Liviri

Carrying the Cold Chain

PART 3: Prescription for success

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"According to recent research by Accenture, 81 percent of supply chain executives agree that they are facing technological changes at unprecedented speed and scale, and that COVID-19 has been their organization's largest stress test."[1]

Prescription for success

The $35 billion dollar bio-pharma question. Can a box be the cure?

Supply chain blockages. Increasing market demands. Fluctuating gas prices. Labor shortages. Extreme weather events. Today's cold-chain shipping environment faces challenges along every step of the journey. And that's just the start.

Add to those the volatility associated with moving temperature-sensitive products and the growing consumer demand for broad-based sustainability and it's evident that transporting life science goods is a complicated undertaking influenced by wall-to-wall variables beyond our control.

This all impacts the bottom line. In a big way. According to the IQVIA Institute for Human Data Science, "The biopharma industry loses approximately $35 billion annually due to failures in temperature-controlled logistics."

Digging for answers, groups such as the Reusable Packaging Association (RPA), a Washington DC-based nonprofit organization, note that innovations in cold-chain totes and containers, as part of a circular reusable packaging system, offer viable solutions. But adoption remains slow, mostly due to the business disruptors we see on our daily news feeds: everything from COVID-19… to wars on foreign soil… to recessionary fears… to geopolitical risk in general.

"From two years ago to today, companies are trying to survive as much as they're trying to just compete and address customer needs," says Tim Debus, RPA president and CEO. "There are pressures in material costs, supply shortages, sustainability objectives, shareholder interests – implementing transformative systems change within their operations can be difficult timing, even though you can make a strong business case about the value created by switching to reusable packaging."

Untangling the intricacies

Putting reusables to work entails a systemic approach across an unbroken cold chain. The cold chain refers to managing the temperature of perishable products to maintain quality and safety from the point of origin through the distribution chain to the final consumer. The distribution and delivery of vaccines, where there is a continued need for precise, highly controlled quality assurances, is a prime example.

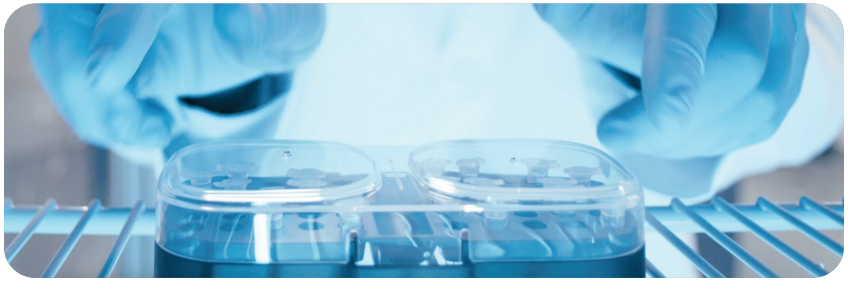
Moving critical medicines from point A to all-points is an intricate undertaking that hinges on precisely orchestrated events in temperature-controlled environments. When in-transport temps veer off course, vaccine chemistry comes unglued, stripping cures of their ability to protect against disease — ultimately rendering them unusable. The World Health Organization (WHO) warns that up to 50 percent of vaccines are wasted globally every year, in large part because of mismanaged temperature control across the cold chain.

Life science-specific reusable packaging designs, whether they're stainless-steel containers with reusable ice packs or upcycled options with multiuse lifecycles, are tailormade to tame temperature inconsistencies across the cold chain.

"If you look at the available COVID-19 vaccines, for example, there are different and highly-precise requirements for its ideal distribution temperature range," Debus says. "This increases the need for versatility, something that reusable packaging options are engineered to address via structural integrity and adaptable temperature management control systems."

The rub revolves around the upfront costs associated with purchasing reusable packaging, coupled with a muddy understanding of the long-term economic gains tied to moving from a linear to a circular, reuse-structured system.

"It's important to remember that the behind-the-scenes workhorses are your pallets, your totes, your trays and racks," Debus explains, "that offer great optimization potential in moving goods through warehousing, distribution centers, and retail and other destination points. With a built-to-last, ready-to-go reusable packaging supply in play, there is a sharp return-on-investment payoff that includes leveraging synergies across operations to drive efficiencies and reduce costs."



