



Optimizing the healthcare supply chain operating model

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In recent years, healthcare provider organizations have been confronted with supply chain disruptions that have complicated the ability to provide consistent high-quality patient care. These challenges have included raw material scarcity and product backorders limiting the ability to maintain steady supply, a competitive and narrowing labor market jeopardizing workforce retention, inflationary pressures and product shortages increasing supply costs, and a rapidly advancing technology landscape requiring substantial capital investment. These unsettling circumstances combined with the urgency of providing patient care have made supply chain management in healthcare significantly more complex than other industries.

Historically, healthcare supply chains have operated tactically, reacting to immediate needs versus purposefully structuring their operating model to mitigate potential supply chain disruptions. The current environment has continued to strain hospital supply chain teams to prove themselves as a valuable, strategic asset to an organization while simultaneously focusing on day-to-day operations. As we move into a post pandemic environment, we are at an opportune time to transform hospital supply chains from tactical, response-driven operations toward a more strategic and resilient operating model.

KPMG utilizes a framework to guide organizations preparing to restructure their operating model. There are six key dimensions that should be considered when revamping your operating model, as shown on the following page.



Target Operating Model Framework







<p>Service Delivery Model</p>	<p>Service Delivery Model Dimension Identifies what and how functional capabilities are delivered to the organization. Includes leveraging leading practices for shared service centers, outsourcing services, business partners, centers of excellence, employee and manager self-service etc. Incorporates automation as a mode of service delivery and identifies opportunities for service delivery options that span across traditional function silos, such as multi-function shared services.</p>	<p>Goals</p> <p>Scaled Use of Talent</p>
<p>People</p>	<p>People Dimension Describes how the people are organized, including lines of reporting and spans of control. Outlines skills, roles, responsibilities and support activities for each process area and where they reside.</p>	<p>Maximizing Talent</p>
<p>Functional Process</p>	<p>Functional Process Dimension Outlines how specific process steps link to functions or departments that perform each step and accompanying policies/procedures to be followed when performing the process steps. From the deep understanding of the processes, services experience that impact the workforce and cross-functional silos, are identified and validated.</p>	<p>Operational and Cross-Functional Efficiency</p>
<p>Technology</p>	<p>Technology Dimension The application, infrastructure, and operational components and elements that support enterprise technology services and functions. These components come together to create the user experience and interaction points for customers. Applications are used to enable the processes, policy compliance, internal controls and generation of reports. Based on the service experiences the technology enablement is architected from – system of engagement through to system of record.</p>	<p>Automation and “Acting Digitally”</p>
<p>Performance Insights and Data</p>	<p>Performance Insights and Data Dimension Includes information requirements, master data strategy and key process indicator (KPI) frameworks, to drive key business insight and optimized decision making, which enables key financial reporting needs, management reporting needs, and analytics. The service experience data is leveraged to plan further improvements in both the end-to-end processes as well the service delivery model.</p>	<p>Insights and “Thinking Digitally”</p>
<p>Governance</p>	<p>Governance Dimension Comprises of strategic and operational governance that sets the vision, ensures value delivery, and aligns business services to the organization’s objectives. Also, identifies the specific controls that are in place to mitigate operational and financial risks, and governance to manage data, processes and other assets.</p>	<p>Risk Mitigation and Controls</p>



