SOLUTIONS

How Hospitals Can Use Software to Drive Strategic Supply Chain Transformation

For hospitals, COVID-19 brought unprecedented challenges on virtually every level. And from an operational and, ultimately, financial standpoint, the supply chain quickly became the weakest link. With the worst of COVID-19 behind us, inflation, higher staffing costs and increased spending are fueling hospitals' sense of urgency to fix the supply chain and, in the process, stem the financial bleeding.

The fix lies in software platforms designed specifically for the hospital environment that allow hospitals to better plan for, manage, standardize and purchase medical supplies from their suppliers.

A raft of challenges

Most hospitals incurred tremendous revenue losses during COVID-19 and are seeking a strategic transformation of the hospital supply chain to help combat rising costs. With inflation, increased staffing costs due to labor shortages, and increased spending on capital equipment after major purchases were deferred during COVID-19 — combined with a lack of commensurate increase in reimbursements — hospitals are facing significant financial pressure. They are subsequently highly motivated to find ways to reduce costs, in particular by optimizing the supply chain to increase efficiencies.

COVID-19 also exposed the gaps and inefficiencies of the existing hospital supply chain ecosystem in glaring detail. According to L.E.K. Consulting's 2022 Annual US Hospital Study,[1] hospitals' high-priority strategic initiatives include a variety of supply chain initiatives, namely cost-effective contracting/purchasing, standardization of best practices/products, workflow optimization, and reduced total cost of ownership of equipment and supplies (see Figure 1).

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Figure 1
Importance of strategic priorities for hospitals and health systems in 2022*
Percentage of all respondents who answered 6 or 7 out of 7, where 7 means "very important" (N=238)**

Highest priority		High priority		Moderate priority	
Attraction/retention of nurses	86	Workflow optimization	70	Remote patient monitoring	57
Patient satisfaction	85	Clinical data connectivity/decision support tool	68	Predictive analytics	52
Reduced medical errors	83	Reduced total cost of ownership of equipment and supplies	67	Participation in other value-based arrangements	50
Quality metrics	81	Clinical workflow efficiency tools	66	AI for clinical use	49
Attraction/retention of physicians	80	New therapeutic technologies	65	Participation in ACOs	49
Cost-effective contracting/purchasing	76	Differentiation of hospital	64	AI for nonclinical use	49
EMR integration across acute and nonacute	76	Flexible staffing and options to outsource ★	63		
Infection control	76	Telehealth ★	63		
Attraction/retention of nonclinical staff	76	Patient-facing technology	61		
Reduced readmission rates	74	Access to capital	60		
Standardization of best practices	73	Antimicrobial stewardship	60		
Revenue cycle management/coding ★	72	Change management and processing improvement	59		
		Standardization of products	58		

Note: Since the survey was fielded, hospitals are also feeling the impacts of inflation, and it is quickly becoming a top priority

■ Quality of care
■ Tech/digital health
■ Operations/purchasing/value-based care
■ Staffing
★ Meaningful percentage change (>2.5%) from 2019

*Survey question: How important are each of the following strategic priorities for your [hospital/health system] today? Scale: 1-7, where "1" means "not at all important" and "7" means "very important"
**Respondents who answered "I don't know" were included in N above but excluded from the analysis (0-1 respondent per priority)
Note: EMR=electronic medical record; AI=artificial intelligence; ACO=accountable care organization
Source: L.E.K. 2022 Hospital Study Survey

In the short term, hospitals aim to restabilize the supply chain and build a more resilient digital, physical and process infrastructure. Over the long term, hospitals want to enable more automated, digital solutions that will both drive efficiencies and deliver higher-quality, lower-variability care.

Hospitals have three core unmet supply chain needs that software can address: to streamline the procurement experience for all stakeholders, enhance data visibility within their own organizations, and increase transparency and engagement within the broader healthcare ecosystem.

