



SMART SUPPLY CHAIN SERVICES



STRATEGY & ANALYTICS
FULL NETWORK VISIBILITY
LOWER COSTS WITH IMPROVED ACCURACY
SECURE & CONFIDENTIAL

ONE TEAM—GLOBALLY CONNECTED



COMPLEX ISSUES MADE SIMPLE



Managing 4,000+ SKUs

SSCS recently serviced over 1 million units through the supply chain for an internationally known customer. This achievement stands as just one example of a customer SSCS has helped guide and manage from production to fulfillment.



220 Supplier Network

With a large and varied network of suppliers, SSCS is able to access a wide choice of cost-competitive component and part manufacturers from around the world. This reach and diversity helps with pricing, availability and speed to market.



1,000 Global Ship-to Locations

SSCS's reach is connected and aligned worldwide. With its global network, SSCS is able to facilitate production and fulfillment to accommodate the shortest delivery demands, globally.



1.9+ Million Annual Transactions

Combining parts, shipping, inventory, fulfillment and replenishment, SSCS annually coordinates and manages over 1.9 million complex transactions for its customers, freeing them to concentrate on their core strengths of manufacturing, R&D, sales, etc.



SMART SUPPLY CHAIN SERVICES

A QUALIFIED, COST
COMPETITIVE SUPPLY
CHAIN PROVIDER

SMART Supply Chain Services (SSCS) blends multiple components into its supply chain services: planning and analytics, a customized desktop/tablet platform, and programming with value added services. With this mix, SSCS customers present some of the most prominent companies in networking, data storage, cloud computing and hosting, HD/SSD, and memory manufacturing. Below, are some of the key customer engagements SSCS performs.



Planning

SMART Supply Chain Services (SSCS) planning tools have helped its customers hone their supply chain network. With its combination of LEAN analytic tools, SSCS can reduce lead times and supply gaps, balance global site inventories, provide proactive replenishment, allowing the supply chain to run more accurately and efficiently.



Platform

SSCS dashboards are customizable and allow 24/7 access to a full suite of network activities, such as providing a supply and demand overview of parts within the network. With the dashboards, users can also view part historical analysis, inventory, stock on hand, and other vital components within the supply chain.



Programming

SSCS also offers programming services for its customers, including component device programming, SSD firmware updates, conducted in a state-of-the-art facility scalable to customer needs. SSCS programming services are cost-competitive, quick and flexible to scale, and geared to customers with non-linear demand.

Value-Added Services

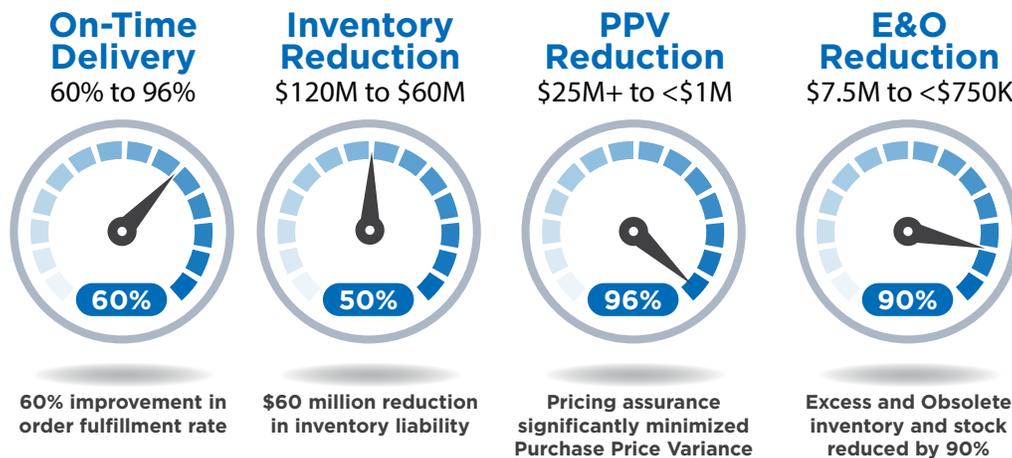
SSCS also provides other value-added services, such as burn-in, taping, reeling, dry packing, baking, packaging, and fulfillment - activities integral and crucial for a fully engaged, closed loop supply chain.