Developing a strategic vision

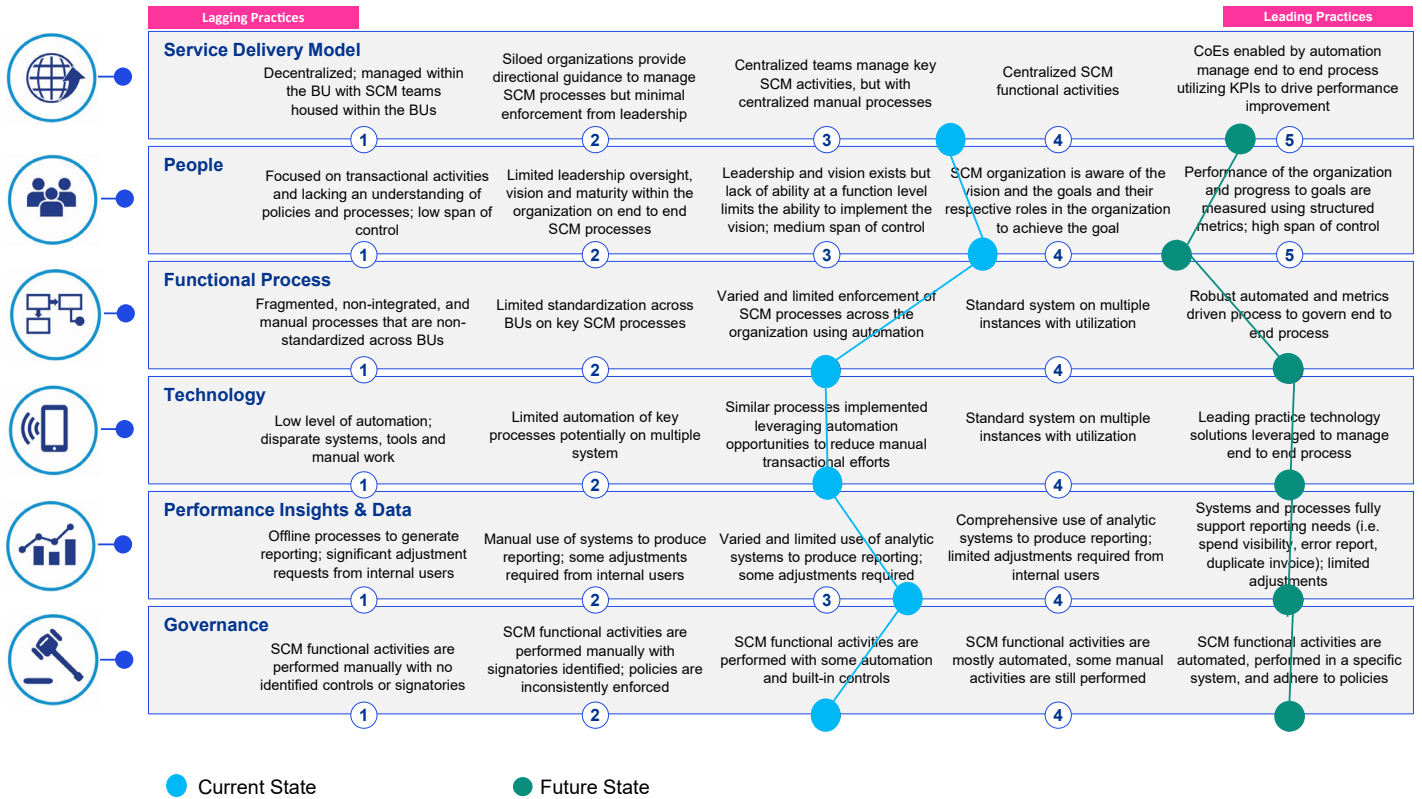
Organizational maturity across each dimension can significantly differ. To determine the strategic vision for your organization, it is essential to assess your current-state maturity level within each dimension to better target the areas of opportunity. Organizations can conduct a workshop to score each dimension of the structured operating model.

