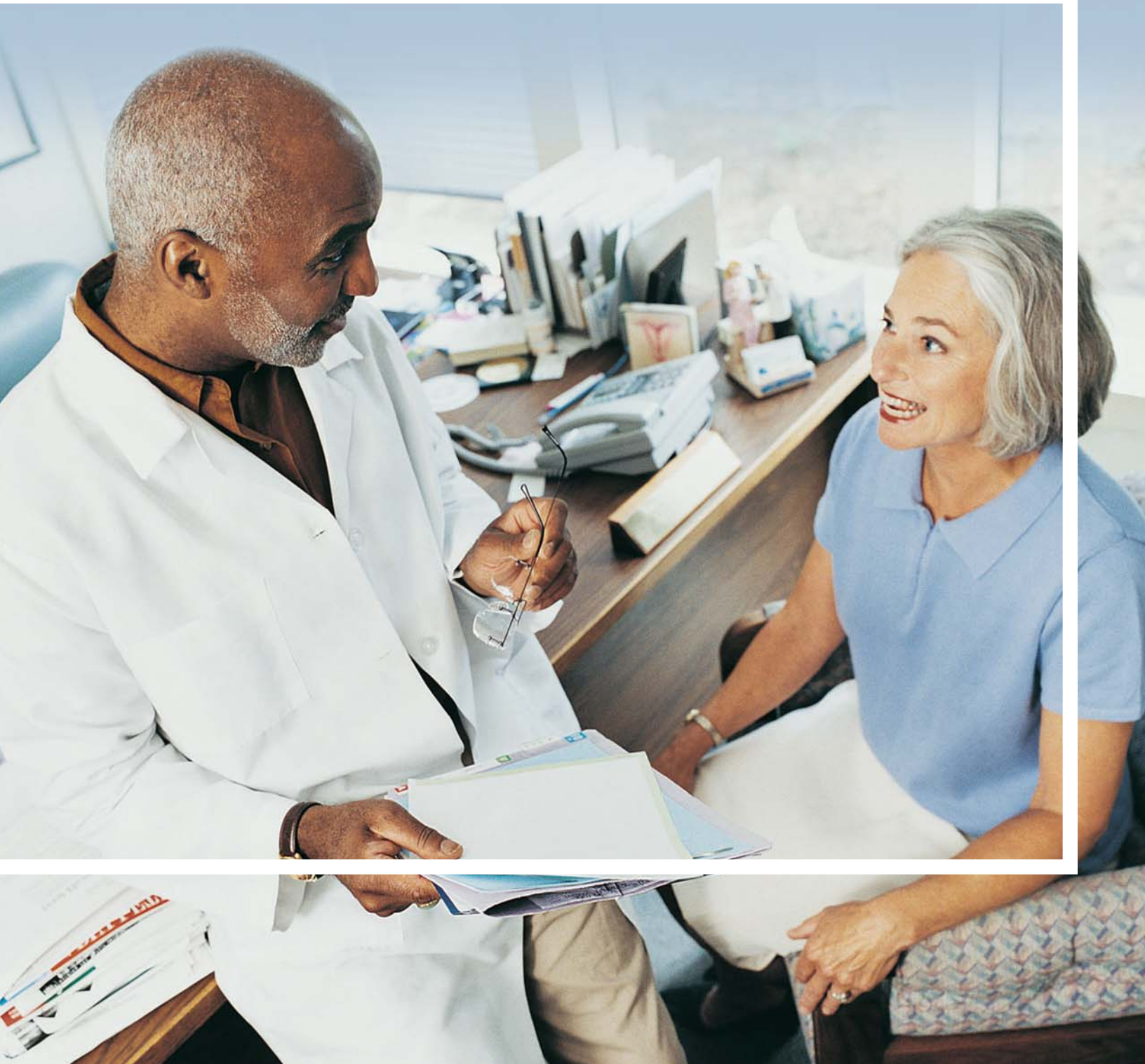


BLOOD GLUCOSE MONITORING SYSTEMS

Product Completion Case Study



EXECUTIVE SUMMARY

RR Donnelley Global Turnkey Solutions developed and implemented a comprehensive model that helped a *Fortune* 500 medical company further its efforts to create demand-based production and worldwide distribution of its two branded blood glucose monitoring systems for consumer use. RR Donnelley provides material procurement and kit assembly services as well as delivery of finished product to the customers' distribution hubs in North America, Europe, and Asia. Specific responsibilities include receiving and warehousing the hand-held glucose meters; procuring kit components such as print materials, lancets, lancing devices, test solutions, and protective cases; and final assembly and packaging of the retail kits.

