

SCOR Metrics

The Supply Chain Operations Reference (SCOR®) model is the product of Supply Chain Council (SCC), an independent, nonprofit, global corporation with membership open to all companies and organizations interested in applying and advancing state-of-the-art supply chain management systems and practices. The SCOR model captures the Council's consensus view of supply chain management. While much of the underlying content of the model has been used by practitioners for many years, the SCOR model provides a unique framework that links business process, metrics, best practices, and technology features into a unified structure to support communication among supply chain partners and to improve the effectiveness of supply chain management and related supply chain improvement activities.

Performance Attributes

The performance attributes of a supply chain permit it to be analyzed and evaluated against other supply chains with competing strategies. SCOR identifies five core supply chain performance attributes: Reliability, Responsiveness, Agility, Costs, and Asset Management. Without these characteristics it is difficult to compare an organization that strategically chooses to be the low-cost provider against an organization that chooses to compete on reliability and performance.

Directly associated with the performance attributes are the Level 1 strategic metrics. These Level 1 metrics are the calculations by which an organization can measure how successful it is in achieving its desired positioning within the market space.

Many metrics in the SCOR model are hierarchical, just as the process elements are hierarchical. Level 1 metrics are created from lower level calculations. Level 2 metrics are generally associated with a narrower subset of processes. For example, Delivery Performance is calculated as the total number of products delivered on time and in full based on a commit date. Additionally, metrics (diagnostics) are used to diagnose variations in performance against plan. For example, an organization may wish to examine the correlation between the request date and commit date.

New in SCOR 10.0: People

The people section introduced in SCOR 10.0 (available online and in the printed SCOR manual) provides means for managing talent in the supply chain by incorporating a standard for describing the expertise required to perform tasks and manage processes. The SCOR skills management complements the existing process, metrics, and practice reference components by aligning people and their skills to the processes.

A Skill in SCOR is the capacity to deliver predetermined results with minimal input of time and energy, characterized by a standard definition with associated experience, aptitudes, and training.

Experience is the knowledge or ability acquired by observation or active participation, obtained by doing the work in a real life environment, and undergoing different situations that require different actions.

Aptitude is a natural, acquired, learned, or developed ability to perform a certain kind of work at a certain level.

Training develops a skill or type of behavior through instruction.

All people skills are coded with a capital letter H followed by a capital letter representing the element: S for Skills, A for Aptitudes, E for Experience and T for Training. These are followed by a period and a four digit number. Note: The number in the ID is a unique identifier and does NOT indicate any kind of priority, importance, or other meaning.