Supply Chain Management (SCM) Maturity Model

	Lagging Practices			Leading Practices	
 Service Delivery Model Decentralized; managed within the BU with SCM teams housed within the BUs	Siloed organizations provide directional guidance to manage SCM processes but minimal enforcement from leadership	Centralized teams manage key SCM activities, but with centralized manual processes	Centralized SCM functional activities	CoEs enabled by automation manage end to end process utilizing KPIs to drive performance improvement	
 People Focused on transactional activities and lacking an understanding of policies and processes; low span of control	Limited leadership oversight, vision and maturity within the organization on end to end SCM processes	Leadership and vision exists but lack of ability at a function level limits the ability to implement the vision; medium span of control	SCM organization is aware of the vision and the goals and their respective roles in the organization to achieve the goal	Performance of the organization and progress to goals are measured using structured metrics; high span of control	
 Functional Process Fragmented, non-integrated, and manual processes that are non-standardized across BUs	Limited standardization across BUs on key SCM processes	Varied and limited enforcement of SCM processes across the organization using automation	Standard system on multiple instances with utilization	Robust automated and metrics driven process to govern end to end process	
 Technology Low level of automation; disparate systems, tools and manual work	Limited automation of key processes potentially on multiple system	Similar processes implemented leveraging automation opportunities to reduce manual transactional efforts	Standard system on multiple instances with utilization	Leading practice technology solutions leveraged to manage end to end process	
 Performance Insights & Data Offline processes to generate reporting; significant adjustment requests from internal users	Manual use of systems to produce reporting; some adjustments required from internal users	Varied and limited use of analytic systems to produce reporting; some adjustments required	Comprehensive use of analytic systems to produce reporting; limited adjustments required from internal users	Systems and processes fully support reporting needs (i.e. spend visibility, error report, duplicate invoice); limited adjustments	
 Governance SCM functional activities are performed manually with no identified controls or signatories	SCM functional activities are performed manually with signatories identified; policies are inconsistently enforced	SCM functional activities are performed with some automation and built-in controls	SCM functional activities are mostly automated, some manual activities are still performed	SCM functional activities are automated, performed in a specific system, and adhere to policies	



Once your current-state maturity is assessed, the scoring results can help identify the most significant areas affecting your supply chain team's ability to optimally perform their functions. The next step is to set the aspirational score along the same maturity chart that your organization would like to attain over time. The maturity map may look something like this:



It is important to set realistic expectations on how your organization can move from its current state to the identified aspirational score. Your estimated timeline to meet the desired target must consider potential blockers such as financial constraints, competing priorities, resourcing limitations, and executive level buy-in, among other organization-specific limitations.



Sample questions for consideration when evaluating current and desired future-state maturity may include the following:



Service delivery model

- How centralized is our supply chain organization? Are there departments (such as operating room (OR) or other clinical departments, information technology (IT), etc.) that are operating independent sourcing, contracting, procurement, or inventory management functions?
- What “extra” functions does the supply chain manage to provide additional value to the organization (e.g., sterile processing, print and copy, linen, laundry, etc.)?
- How are we working with clinicians to improve our ability to provide customer service?
- What self-service options are available for purchasing, obtaining order status, generating custom analytics, etc.?



People

- Do we have the correct number of full-time equivalents supporting our strategic sourcing, contracting, procurement, and inventory management functions?
- Where are there resource skill gaps today, and what can be done to fill those gaps?
- Are we placing people in jobs that match their natural skill sets? What can be done to distribute staff in a way that reaches the most optimal output?
- Are supply chain career paths appropriately defined in a way that allows for upward and/or lateral mobility?



Functional process

- How defined and efficient are our sourcing, contracting, procurement, and inventory management processes?

- Where are the predominant blockers, areas of bottleneck, or points of friction limiting optimal processes?



Technology

- Do we have the appropriate technologies in place to digitize and automate our processes?
- Is advanced automation such as robotic process automation, intelligent automation, and predictive analytics (e.g., a supply chain control tower), warehouse automation, etc., being appropriately leveraged today or planned for future state?



Performance insights and data

- What key performance indicators (KPIs) are we measuring today, and how are they distributed across functions?
- How are KPI baselines captured? How are target goals set and how is data/reporting used to monitor progress?
- Are KPIs helping to drive business decision-making?
- How are the insights we are capturing contributing to our ability to reduce spending?



Governance

- Is responsibility and accountability clearly defined, communicated, and aligned across the supply chain organization, as well as upstream and downstream functions such as Accounts Payable, the Operating Room, etc.?
- How are we governing master data, and do we have the appropriate level of cross-functional input?
- Do we have robust risk management measures in place to prevent supply chain disruption?





Crafting the future-state operating model

In crafting your strategic vision, our recommended exercise includes conducting workshops specific to the distinct supply chain work streams to discuss and document each team’s current state, aspirational goals, and potential blockers to close the gap. KPMG leans on supply chain taxonomies to conduct these discussions to help ensure that each work stream within an organization’s supply chain has been represented.