This product postponement solution results in lower component and finished-goods inventories, improved product availability, and greater production flexibility. Another major benefit is the proximity of RR Donnelley's regional supply-chain centers to the customers' distribution hubs, which provide companies with improved time-to-market and significantly reduced freight costs.

Client's Key Reasons for Choosing RR Donnelley

- Innovative postponement model
- Medical device experience (FDA/cGMP; ISO-13485)
- Global presence
- IT infrastructure and expertise
- Flexibility
- Strong management at all sites
- Track record of ongoing innovation
- Financial stability

Scheduled reviews maintain communications as well as an environment of continuous improvement.

BACKGROUND

The diabetes care division of this company is constantly developing products to reduce the discomfort and inconvenience of blood glucose monitoring. It introduces systems that are easier and less painful to use, require less blood, and provide faster results. The company designs, develops, and manufactures several leading-edge glucose monitoring systems and test strips for use in both home and hospital settings.

CHALLENGE

A major acquisition strengthened the company's position in the large and rapidly growing blood glucose testing segment but also added to the complexities of gaining efficiencies in an already cost-sensitive marketplace. The customer decided to maintain both its existing and newly acquired brands. It wanted to unify and simplify its existing supply chain with that of the acquisition, but the two supply chains shared little commonality in such key areas as:

- Suppliers
- Kitting strategy
- Distribution locations
- Order systems
- Documentation control

After careful evaluation, the client established these major goals:

Improve Customer Satisfaction

The company believes there is one opportunity to acquire a customer, and that acquisition can be worth significant lifetime value in supply sales. Glucose meter kits must be available on the shelf when the prospect is in the store making a decision. Backorders are disastrous, generally resulting in significant lost sales.

Make the Supply Chain More Demand Driven, Flexible and Responsive

Large inventories of finished goods are expensive to maintain, yet the long lead times of producing fully packaged kits in Asia necessitates large inventories to ensure product availability. In this case, the customer wanted to package the product closer to end users, thereby adding more flexibility to respond to demand changes and enable inventory reductions.

Reduce Total Supply Chain Costs

In a highly competitive segment where meter kits are sold at a loss and profits are derived from ongoing sales of lancets and test strips, controlling supply chain costs is essential to profitability. Unfortunately, the company's two supply chains were both unwieldy. Manufacturing, warehousing, and shipping were unnecessarily complex with lots of opportunities to incur unanticipated expense. The customer wanted a unified supply chain and a single manufacturing process. It wanted to produce products closer to customers in North America, Europe, and Asia with a goal of realizing annualized supply chain savings of \$5 million.

Minimize Capital Expenditures and Resource Requirements

Because of the popularity of its products, the company needed to rapidly expand capacity, yet it desired to do so without major capital expenditures and without overburdening the scarce managerial resources needed to manage other aspects of existing and newly acquired businesses.

To find a solution, the client began with a small target team that addressed issues such as identifying process possibilities and potential suppliers, evaluating the suppliers,

initiating an RFQ process, and making a final proposal to senior management. The company ultimately selected RR Donnelley's innovative product completion solution.

SOLUTION

RR Donnelley introduced a model that postponed final product configuration and kitting to increase responsiveness and lower costs. Basic glucose meters are shipped from the company's contract electronics manufacturers (CEMs) in Asia to RR Donnelley product completion facilities in the United States, Scotland, and Singapore where they are kitted and shipped to the company's distribution centers (DCs) or held for direct shipment to company affiliates and retailers.