PLANNING & STRATEGY

SMART Supply Chain Services (SSCS) applies a software managed services approach with LEAN supply chain planning initiatives that capture all details in the logistics network. Planning, demand, supply, timing, executables and fulfillment are built into the system, enabling the most efficient network possible. By partnering with SSCS, companies can focus on their core strengths.

Servicing contract manufacturers at multiple, worldwide sites, variable part combinations and complexities, SSCS guides its customers' networks with co-planning and fulfillment, price management, total acquisition management (TAM) assurance, engineering change notice (ECN) management, and excess and oversupply (E&O) management. The graphic below shows how SSCS can successfully administer the day-to-day tactical minutiae of supply chain planning and operations with partners maintaining strategic and contractual control.

Proven Results - Partner Examples



Advantages of the SSCS Managed Service Model

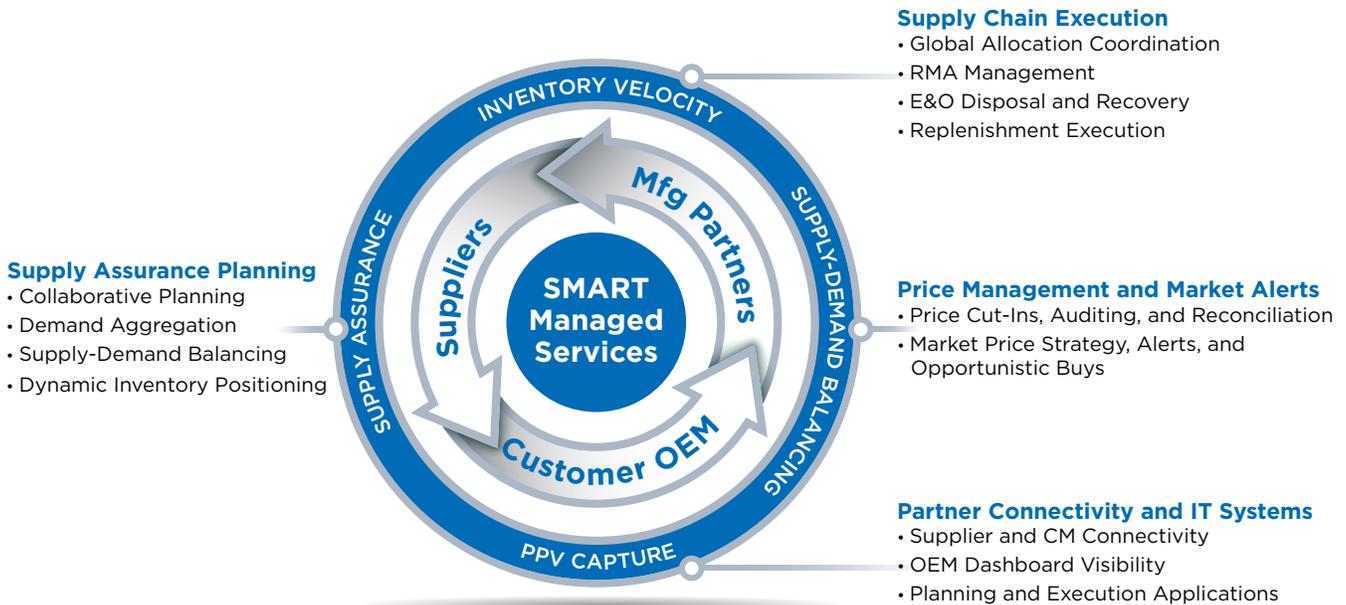
- Low-Touch Planning and Execution
- Captures Purchase Price Variance (PPV)
- Reduces Risk with Inventory Reduction
- Proactive Replenishment Planning, Execution and Signal Alignment
- End-to-End Supply Chain Visibility
- Market Pricing Alert Management
- Transaction Neutral - No Supplier or Contract Manufacturer (CM) Bias



GLOBAL DEMAND MANAGEMENT

Using LEAN principles and analytics, SSCS's demand sensing and validation provides continuous monitoring of all demand signals. Dashboards provide demand change data at the aggregate and lowest level to quickly identify actionable changes from planning cycle to planning cycle. SSCS provides a commit to demand to complete the closed loop process.

With SSCS's closed loop process, various aspects of the supply chain network are planned and addressed as follows.



HOW DOES SSCS DO IT?

When a company partners with SSCS, a central planning team is formed between OEM and SSCS. With these collaborative sessions, orders, resizings, and ROPs are discussed. In these meetings, trend and order data is analyzed between all partners - the OEM, suppliers and contract manufacturers.