Supply Chain Reliability

RL.1.1 - Perfect Order Fulfillment

RL.2.1 - % of Orders Delivered In Full

RL.3.33 - Delivery Item Accuracy

RL.3.35 - Delivery Quantity Accuracy

RL.2.2 - Delivery Performance to Customer Commit Date

RL.3.32 - Customer Commit Date Achievement Time Customer Receiving

RL.3.34 - Delivery Location Accuracy

RL.2.3 - Documentation Accuracy

RL.3.31 - Compliance Documentation Accuracy

RL.3.43 - Other Required Documentation Accuracy

RL.3.45 - Payment Documentation Accuracy

RL.3.50 - Shipping Documentation Accuracy

RL.2.4 - Perfect Condition

RL.3.12 - % Of Faultless Installations

RL.3.24 - % Orders/Lines Received Damage Free

RL.3.41 - Orders Delivered Damage Free Conformance

RL.3.42 - Orders Delivered Defect Free Conformance

RL.3.55 - Warranty and Returns

Supply Chain Responsiveness

RS.1.1 - Order Fulfillment Cycle Time

RS.2.1 - Source Cycle Time

RS.3.8 - Authorize Supplier Payment Cycle Time

RS.3.35 - Identify Sources of Supply Cycle Time

RS.3.107 - Receive Product Cycle Time

RS.3.122 - Schedule Product Deliveries Cycle Time

RS.3.125 - Select Supplier and Negotiate Cycle Time

RS.3.139 - Transfer Product Cycle Time

RS.3.140 - Verify Product Cycle Time

RS.2.2 - Make Cycle Time

RS.3.33 - Finalize Production Engineering Cycle Time

RS.3.49 - Issue Material Cycle Time

RS.3.101 - Produce and Test Cycle Time

RS.3.114 - Release Finished Product to Deliver Cycle Time

RS.3.123 - Schedule Production Activities Cycle Time

RS.3.128 - Stage Finished Product Cycle Time

RS.3.142 - Package Cycle Time

RS.2.3 - Deliver Cycle Time

RS.3.16 - Build Loads Cycle Time

RS.3.18 - Consolidate Orders Cycle Time

RS.3.46 - Install Product Cycle Time

RS.3.51 - Load Product & Generate Shipping Documentation Cycle Time

RS.3.95 - Pack Product Cycle Time

RS.3.96 - Pick Product Cycle Time

RS.3.102 - Receive & Verify Product by Customer Cycle Time

RS.3.110 - Receive Product from Source or Make Cycle Time

RS.3.111 - Receive, Configure, Enter, & Validate Order Cycle Time

RS.3.116 - Reserve Resources and Determine Delivery Date Cycle Time

RS.3.117 - Route Shipments Cycle Time

RS.3.120 - Schedule Installation Cycle Time

RS.3.124 - Select Carriers & Rate Shipments Cycle Time

RS.3.126 - Ship Product Cycle Time

RS.2.4 - Delivery Retail Cycle Time

RS.3.17 - Checkout Cycle Time

RS.3.32 - Fill Shopping Cart Cycle Time

RS.3.34 - Generate Stocking Schedule Cycle Time

RS.3.97 - Pick Product from Backroom Cycle Time

RS.3.109 - Receive Product at Store Cycle Time

RS.3.129 - Stock Shelf Cycle Time

Supply Chain Agility

AG.1.1 - Upside Supply Chain Flexibility

AG.2.1 - Upside Flexibility (Source)

AG.2.2 - Upside Flexibility (Make)

AG.2.3 - Upside Flexibility (Deliver)

AG.2.4 - Upside Return Flexibility (Source)

AG.2.5 - Upside Return Flexibility (Deliver)

AG.1.2 - Upside Supply Chain Adaptability

AG.2.6 - Upside Adaptability (Source)

AG.2.7 - Upside Adaptability (Make)

AG.2.8 - Upside Adaptability (Deliver)

AG.2.9 - Upside Return Adaptability (Source)

AG.2.10 - Upside Return Adaptability (Deliver)

AG.1.3 - Downside Supply Chain Adaptability

AG.2.11 - Downside Adaptability (Source)

AG.2.12 - Downside Adaptability (Make)

AG.2.13 - Downside Adaptability (Deliver)

AG.1.4 - Overall Value at Risk (VAR)

AG.2.14 - Supplier's/Customer's/Product's Risk Rating

AG.2.15 - Value at Risk (Plan)

AG.2.16 - Value at Risk (Source)

AG.2.17 - Value at Risk (Make)

AG.2.18 - Value at Risk (Deliver)

AG.2.19 - Value at Risk (Return)

Supply Chain Costs

CO.1.1 - Supply Chain Management Cost

CO.2.1 - Cost to Plan

CO.3.104 - Cost to Plan (Deliver)

CO.3.105 - Cost to Plan (Make)

CO.3.106 - Cost to Plan (Return)

CO.3.107 - Cost to Plan (Source)

CO.3.108 - Cost to Plan Supply Chain

CO.2.2 - Cost to Source

CO.3.27 - Cost to Authorize Supplier Payment

CO.3.115 - Cost to Receive Product

CO.3.126 - Cost to Schedule Product Deliveries

CO.3.137 - Cost to Transfer Product

CO.3.138 - Cost to Verify Product

CO.2.3 - Cost to Make

CO.2.4 - Cost to Deliver

CO.3.163 - Order Management Costs

CO.3.200 - Order Delivery Costs

CO.2.5 - Cost to Return

CO.3.131 - Cost to Source Return

CO.2.7 - Mitigation Cost (\$)

CO.3.178 - Risk Mitigation Costs (Deliver)

CO.3.179 - Risk Mitigation Costs (Make)

CO.3.180 - Risk Mitigation Costs (Plan)

CO.3.181 - Risk Mitigation Costs (Return)

CO.3.182 - Risk Mitigation Costs (Source)

CO.1.2 - Cost of Goods Sold

CO.3.140 - Direct Labor Cost

CO.3.141 - Direct Material Cost

CO.3.155 - Indirect Cost Related to Production

Supply Chain Asset Management

AM.1.1 - Cash-to-Cash Cycle Time

AM.2.1 - Days Sales Outstanding

AM.2.2 - Inventory Days of Supply

AM.3.45 - Inventory Days of Supply (Finished Goods)

AM.3.16 - Inventory Days of Supply (Raw Material)

AM.3.17 - Inventory Days of Supply (WIP)

AM.3.23 - Recycle Days of Supply

AM.3.28 - Percentage Defective Inventory

AM.3.37 - Percentage Excess Inventory

AM.3.44 - Percentage Unserviceable MRO Inventory

AM.2.3 - Days Payable Outstanding

AM.1.2 - Return on Supply Chain Fixed Assets

AM.2.5 - Supply Chain Fixed Assets

AM.3.11 - Fixed Asset Value (Deliver)