Streamline the procurement experience for all stakeholders

The procurement experience in hospitals is manual and not standardized. Take the process of obtaining quotes, in which end users such as clinicians, service line leaders and biomedical engineers engage. With the current system, they spend time, often in silos, outside their core responsibilities to obtain competing quotes from multiple individual suppliers. Far too often, exacerbated by high turnover, the end users often do not know the corporate purchasing standards and preferences.

Due to the nonstandardized process, the quotes end users obtain are often inaccurate, requiring rework. In the meantime, in extreme cases, hospitals risk purchasing materials and equipment that do not meet specific corporate standards and cannot be used; for example, capital equipment that requires network connectivity but does not meet IT/cybersecurity minimum standards.

The purchase process is also extremely time-consuming. On average, it takes 7.1 unique signoffs for a piece of imaging equipment to be approved and purchased, according to data supplied by OpenMarkets. For imaging equipment costing more than $1 million, an average 13.2 signatures are required.

Simplifying this process through streamlined documentation of IT approvals, risk assessments and corporate guidelines can save an enormous amount of time for cross-functional hospital teams. Having solutions that standardize the procurement process and allow for quotes to be compared easily would improve the experience for supply chain and hospital stakeholders alike, saving time and labor and, in the process, reducing the chance of human error.

Enhance data visibility within their own organizations

Hospitals often do not have a good record of their inventory across service lines and locations. One common issue is incomplete data. Another is nonstandardized data, whereby the same product or manufacturer ends up being represented in different ways.

To improve the visibility and quality of data, hospitals need access to complete, augmented data catalogs, which will enable them to become more efficient and reduce the number of errors. Such catalogs will also provide them with context, making the analysis they need to do that much easier. Hospitals also need ways to help them reduce the total cost of ownership for equipment and supplies, such as:

• Standardizing product usage so they can leverage higher purchasing volumes to negotiate more cost-effective contracts

• Employing data analytics and industry benchmarks to help prevent over-purchases while negotiating better pricing from suppliers

• Enforcing standardization and contract preferences

Increasing the transparency of hospitals' supply chains will not only help reduce costs but also enable the right products to be delivered to the right place at the right time, ensuring that clinicians have the appropriate materials to deliver the best patient care possible.

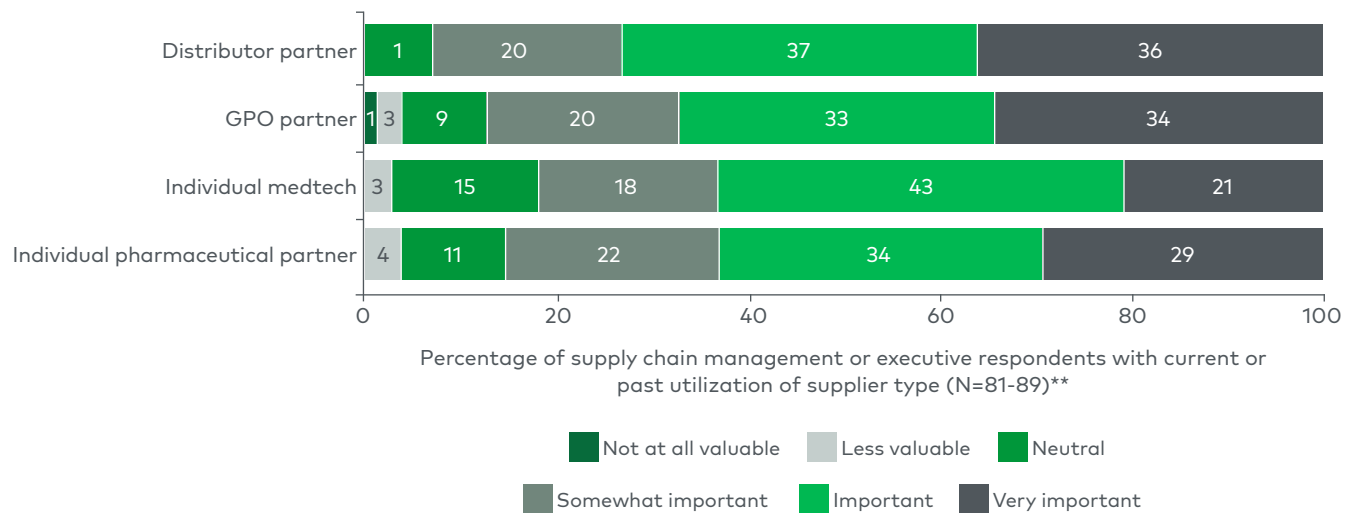## Increase transparency and engagement within the broader healthcare ecosystem