Along with planned forecasting, SSCS also uses an exception based process. For example, if a big upside, or large sustained order is expected, SSCS can work on an extended PO period versus the standard lead time, extending placements and taking into positioning additional materials and accounting for risk buys that may be needed.



PLANNING

From 10 Weeks to Three Days

Timing is everything, and that's certainly true with purchasing and delivery expectations.

Strategic purchasing, re-order points (ROP), fulfillment dates, along with real-time inventory status, allows SSCS customers to fine-tune global forecasts which provides the most responsive distribution and fulfillment possible.

Strategic Purchasing: SSCS is continuously refining and re-evaluating the procurement process for its customers to realize the most cost-effective sourcing available at the most optimum costs. SSCS analyzes optimized pricing from suppliers so they can buy, stock, and produce for customers at the lowest total acquisition cost.

LEAN + ROP Strategy: SSCS utilizes LEAN logic to maximize inventory velocity and calculate safety stock. SSCS's LEAN process reduces shortages and allows for unanticipated demand.

Inventory Maintenance: SSCS has one global Enterprise Resource Planning (ERP) system which enables all global inventory to be monitored on one platform where all regions can see all supply. SSCS systems and reports are updated in real time with no delays. This gives customers full visibility into making strategic decisions and managing inventory levels to support production lines or their customers.

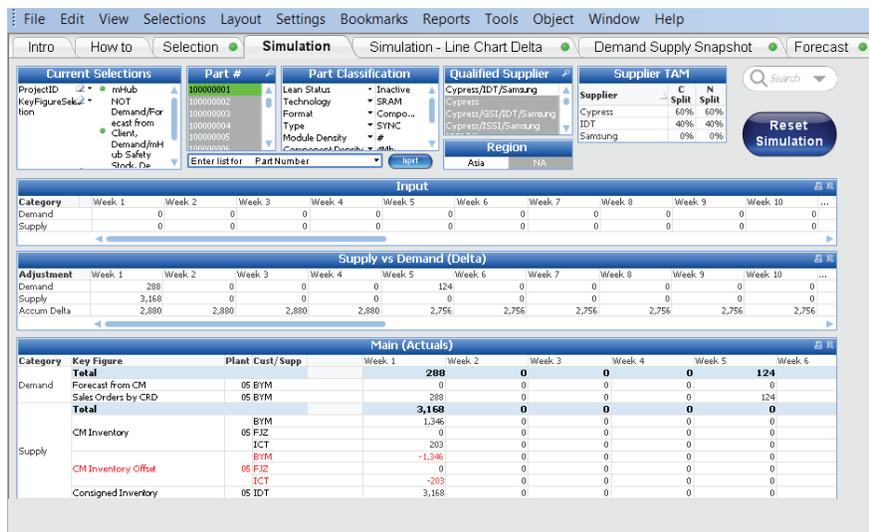
Demand Analytics: SSCS's primary systems, ERP, Logistics Execution System (LES), and Business Intelligence (Bi) are integrated into the digital platform. This gives SSCS the ability to design and create comprehensive forecast analytics, giving a planner all the data he or she needs to make accurate and correct decisions.



EXERCISE THE POWER OF THE PLATFORM

The SSCS platform or portal is designed to provide a supply-demand overview of parts within the SSCS supply chain system. The platform consists of several merged data models. SSCS continues to invest in the latest digital technology from SAP to support ERP, e-commerce and many supply chain functions. World-wide, SSCS runs one global instance of SAP S/4 Hana, Bi, GRC, GTS and Portals. All are integrated with our e-commerce, logistics execution and third party logistics systems to feed real-time data into our business Intelligence platform. Dashboards provide real time data so that customers can make the critical decisions to run their business with confidence.

The platform considers all data models when calculating weekly supply/shortage/excess quantities. Each tab within the dashboard provides a different view for evaluating supply vs. demand. The main tab displays all the data models in a clear, organized view, and where scenarios can be simulated using the input section.