AM.3.18 - Fixed Asset Value (Make)

AM.3.20 - Fixed Asset Value (Plan)

AM.3.24 - Fixed Asset Value (Return)

AM.3.27 - Fixed Asset Value (Source)

AM.1.3 - Return on Working Capital

AM.2.6 - Accounts Payable (Payables Outstanding)

AM.2.7 - Accounts Receivable (Sales Outstanding)

AM.2.8 - Inventory

SCOR® Quick Reference Guide



SCOR Online Access

The SCOR framework is also available online to members. The online version features easy navigation through linked definitions, performance metrics, best practices, and skills.

Visit: supply-chain.org/online-access

scor®

Supply Chain Operations Reference model

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SCOR Processes	sP PLAN					sS SOURCE			sM MAKE			sD DELIVER				sR RETURN			Best Practices
<p>The Supply Chain Operations Reference (SCOR®) model describes the business activities associated with all phases of satisfying a customer’s demand. The model itself is organized around the five primary management processes of Plan, Source, Make, Deliver, and Return. Using these process building blocks, the SCOR model can be used to describe supply chains that are very simple or very complex using a common set of definitions across disparate industries. Today public and private organizations and companies around the world use the model as a foundation for global and site-specific supply chain improvement projects.</p> <p>SCOR spans all customer interactions (quote to cash), all physical material transactions (procure to payment, including equipment, supplies, spare parts, bulk product, software, etc.) and all market interactions (manufacturing, from the understanding of aggregate demand to the fulfillment of each order).</p> <p>The model is designed and maintained to support supply chains of various complexities and across multiple industries. The Council has focused on three process levels and does not attempt to prescribe how a particular organization should conduct its business or tailor its systems or information flow.</p> <p>SCOR Model Structure</p> <p>A set of standard notation is used throughout the model:</p> <ul style="list-style-type: none"> P depicts Plan elements S depicts Source elements M depicts Make elements D depicts Deliver elements R depicts Return elements <p>SR = Source Return and DR = Deliver Return.</p> <p>An E preceding any of the others (e.g., EP) indicates that the process element is an Enable element associated with the Planning or Execution element. Every Level 1 process has Enable processes associated with it.</p>	<p>sP1 Plan Supply Chain</p> <p>sP2 Plan Source</p> <p>sP3 Plan Make</p> <p>sP4 Plan Deliver</p> <p>sP5 Plan Return</p>	<p>sS1 Source Stocked Product</p> <p>sS2 Source Make-to-Order Product</p> <p>sS3 Source Engineer-to-Order Product</p>	<p>sM1 Make-to-Stock</p> <p>sM2 Make-to-Order</p> <p>sM3 Engineer-to-Order</p>	<p>sD1 Deliver Stocked Product</p> <p>sD2 Deliver Make-to-Order Product</p> <p>sD3 Deliver Engineer-to-Order Product</p> <p>sD4 Deliver Retail Product</p>	<p>sSR1 Source Return Defective Product</p> <p>sSR2 Source Return MRO Product</p> <p>sSR3 Source Return Excess Product</p>	<p>sS1.1: Schedule Product Deliveries</p> <p>sS1.2: Receive Product</p> <p>sS1.3: Verify Product</p> <p>sS1.4: Transfer Product</p> <p>sS1.5: Authorize Supplier Payment</p>	<p>sS2.1: Schedule Product Deliveries</p> <p>sS2.2: Receive Product</p> <p>sS2.3: Verify Product</p> <p>sS2.4: Transfer Product</p> <p>sS2.5: Authorize Supplier Payment</p>	<p>sS3.1: Identify Sources of Supply</p> <p>sS3.2: Select Final Supplier(s) and Negotiate</p> <p>sS3.3: Schedule Product Deliveries</p> <p>sS3.4: Receive Product</p> <p>sS3.5: Verify Product</p> <p>sS3.6: Transfer Product</p> <p>sS3.7: Authorize Supplier Payment</p>	<p>sM1.1: Schedule Production Activities</p> <p>sM1.2: Issue Product</p> <p>sM1.3: Produce and Test</p> <p>sM1.4: Package</p> <p>sM1.5: Stage Product</p> <p>sM1.6: Release Product to Deliver</p> <p>sM1.7: Waste Disposal</p>	