Hospitals are increasingly viewing suppliers as strategic partners and are looking for opportunities to leverage those relationships, such as engaging with them virtually. They particularly desire a higher level of virtual engagement around training, education and procedural support for new products.

Healthcare providers are also looking to collaborate with their suppliers — both distributors and medtech companies — to create supply chain resiliency and transparency.

Supply chain disruptions result in unpredictability when it comes to obtaining desired items, which leads to time wasted managing and sourcing inventory. Supply chain directors are looking for ways to ensure they have access to backup suppliers and sufficient product stockpiles in times of underproduction or delays. Nearly 75% of surveyed hospital supply chain leaders believe it is important for their distribution partners to offer resiliency programs.

Hospital supply chain leaders are also particularly interested in resiliency programs to help improve their ability to plan ahead and adapt to changing inventory levels. The most valuable components of those programs are inventory status by location, real-time shipment location visibility and consumption forecasts (see Figure 2, Parts 1 and 2).
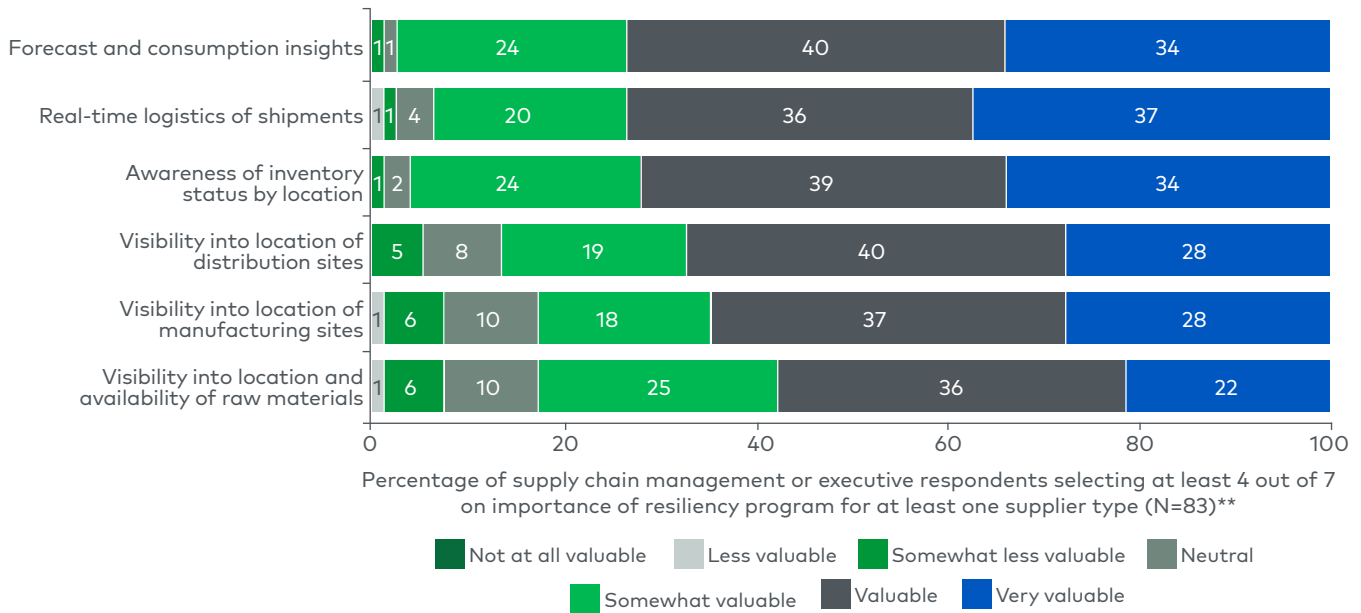
Figure 2 (part 1)
Importance of offering a resiliency program by supplier type* (2022)