GUI courtesy of Qlikview

Key Features

- Data-Rich Dashboards
- Global Forecast Aggregation and Planning Analytics
- Supply and Demand Alignment
- Historical Planning, Buy, Stock and Sell Activity
- Trend Analysis with Waterfall Displays
- Fully Customizable

Additional Features

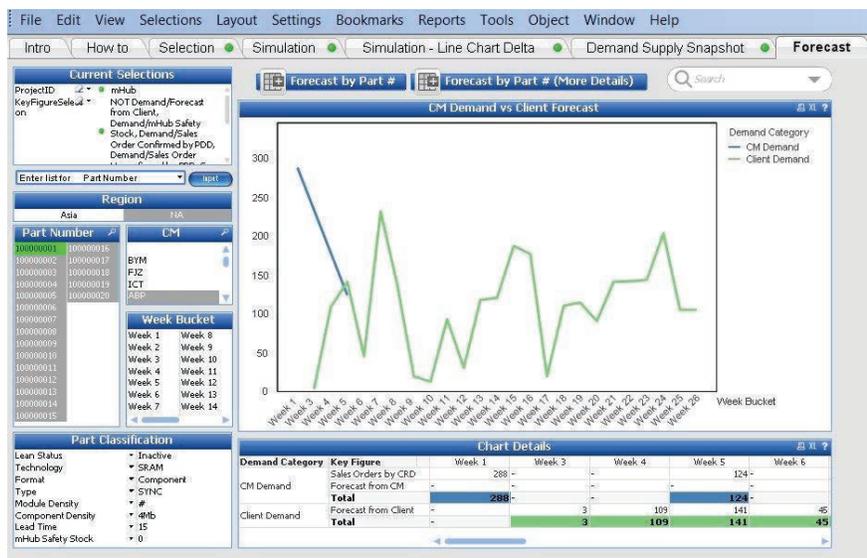
- Interactive "What If" Supply and Demand Scenarios
- Fully Secure, End-to-End Visibility
- One Portal for All Activities and Functionality
- Email Notifications and Updates



FASTER, SMARTER, STRONGER

With its set of control and simulated scenario tools, SSCS platform users can manage the supply/demand network in virtual real time. Using the LEAN analytic tools in the portal, they allow users to eliminate waste and focus on improving the flow through the supply chain.

With LEAN analytics, users can eliminate unevenness, minimize excess and obsolete, and improve product leveling through value stream mapping and additional tools.



GUI courtesy of Qlikview

Faster

Using the analytics tools, users can identify what areas of the supply chain need improvement and make changes accordingly. Likewise, they can also see what sequences of the chain are optimized and running smoothly. Iterative changes can be made to eliminate waste, increase production, and level the production and delivery stream.

Smarter

The analytics-driven intelligence the portal provides gives users complete visibility into macros and micros of the supply chain network. With the complete information the portal provides, users can manage a “smarter” supply chain that responds and predicts to virtually every variable in the network.

Stronger

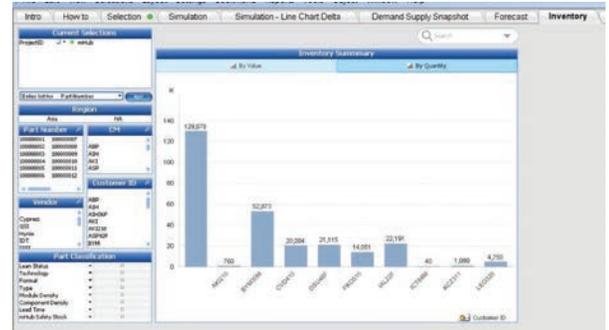
Users can hone their network into a finely tuned supply chain, reducing the fat of excess inventory and replacing it with analytic strength that the SSCS portal provides. Viewing pricing by component or finished good, users can focus on specific sets of the chain or the whole body, producing better network performance.



TOOLS

Waterfall Modeling – Portal tools allow customers to fully utilize supply chain networking by developing and reporting on every sequence: purchasing, design, production, testing, and fulfillment.

Predictive Purchasing – The online tools allow customers to anticipate the purchase of the exact part or component at the correct quantity at the lowest price and cost.



GUI courtesy of Qlikview

PO and Backlog Management – Ordering and managing stock are crucial factors in the supply chain. SSCS portal tools allow customers to manage every phase of component purchasing and prioritize stock with ease.

Fulfillment – Delivery of orders and products is not the end of the supply chain network, but it is a critical confidence factor between vendor and customer. The SSCS portal helps guide fulfillment to the highest service levels.

Commit Manager – This is how SSCS commits to the full demand signal and provides a closed loop process for the customer. For example, demand portions can be forecasted, not backlogged, and the commitment can be taken back in the ERP system to identify shortages. The commit form can be sent EDI, flat file, web portal, etc., and is based on the commits SSCS receives from the suppliers. A typical commit window is 26 weeks with the commits reported weekly, but can be adjusted based on customer requirements.