Process scope—Source to Pay (S2P)

Source to Pay (S2P)																
Sourcing & Contracting				Requisition & Procurement		Receiving	Payment				Reporting	Governance		MDM		
L1	L2	L3														
	1.0 Sourcing Approach	2.0 Strategic Sourcing	3.0 Contract Management	4.0 Supplier and Contract Management	5.0 Requisitioning	6.0 Purchasing	7.0 Receive Order	8.0 P-Card Administration	9.0 T&E Administration	10.0 Invoice Processing	11.0 Payment & Settlement	12.0 Period End Close	13.0 Reporting & Analytics	14.0 Merge Process	15.0 System Maintenance	16.0 Master Data Management
	1.1 Define Sourcing Strategy	2.1 Gather Market & Supplier Intelligence	3.1 Supplier Intake and Qualification	4.1 Define Supplier Portfolio & Segmentation	5.1 Requisition	6.1 Solicit / Track Supplier Quotes	7.1 Accept / Reject / Rescind (including ADNs)	8.1 Administer P-Cards	9.1 Administer Travel / Expense Cards	10.1 Invoice Intake	11.1 Validate, Approve, & Post Payment/Credit Notes	12.1 Close All Operating Sub-Ledger & Reconcile with GL	13.1 Develop & Maintain Reporting / Dashboards	14.1 Maintain Policies and Procedures	15.1 Maintain System Interface	16.1 Perform Master Data Maintenance
	1.2 Develop Category Management Plan	2.2 Value Analysis	3.2 Supplier Requests	4.2 Manage Supplier Performance and Risk	5.2 Bill Only, B2B and Replace	6.2 PO / PO Issue	7.2 Receipt Exception Reconciliation	8.2 P-Card Purchases	9.2 Reverse Credit Card Transaction	10.2 Invoice Inquiries and approval	11.2 Generate Payments File & Release Payments	12.2 Perform Reconciliations & Identify Adjustments	13.2 Analyze and Report on Spend & Savings Opportunities	14.2 Develop and Maintain Internal Controls	15.2 Perform System Updates	
	1.3 Define Buying Channel	2.3 Conduct Sourcing Event	3.2 Manage Supplier Events	4.3 Contract Monitoring and Administration	5.3 Requisition Review and Approval	6.3 PO Acknowledgment	7.3 Additional Receipt	8.3 P-Card Transaction Verification	9.3 Expense Report	10.3 Invoice Match	11.3 Record Intercompany Receipt	12.3 Month End Accruals	13.3 Analyze & Report on Performance Operations	14.3 Perform Audit Activities		
	1.4 Govern & Manage Category	2.4 Contract Authoring	3.4 Load & Maintain Catalog / Item Master	4.4 Contract Review and Renewal		6.4 Change Order	7.4 Receipt Accruals	8.4 P-Card Payment	9.4 T&E Report Audit & Approval	10.4 Invoice Match Exceptions	11.4 Perform Bank Reconciliations		14.4 Evaluate and Implement Improvement Opportunities			
		2.5 Supplier Contract				6.5 Backorders / PO Fill Kill	7.5 Return to Supplier		9.5 T&E Exceptions Follow up / Resolution	10.5 Prepaid Spend Amortization			14.5 Retain Records			
		2.6 Supplier Contract Amendments & Cancellations														



Process scope—Demand to Replenish (D2R)