<p>sM2.1: Schedule Production Activities</p> <p>sM2.2: Issue Product</p> <p>sM2.3: Produce and Test</p> <p>sM2.4: Package</p> <p>sM2.5: Stage Finished Product</p> <p>sM2.6: Release Finished Product to Deliver</p> <p>sM2.7: Waste Disposal</p>	<p>sM3.1: Finalize Production Engineering</p> <p>sM3.2: Schedule Production Activities</p> <p>sM3.3: Issue Product</p> <p>sM3.4: Produce and Test</p> <p>sM3.5: Package</p> <p>sM3.6: Stage Finished Product</p> <p>sM3.7: Release Product to Deliver</p> <p>sM3.8: Waste Disposal</p>	<p>sD1.1: Process Inquiry and Quote</p> <p>sD1.2: Receive, Enter, and Validate Order</p> <p>sD1.3: Reserve Inventory and Determine Delivery Date</p> <p>sD1.4: Consolidate Orders</p> <p>sD1.5: Build Loads</p> <p>sD1.6: Route Shipments</p> <p>sD1.7: Select Carriers and Rate Shipments</p> <p>sD1.8: Receive Product from Source or Make</p> <p>sD1.9: Pick Product</p> <p>sD1.10: Pack Product</p> <p>sD1.11: Load Vehicle and Generate Shipping Docs</p> <p>sD1.12: Ship Product</p> <p>sD1.13: Receive and Verify Product by Customer</p> <p>sD1.14: Install Product</p> <p>sD1.15: Invoice</p>	<p>sD2.1: Process Inquiry and Quote</p> <p>sD2.2: Receive, Configure, Enter, and Validate Order</p> <p>sD2.3: Reserve Inventory and Determine Delivery Date</p> <p>sD2.4: Consolidate Orders</p> <p>sD2.5: Build Loads</p> <p>sD2.6: Route Shipments</p> <p>sD2.7: Select Carriers and Rate Shipments</p> <p>sD2.8: Receive Product from Source or Make</p> <p>sD2.9: Pick Product</p> <p>sD2.10: Pack Product</p> <p>sD2.11: Load Product and Generate Shipping Docs</p> <p>sD2.12: Ship Product</p> <p>sD2.13: Receive and Verify Product by Customer</p> <p>sD2.14: Install Product</p> <p>sD2.15: Invoice</p>	<p>sD3.1: Obtain and Respond to RFP/RFQ</p> <p>sD3.2: Negotiate and Receive Contract</p> <p>sD3.3: Enter Order, Commit Resources, and Launch Program</p> <p>sD3.4: Schedule Installation</p> <p>sD3.5: Build Loads</p> <p>sD3.6: Route Shipments</p> <p>sD3.7: Select Carriers and Rate Shipments</p> <p>sD3.8: Receive Product from Source or Make</p> <p>sD3.9: Pick Product</p> <p>sD3.10: Pack Product</p> <p>sD3.11: Load Product and Generate Shipping Docs</p> <p>sD3.12: Ship Product</p> <p>sD3.13: Receive and Verify Product by Customer</p> <p>sD3.14: Install Product</p> <p>sD3.15: Invoice</p>	<p>sD4.1: Generate Stocking Schedule</p> <p>sD4.2: Receive Product at the Store</p> <p>sD4.3: Pick Product from Backroom</p> <p>sD4.4: Stock Shelf</p> <p>sD4.5: Fill Shopping Cart</p> <p>sD4.6: Checkout</p> <p>sD4.7: Deliver and/or Install</p>	<p>sSR1.1: Identify Defective Product Condition</p> <p>sSR1.2: Disposition Defective Product</p> <p>sSR1.3: Request Defective Product Return Authorization</p> <p>sSR1.4: Schedule Defective Product Shipment</p> <p>sSR1.5: Return Defective Product</p>	<p>sSR2.1: Identify MRO Product Condition</p> <p>sSR2.2: Disposition MRO Product</p> <p>sSR2.3: Request MRO Return Authorization</p> <p>sSR2.4: Schedule MRO Shipment</p> <p>sSR2.5: Return MRO Product</p>	<p>sSR3.1: Identify Excess Product Condition</p> <p>sSR3.2: Disposition Excess Product</p> <p>sSR3.3: Request Excess Product Return Authorization</p> <p>sSR3.4: Schedule Excess Product Shipment</p> <p>sSR3.5: Return Excess Product</p>	<p>The SCOR Best Practices section contains management practices, software solutions, and definitions associated with each process. These practices can contribute to “best-in-class” performance in supply chain optimization (SCOR), supply chain risk management, and environmentally responsible supply chain management (GreenSCOR).</p> <p>Supply Chain Risk Management</p> <p>Supply chain risk management is the systematic identification, assessment, and mitigation of potential disruptions in logistics networks with the objective to reduce their negative impact on the logistics network’s performance. Potential disruptions can occur within the supply chain (e.g. insufficient quality, unreliable suppliers, machine break-down, uncertain demand, etc.) and outside the supply chain (e.g. flooding, terrorism, labor strikes, natural disasters, etc.). Both areas are considered in an integral multi-phase approach for supply chain risk management:</p> <p>Establish Context – Define and document the objective and scope (internal and external) for managing risk.