Forecast Analysis – The SSCS portal is able to provide forecasting information to its users, including closed-loop forecasting, statistical forecasting, aligning bottom-up and top-down forecasting. SSCS customers using analytics functions in the portal have seen significant declines in forecasting errors. Because the portal runs in virtual real-time, forecasts can be refined on a constant basis. Accurate forecasting response can improve production efficiency, reduce costs, and accelerate fulfillment and reduce lead times.



VALUE-ADDED SERVICES

Programming

SSCS also offers programming with its planning and platform services. The advantages of using SSCS Programming Services are that they offer worldwide state-of-the-art facilities, superior quality, are quick and flexible, and are a confidential and proven safe harbor supplier.

Below, are highlighted programming features. All programming is flexible to scale at very cost-aggressive pricing. First article requests for programming are also a feature SSCS provides.

Parallel Programing System

- Concurrently Programming System
- Vector Engine Co-Processor®

Devices

- NAND, NOR, Serial and Managed NAND Flash
- EPROM/EEPROM and Flash EPROM
- Microcontroller (MCU)
- PLD and eMMC
- Mix Signal & Timing

Throughput

- PLCC, CSP, BGA,BGA, SOIC,QFN,MLF, LAP, QFP, TSOP,LCC,SDIP
- Very Small Packages: MSOP8, TSOC6 and SOT23
- Ranging from SOT23, as Small as 1.63 mm x 2.95 mm to Larger 240-pin QFP

Throughput

- Ideal for Both High Volume and/or High Mix.
- Supports Very Low Voltage Devices Down to 0.7 (Vdd)

Handling System

- Integrated with LaserAlign™ Sensor from CyberOptics®
- Repeatable Pick-and-Place Accuracy
- Input and Output Media with Choices of Tube, Tray or Tape
- Device Transfer between Different Media Types

Marking System

- CO2 Laser Marking System
- Mark Devices once, Programmed, Verified, and Ready for Output
- Marks Up to Three Lines of Code

Vision System

- On-the-fly LaserAlign™ Sensor from CyberOptics®
- Repeatable Pick-and-Place Accuracy

Socket Cards

- Provides Electro-Mechanical Interface between Device and Programmer
- Receptacle-Base Socket Module
- Active, Pass and Fail LED Indicators per Device

Algorithms

- Algorithms Manufacturer Approved and Certified
- Develops Certified Algorithms for Newly Introduced Devices by Working with Equipment Vendor

Supported Device Commands

- ID Check
- Blank Check
- Continuity Check
- Compare
- Read
- Erase Device Setting Options
- Program
- Verify
- Test
- Checksum
- Secure
- Device Settings Configuration
- Auto-Range



VALUE-ADDED SERVICES

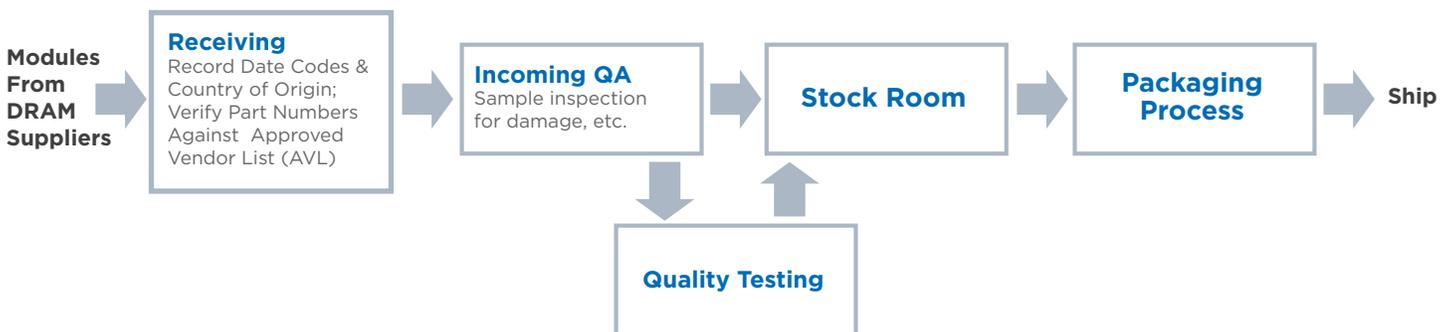
Fulfillment & Packaging

Along with programming, SSCS's value added services include fulfillment and material packaging. As well as leveraging worldwide purchasing power and distribution, SSCS can complete the “push” points from programming devices to customer fulfillment and complete packaging of materials so customers can utilize product immediately at reception. SSCS realizes customers need to address customization such as language, industry or process specializations, and the packaging and fulfillment processes allow for these.