L1	Demand to Replenish (D2R)										
L2	Asset Inventory Management		Logistics Management			PAR Management		Accounting & Close	Reporting	Process Governance	
L3	1.0 Manage Inventory	2.0 Inventory Ordering	3.0 Manage Inbound Material	4.0 Manage Outbound Material	5.0 Distribution	6.0 Order Planning	7.0 Replenishment	8.0 Month End	9.0 Reporting & Analysis	10.0 Manage Process	11.0 System Maintenance
	1.1 Manage Locations	2.1 Check & Confirm Inventory Balances	3.1 Accept Shipment / Receipt (including ASNs)	4.1 Capture Shipping Costs and Cost to Charge	5.1 Quick Issue	6.1 Define ABC Classification	7.1 PAR Count	8.1 Close AP Operating Sub Ledger & Reconcile with GL	9.1 Develop & Maintain Reporting / Dashboards	10.1 Maintain Policies and Procedures	11.1 Maintain System Interfaces
	1.2 Define ABC Classification	2.2 Inventory Stock Request	3.2 Receipt Exception Reconciliation	4.2 Manage Outbound Inventory	5.2 Good Delivery	6.2 Establish PAR Levels	7.2 JIT/LUM Replenishment for PAR Locations	8.2 Perform Reconciliations & Identify Adjustments	9.2 Analyze & Report on Performance Operations	10.2 Develop and Maintain Internal Controls	11.3 Perform System Updates
	1.3 Establish Inventory Levels	2.3 Inventory Putaway	3.3 Additional Receipt	4.3 Confirm and Track Outbound Shipment	5.3 Confirm and Track Goods Delivery	6.3 Manage Order Rules	7.3 Manage ad hoc inventory requests	8.3 Month End Accruals		10.3 Perform Audit Activities	11.2 Perform Master Data Maintenance
	1.4 Define Inventory Substitutions	2.4 Consigned Inventory	3.4 Receipt Accruals				7.4 Inventory Stock Request			10.4 Evaluate and Implement Improvement Opportunities	
	1.5 Inventory Move	2.5 Tissue Tracking	3.5 Return to Supplier				7.5 PAR Putaway			10.5 Retain Records	
	1.6 Inventory Counts	2.6 Explant Tracking					7.6 Multi-Bin Kanban PAR Replenishment				
	1.7 Inventory Adjustments (QTY and cost)										
	1.8 Inventory Transfer										
	1.9 Inventory Return										

Improvement initiatives should be customized based on your organization's specific priorities. KPMG can work with your team to conduct these discussions as well as support your workshops with industry observations of common, leading, and emerging practices across these taxonomies. In addition, we can share our observations of how model healthcare supply chain teams are structured.



Planning for implementation

KPMG has observed that organizations that establish quantifiable improvement targets are able to implement their improvement initiatives with measurable success. These quantifiable improvement targets should be based on leading practice benchmarks, should be specific to the improvement initiative being implemented, and should have a current-state baseline from which to monitor progress. As an example, an organization implementing robotic process automation (RPA) to automate monitoring of vendor performance against contractual service line agreements may look to increase the percentage of high-priority vendors under a formal supplier performance management process (based on supplier segmentation) by a certain percentage. This increased automation can result in additional efficiencies—the percentage of automation may result in shifting category manager attention to more strategic activities, potentially decreasing the cycle time between reviewing sourcing agreements and contract execution. To measure success, baseline values (in this case, the percentage of RPA automation and cycle time for contract execution) and the desired target improvement (i.e., increase RPA from baseline of 5 percent to target of 20 percent and improve contract execution cycle time from 90 days to 30 days) should be captured immediately prior to implementation so that progress against targets can be tracked on a regular basis.

Other elements that can contribute to a successful supply chain operating model transformation are leadership buy-in and support, end-user input during the detailed design phase, a comprehensive approach to transformation that incorporates all Target Operating Model (TOM) dimensions, sufficient access to funding, and a departmental culture that promotes willingness to train their employees and encourage adopting change.





In closing

Supply chain operating model transformation is a complex and time-intensive undertaking that may take multiple years to accomplish. There is no one-size-fits-all approach; as leading practices continue to evolve and become more technologically advanced, supply chain leaders should periodically reevaluate their operating model for improvement opportunities to stay ahead of the curve.

KPMG is a market leader in working with healthcare providers to support operating model transformation efforts; for decades, KPMG has focused on conducting leading practice research, developing proprietary and healthcare-specific tools and accelerators, and hiring clinicians and healthcare management professionals into consulting to help maximize the value that we are able to deliver to our clients. Our team has provided services to nearly two-thirds (62 percent) of all healthcare systems in the United States, including 50 percent of the top 200 healthcare systems. If you or a peer is interested in learning more about where to focus your supply chain operating model improvement efforts, then please feel free to reach out to us.