Percentage of supply chain management or executive respondents with current or past utilization of supplier type (N=81-89)**

Legend:
- Not at all valuable
- Less valuable
- Neutral
- Somewhat important
- Important
- Very important

*Survey question: Please indicate the level of importance for your supply chain partners to have supply chain resiliency programs
**Respondents who answered "N/A – we do not use" were included in N above but excluded from the analysis (1-2 respondents per supplier type)
Note: GPO=group purchasing organization
Source: L.E.K. 2022 Hospital Study Survey

Figure 2 (part 2)
Value of different components of partner supply chain resiliency programs* (2022)

Percentage of supply chain management or executive respondents selecting at least 4 out of 7
on importance of resiliency program for at least one supplier type (N=83)**

Legend: Not at all valuable · Less valuable · Somewhat less valuable · Neutral · Somewhat valuable · Valuable · Very valuable

*Survey question: How valuable are each of the following aspects of a supply chain partner's supply chain resiliency program?
**Respondents who answered "I don't know" were included in N above but excluded from the analysis (0-1 respondent per component)
Source: L.E.K. 2022 Hospital Study Survey

The use of marketplaces that list compliant equipment from contracted suppliers streamlines the procurement process, saving time and money. As Michelle M. Wall, system director of capital planning at Bon Secours Mercy Health (BSMH), noted after that organization began building a custom equipment formulary with OpenMarkets, the impact of its implementation has been felt across the organization.

"It is incredible how much smoother our processes have become since the OpenMarkets integration. And on a personal level, my job has just been that much easier. With the controls in place, there is so much less back-and-forth between our capital planning team and hospital staff. And it has helped us to be a better partner to our suppliers by focusing on them and not the wrong folks or products. Across the BSMH system, we now have the clarity that empowers individual hospital teams to purchase the right equipment from the right suppliers at the right time. The savings in process churn and equipment cost have been astounding."

Solutions that address unmet provider needs

Three platforms streamline the hospital equipment procurement process while delivering a slew of benefits to both hospitals and their suppliers: OpenMarkets, Concordance (Surgence) and PartsSource. Figure 3 denotes a summary of the three platforms.

Figure 3
Overview of procurement platforms

OpenMarkets — Budgeting, procurement and inventory management related to capital equipment	• Standardizes suppliers and product detail, streamlining the purchasing and communication process • Improves speed to order, resulting in a faster purchasing process • Increases compliance with equipment standardization goals, facilitating aggregate purchasing • Aggregates purchase data to provide insights on hospital equipment spend
CONCORDANCE HEALTHCARE SOLUTIONS — Real-time supply chain data ecosystem for manufacturers, suppliers, distributors and providers	• Offers suppliers, distributors and providers downstream and up stream visibility • Affords real-time ecosystem visibility that can optimize allocation priorities and ordering decisions, and reduce overstocks or understocks • Automates and/or streamlines current manual data exchange process related to product substitution, allocation decisions and purchase orders
PARTSSOURCE — Evidence-based marketplace and software platform for equipment parts, repair and service agreements	• Standardizes procurement workflow process for equipment parts and services • Reduces procure-to-pay process, resulting in faster purchasing • Improves procurement policy compliance through formulary rules • Provides in-depth insights into purchase trends and analytics across spend, quality and industry benchmarks

Source: L.E.K. research and analysis

OpenMarkets

The current way equipment is procured is not just inefficient; it lacks transparency and standardization. Not only can hospitals within the same health system each have different processes for capital budgeting, procurement and inventory, but they lack a scalable, systemwide equipment formulary that ensures end users (e.g., clinicians, biomedical engineering, construction management) select preferred suppliers and equipment models and are quoted the contracted prices. There is also a lack of visibility into the quote requests emanating from end users.