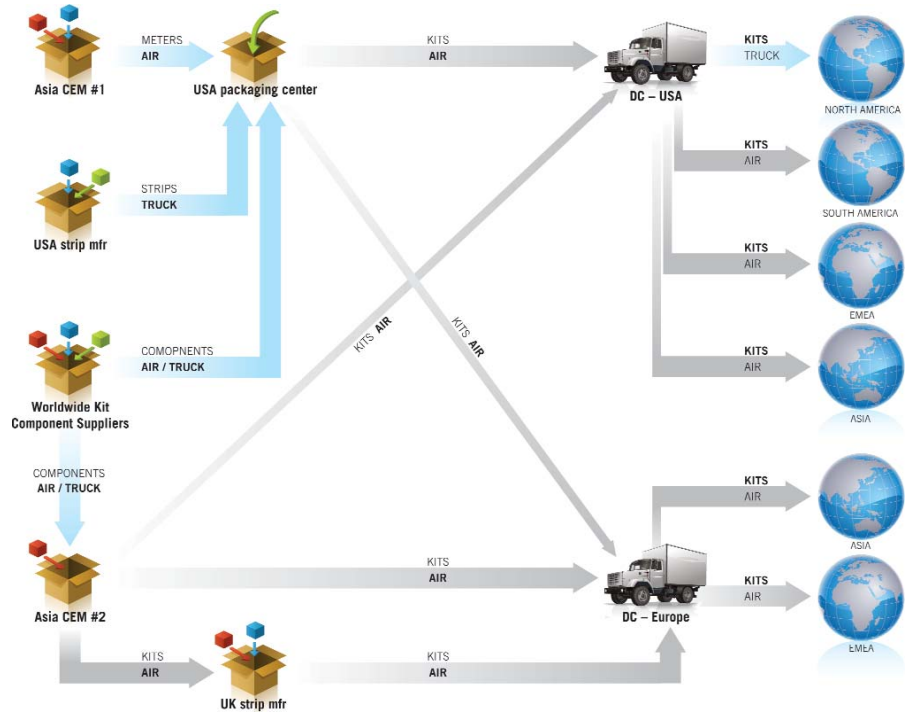
RR Donnelley manages suppliers and assumes ownership of materials until the product is fully kitted. The entire process is cGMP/QSR and IVDD compliant. Finished blood glucose test kits are 100 percent serialized and fully traceable. The number of print suppliers was reduced from five to two and the locations of the supplying facilities changed to reduce freight costs. To minimize disruption, a phased implementation plan was developed and production initiated sequentially in the US, Europe/Middle East/Africa (EMEA), and Asia.

RR Donnelley's advanced IT solution, IViewXT™, was utilized to provide the company with supply chain visibility across the key product completion stages:

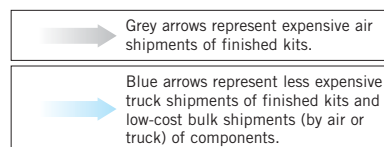
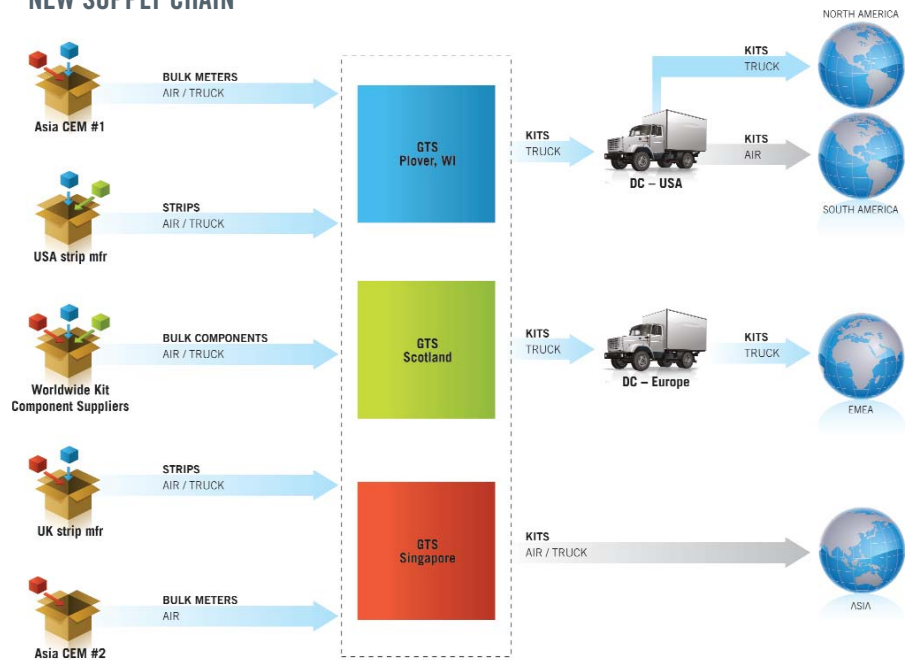
- Sourcing/Procurement
- Inventory Management
- Assembly
- Configuration
- Customization
- Testing
- Packaging
- Fulfillment/Distribution