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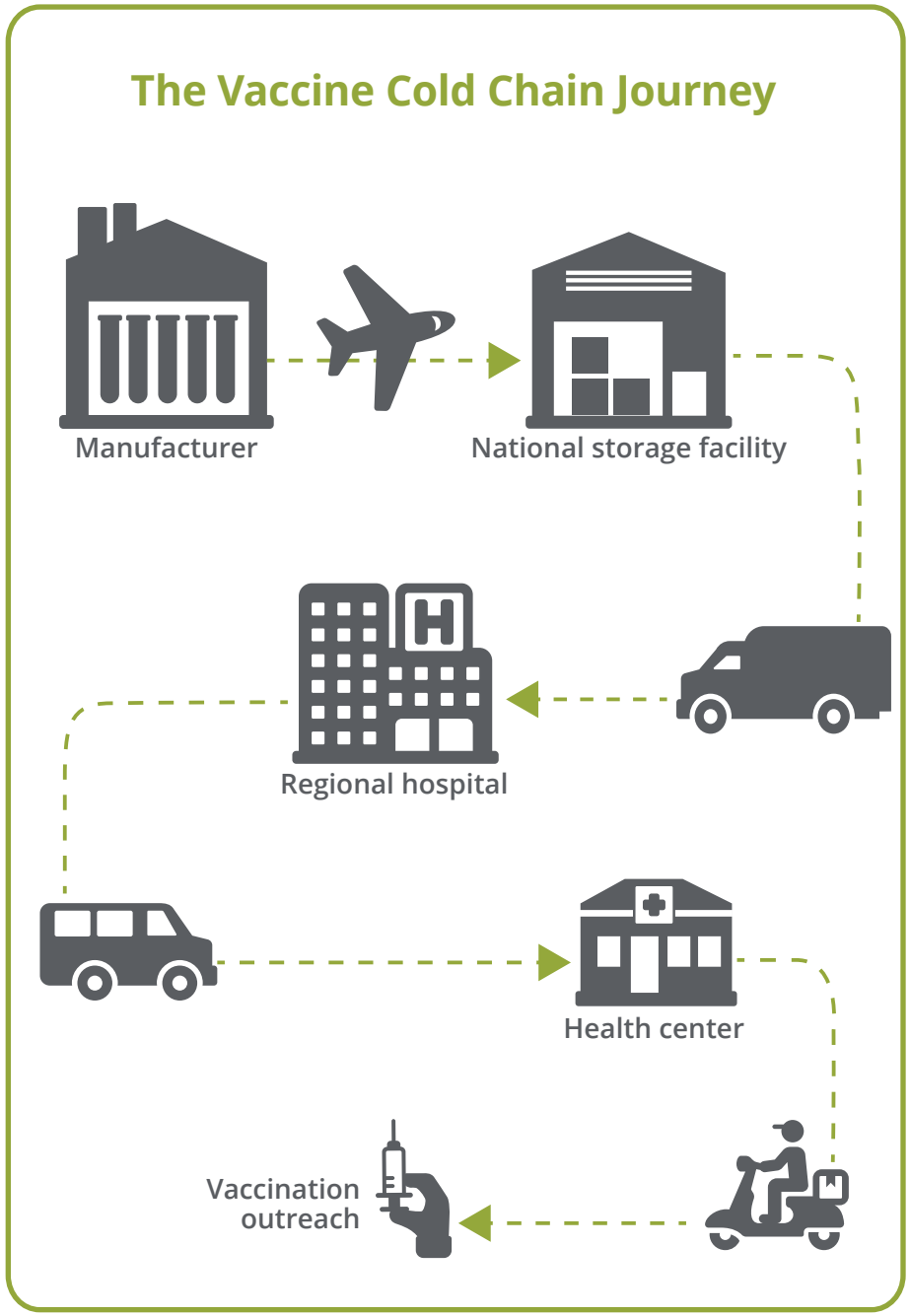
Savings on repeat

RPA has communicated for decades that reusable packaging programs present a strong business case, and that during uncertain economic times, reusable packaging provides stability when material costs are volatile — and resiliency when product supplies are constrained.

"If you're solely looking at reuse as addressing waste and pollution, you're missing the larger financial considerations," Debus says. "Reusable packaging programs provide cost savings tied to optimized supply chains, by creating new tools for automation and by allowing businesses to capture efficiency-building data about the distribution of their products.

"The business benefits are far-ranging when it comes to providing economic value — especially when facing supply chain constraints."

Benefits are served best, of course, when they outweigh costs. Whether it's saving billions of dollars by safeguarding vaccine vitality, or decreasing reliance on expensive raw material sourcing, cold chain-ready reusable packaging brings those economical advantages into view.



Make it sustainably so

Until that money-in-the-bank vision is realized, however, the focus on planetary wellness remains the near-term key to bridging the reusable packaging divide. And it's more likely governments, not businesses, driving the bus. Avenues include regulatory and legislative action, forcing shifts toward Extended Producer Responsibility (EPR) programs, both at home and abroad.

EPR is a policy approach where producers are saddled with lofty responsibilities — be it financial and/or physical — for the treatment or disposal of post-consumer products. Assigning such responsibility provides incentives to prevent waste at the source, with an emphasis on product designs that support the environment by way of public recycling and materials management goals.

These transformations are unfolding currently in states such as California, with some of the most robust waste and pollution fighting programs in the US. Across the EU, where countries are years ahead of the curve with circular economy packages and green deals, similar policy is used to encourage both source reduction and packaging reuse.

In general, these eco-edicts are more common on the consumer packaging side, but they're also relevant for supply chain packaging for the B2B distribution of goods.

"When you start adding more restrictions and regulations in handling and management of goods, like pharmaceuticals and medical supplies," Debus says, "you're continuing to see major factors that are causing companies to think twice about not just the products they produce, but also how they distribute those products to the marketplace."

Too much at stake

The biopharma cold chain packaging market is expected to grow by USD 1.85 billion from 2020 to 2025.

Bolstering the cold chain to meet that demand makes sense. It requires a proactive, holistic approach to standardization across the industry, with equipment that is plug-and-play regardless of the manufacturer.

Reusable packaging should be integral to those big-picture conversations, because when exploring successful business strategies that seek to decrease costs and increase efficiencies — there's too much at stake to stay the course.

"Anytime you have systems change, from linear to circular for instance, it's not always going to be a slam dunk," Debus says, "but in my experience there's always a net benefit. And it's always worth the focus, time and investment to achieve a more resilient operating system."

As businesses either fully embrace or cautiously entertain the idea of integrating reusable packaging into their operational systems, innovation is the one factor that remains unwavering. From matching the breakneck pace of biopharma developments to mastering your click-and-collect assortments,

the seed has been planted. What grows from it is where we're going next.

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LIST OF SOURCES

[1] **"**According to recent research by Accenture, 81% of supply chain executives agree that they are facing technological changes at unprecedented speed and scale, and that Covid has been their organization's largest stress test.**"**

https://www.pharmaceuticalcommerce.com/view/pharma-cold-chain-pushing-the-envelope