Benefits of OpenMarkets platform

OpenMarkets' platform creates a true supplier-provider partnership, with benefits to both parties. For providers, it enables strategic sourcing by standardizing supplier and product detail. Doing so not only streamlines the procurement process; it also reduces rework and results in a faster purchasing process (e.g., a 15%-20% improvement in speed to order).

It also increases a provider's ability to set — and meet — supplier compliance and standardization goals (standardized equipment is, after all, crucial to patient safety, worker productivity and the bottom line); contract compliance improves, on average, 10%-12% a year. The platform also streamlines communications and gives users the confidence that they are performing all the necessary steps accurately, as well as providing easy digital access to products and commercial support.

For suppliers, OpenMarkets allows them to manage their product information 24/7, and in an environment used by a hard-to-reach audience. Suppliers can impact provider procurement workflows, increasing both speed to order and margins, and can ensure the contract compliance of providers. The shared platform creates a range of new, real-time performance reporting capabilities to better understand what the customer is looking for and how the supplier's team is meeting its needs.

Concordance (Surgence)

When providers have no upstream visibility into the data inventory of manufacturers and distributors, they leave themselves open to unpredictable availability and lead times for essential supplies. Meanwhile, manufacturers and distributors without downstream visibility into providers' inventory levels, utilization and demand for products risk making suboptimal production and allocation decisions. And all three parties end up communicating in a siloed, analog, reactive and ad hoc manner to address challenges throughout the supply chain.

Concordance, together with Palantir, is building the first fully integrated medical supply chain ecosystem, named Surgence, that brings together inventory and supply chain data from manufacturers, distributors and providers into a single real-time platform. Users will be able to communicate within the ecosystem, and will have access to real-time, data-driven alerts and recommendations related to procurement, inventory management and utilization decisions. The ecosystem provides first-class data security and governance, allowing each partner within Surgence to control which data other partners in the ecosystem can see. Today, data is transformed into enriched information with real-time alerts brought to decision-makers throughout the supply chain, but in the near future, Surgence also plans to unlock the power of artificial intelligence (AI) throughout its applications as partners of the platform are ready for those next steps.

With Surgence's offering, the network will be able to use current and historical provider and distributor inventory levels to anticipate upcoming shortages so that it can provide automated alerts — and even trigger reorders. It will also provide visibility into stocking times and capabilities from manufacturers and distributors along with inventory data from

hospitals that will help those providers make informed supply chain decisions. It will even offer alternative product suggestions where necessary, along with insights into the quality of those alternatives. While this platform will be particularly valuable for consumables, it could also be used for procuring and managing direct supply channels, such as patient preference information, equipment and other supply channels.

Benefits of the Surgence platform

With Surgence, providers will use a single platform through which they can communicate, manage and analyze purchase orders issued to multiple manufacturers, replacing any existing manual processes. The automated alerts and/or reorder notifications they receive will not only alleviate manual work for their supply chain team, but will also reduce the number of stockouts, resulting in greater efficiency while also reducing risk. Combined with the visibility into manufacturer and distributor inventory they will receive, providers will be able to avoid overbuying, thereby reducing upfront supply costs and lowering the downstream costs of excess and expired products. Meanwhile, Surgence will allow product substitution options to be a collaborative effort in a shared application, reducing labor costs for all parties. The extensive manual research process and back-and-forth with suppliers and distributors to find substitutes will become a thing of the past.