UNIFICATION/SIMPLIFICATION OF SYSTEM KIT SUPPLY CHAIN

PREVIOUS SUPPLY CHAIN



NEW SUPPLY CHAIN



RESULTS

Today, the company has a single supply chain and a uniform worldwide manufacturing process. The postponement model is an undisputed success that exceeded the customer's goal of annualized supply chain savings of \$5 million. The solution resulted in lower component and finished-goods inventories, improved product availability, and greater production flexibility.

Other Key Benefits:

- In the all-important area of freight costs, there was a reduction of more than 70 percent per kit
- Virtual elimination of backorders, even when first-year demand exceeded forecasts by 50 percent
- Response time for unplanned orders reduced from one month to one week
- Dramatic simplification of the supply chain
- Customer gained a world-class solution while minimizing capital expense by leveraging RR Donnelley's assets, infrastructure, and expertise

The results were so encouraging that the customer wants to continue working with RR Donnelley to achieve even higher levels of demand-driven production and fulfillment by transitioning to a model that involves replenishment upon shipment to the distribution center.



RR Donnelley Global Turnkey Solutions is a technology and segment leader in supply chain management services focused on product completion. We provide a wide range of outsourcing capabilities to some of the world's largest companies. Services range from materials sourcing, product configuration and testing to customized kitting and global fulfillment.

WHO WE SERVE

Medical Products

- medical devices
- pharmaceuticals

Technology

- computer hardware
- peripherals
- software

Communications & Networking

- networking systems & components
- telecommunications

Retail

- consumer electronics
- private label

GLOBAL PRODUCTS AND SERVICES

books
business communication services
business process outsourcing
catalogs
commercial print
direct mail
directories
distribution, logistics, print fulfillment & kitting
document outsourcing & management
e-business solutions
financial printing & communications
forms, labels & office products
magazines
premedia technologies
product usage documentation & in-box materials
retail inserts
RFID & barcoding
supply chain management solutions

We serve progressive medical product manufacturers from our FDA registered, ISO 9001 and ISO 13485 accredited facilities in North America, Europe, and Asia. These facilities provide an integrated suite of postponement and outsourcing services that help execute key elements of our customers' supply chains.

The services we offer include: strategic sourcing, light assembly, testing, packaging/kitting, and global fulfillment. Our creative solutions generate value by delivering products cost-effectively and on schedule, and by providing customers with an avenue to outsource non-core functions and expand capacity without adding assets.

Global Turnkey Solutions' demand-driven approach helps companies create more customer-relevant products through customization and by bringing production, fulfillment and distribution as close to customers as possible. Our local facilities serve major geographic markets and allow companies to customize products and information for individual customers and segments without sacrificing speed or cost-efficiencies.

To receive more information about our services for medical device products as well as case studies from other segments including technology, communications and networking, and retail, please contact your RR Donnelley representative or send an e-mail request to gtsinfo@rrd.com.

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