</p> <p>Identify Risk – Collect and document all potential risk events that may impact the organization from meeting its goals.</p> <p>Assess Risk – Collect and document for each potential risk the causes, probability, and consequences. (Understand the Value at Risk.)</p> <p>Evaluate Risk – Determine for each risk whether mitigation actions are required or the risk is acceptable; prioritize risks.</p> <p>Mitigate Risk – Determine the actions required to eliminate, reduce, or accept and monitor the risks (Risk Mitigation Plan).</p> <p>Monitor Risk – Continuously monitor effectiveness of mitigation plans; identify emerging risks and changes in internal and external context.</p> <p>GreenSCOR</p> <p>The following strategic environmental metrics allow the SCOR model to be used as a framework for environmental accounting:</p> <ul style="list-style-type: none"> Carbon Emissions (Tons CO2 Equivalent) Air Pollutant Emissions (Tons or kg) Liquid Waste Generated (Tons or kg) Solid Waste Generated (Tons or kg) % Recycled Waste (Percent) <p>The SCOR framework ties emissions to the originating processes, providing a structure for measuring environmental performance and identifying where performance can be improved. The hierarchical nature of the model allows strategic environmental footprint goals to be translated to specific targets and activities.</p>
		<p>sEP Enable Plan</p> <p>sEP1: Manage Business Rules for Plan Processes</p> <p>sEP2: Manage Performance of Supply Chain</p> <p>sEP3: Manage Plan Data Collection</p> <p>sEP4: Manage Integrated Supply Chain Inventory</p> <p>sEP5: Manage Integrated Supply Chain Capital Assets</p>	<p>sEP6: Manage Integrated Supply Chain Transportation</p> <p>sEP7: Manage Planning Configuration</p> <p>sEP8: Manage Plan Regulatory Requirements and Compliance</p> <p>sEP9: Manage Supply Chain Risk</p> <p>sEP10: Align Supply Chain Unit Plan with Financial Plan</p>	<p>sES Enable Source</p> <p>sES.1: Manage Sourcing Business Rules</p> <p>sES.2: Assess Supplier Performance</p> <p>sES.3: Maintain Source Data</p> <p>sES.4: Manage Product Inventory</p> <p>sES.5: Manage Capital Assets</p>	<p>sES.6: Manage Incoming Product</p> <p>sES.7: Manage Supplier Network</p> <p>sES.8: Manage Import/Export Requirements</p> <p>sES.9: Manage Supply Chain Source Risk</p> <p>sES.10: Manage Supplier Agreements</p>	<p>sEM Enable Make</p> <p>sEM.1: Manage Production Rules</p> <p>sEM.2: Manage Production Performance</p> <p>sEM.3: Manage Make Information</p> <p>sEM.4: Manage In-Process Products (WIP)</p> <p>sEM.5: Manage Make Equipment and Facilities</p>	<p>sEM.6: Manage Transportation (WIP)</p> <p>sEM.7: Manage Production Network</p> <p>sEM.8: Manage Make Regulatory Environment</p> <p>sEM.9: Manage Supply Chain Make Risk</p>	<p>sED Enable Deliver</p> <p>sED.1: Manage Deliver Business Rules</p> <p>sED.2: Assess Delivery Performance</p> <p>sED.3: Manage Deliver Information</p> <p>sED.4: Manage Finished Goods Inventory</p> <p>sED.5: Manage Deliver Capital Assets</p>	<p>sED.6: Manage Transportation</p> <p>sED.7: Manage Product Life Cycle</p> <p>sED.8: Manage Import/Export Requirements</p> <p>sED.9: Manage Supply Chain Deliver Risk</p>	<p>sER Enable Return</p> <p>sER.1: Manage Business Rules for Return Processes</p> <p>sER.2: Manage Performance of Return Processes</p> <p>sER.3: Manage Return Data Collection</p> <p>sER.4: Manage Return Inventory</p> <p>sER.5: Manage Return Capital Assets</p>	<p>sER.6: Manage Return Transportation</p> <p>sER.7: Manage Return Network Configuration</p> <p>sER.8: Manage Return Regulatory Requirements and Compliance</p> <p>sER.9: Manage Supply Chain Return Risk</p>								