SSCS is equipped to handle any customer's fulfillment and packaging, custom or standard. The SSCS worldwide, dedicated network is both flexible and comprehensive. Below, is the range of fulfillment and packaging capabilities SSCS can handle:

- Standard – SSCS can fulfill large orders for current sales needs or inventory storage to accommodate anticipated or future demands
- Custom – SSCS's fulfillment is also equipped to handle tailored or individualized order where one or two components of an order need to be modified for a specific customer
- Digital fulfillment – upload copy and product diagrams for field manuals and instruction sheets

Value-Added Fulfillment Process (Simplified)



For example, SSCS receives memory modules from suppliers and the fulfillment process begins. The modules are received where date codes and country of origin are recorded and part numbers are verified against approved vendors' lists. During Quality Analysis (QA) and stocking, out-of-box testing is performed. In the final step before shipping, programming can be done.

Packaging is an essential step in the fulfillment process. SSCS employs a specific system as part of SSCS's proprietary IT infrastructure, WIPTrack. This process ensures that products are properly tested, packaged, bundled, and labeled before they're scanned for shipping.



ONE TEAM - GLOBALLY CONNECTED

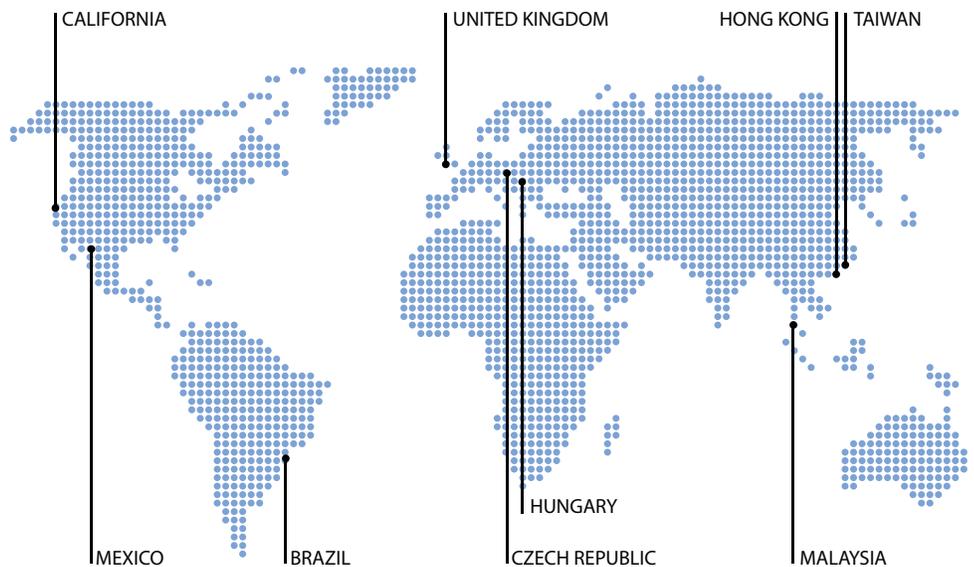
SMART Supply Chain Services (SSCS) delivers value-added, full visibility supply chain planning and programming services in a secure and confidential operating environment. With its expertise and experience, SSCS has become a qualified, cost-competitive, third-party provider to manufacturers that want to focus on their core competencies, retain strategic control, yet do not wish to maintain day-to-day tactical operations of the supply chain network. SSCS is a division of SMART Modular Technologies.

EXPERIENCE

At SSCS, the biggest asset is its staff and their significant supply chain management experience supporting all regions. SSCS has senior management and IT experts across the globe who engage with customers every day. The focus is on their customers' unique supply chain requirements. SSCS listens, supports and provides comprehensive solutions, services and systems for e-Commerce, planning, procurement, warehouse management, logistics and analytics. With our proven track record we are ready to consult and implement your supply chain needs.

GLOBAL FOOTPRINT

SSCS REACH
WORLDWIDE
AND CONNECTED



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