Manufacturers will also benefit by leveraging end user inventory and utilization data to better forecast production, demand and allocation of inventory. Doing so will not only allow them to move product across the supply chain more efficiently, but also help them mitigate any potential shortages, better supporting patient care. Indeed, manufacturers today consider visibility into providers' inventory levels to be an unmet need. Having real-time downstream supply chain visibility can help better inform demand levels and allow them to do real-time production and supply planning. It can also help them reduce lost sales for out-of-stock items through improved planning and proactive reorder management. Having more visibility into provider needs and inventory status will also allow manufacturers to more efficiently allocate products and gain visibility into at-risk sales.

PartsSource

Hospital supply chain and procurement teams source replacement parts and obtain parts from multiple manufacturers, which is time-intensive and costly — biomedical engineers can spend hours looking for a specific part. The process is also slow, requiring multiple steps, from the requisitioning process to payment to delivery.

PartsSource is an evidence-based marketplace and software platform that offers replacement parts from over 6,000 original equipment manufacturers (OEMs) and suppliers,

enabling over 5,000 healthcare providers to procure replacement parts and equipment repair services on a single platform. PartsSource integrates with health systems' enterprise resource planning (ERP) systems and computerized maintenance management systems (CMMS), improving procurement process efficiency and promoting standardized workflows. The PartsSource Pro analytics dashboards give hospitals in-depth insights into purchase trends and analytics related to equipment parts and services. Customized dashboards enable department leaders with visibility into spend, quality data and industry benchmarks to promote data-driven decision making.

Benefits of PartsSource's platform

As a one-stop-shop platform, PartsSource provides a streamlined purchase process that allows users to compare a wide variety of products, which makes it easier for hospitals to purchase quality parts at competitive prices. Its integration with hospital ERP/CMMS systems decreases the administrative burden, ensures necessary stakeholders stay informed, and increases efficiency by automating and standardizing the procurement workflow, reducing time to completion and saving hospitals significant time compared to the manual procure-to-pay process. According to studies conducted by PartsSource, the time per order is reduced from 89 minutes to 4 minutes with PartsSource Pro, freeing up technicians to perform higher-level work. The platform also enables standardization of enterprise procurement preferences, improving compliance and cost control.

Its analytics capability helps hospitals track spend and reduce costs by identifying the root cause of any unusual spend increases across health systems. The analytics also identify missed savings opportunities and track purchases by individual employees in order to effectively manage parts spend on a granular level. Additionally, it tracks and manages inventory to help inform hospitals' future purchasing decisions.

Suppliers also benefit from PartsSource's platform as it provides broader access to hospital customers and systems that are beyond the reach of OEMs' sales teams and provides access to robust portfolio analytics. Indeed, OEMs with limited distribution networks and capabilities view PartsSource as a key channel partner when it comes to gaining access to customers.

The solution is the platform

The fiscal situation of hospitals in 2023 has never been more dire. They need strategic assets, from suppliers they know and trust, to right their respective financial ships. And they need streamlined, repeatable processes that they can depend on to steer them to those suppliers and their products. As AI and machine learning models continue to advance, there are also opportunities to incorporate advanced data analytics into the supply chain, such as leveraging

more advanced predictive analytics that optimize procurement and demand forecasting, ultimately driving cost-efficiency and agility.

Truly effective procurement platforms such as those from OpenMarkets, Surgence and PartsSource not only save money; they save lives. They make necessary data visible, standardize and streamline the purchasing process, and strengthen the supplier-provider relationship. Hospitals can ensure the safety of their patients only when they have the right equipment at the right time. Now, more than ever, that requires the right procurement platform.

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OpenMarkets is the preeminent platform for buying, selling and managing healthcare equipment. Leading hospitals and equipment suppliers use OpenMarkets to work together, better, in the $80 billion healthcare equipment market.

For more information, please contact medtech@lekinsights.com.

Endnotes

[1]Lek.com, "L.E.K. 2022 Annual US Hospital Study: Navigating Out of the Pandemic."
https://www.lek.com/insights/sr/lek-2022-annual-us-hospital-study-navigating-out-pandemic

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