SCCG
THE SUPPLY CHAIN
CONSULTING GROUP

The Supply Chain Consulting Group

WAREHOUSE MANAGEMENT SYSTEMS

WHERE TO START

White Paper

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EXECUTIVE SUMMARY

The disruptive events of the past two years have created new challenges for warehouse operations, capacity and staffing. What worked well previously may no longer be 'fit for purpose'. Storage and distribution operations are becoming more complex.

A Warehouse Management System (WMS) is becoming critical to ensure that processes are carried out accurately and efficiently.

DRIVERS FOR WMS

Most tasks in warehouse management are linked; one small stock control problem can lead to late delivery to a customer. Poor inventory management, inadequate management information, error-prone documentation, high labour costs and seasonal fluctuations are all individual problems. When two or more problems collide, they can derail warehouse operations.

Poor inventory accuracy leads to stockouts, causes picking problems and can lead to failed deliveries and disappointing customers. Obsolete stock is costly and takes up space. How accurate is your current inventory system?

Redundant processes waste time and money. They occur in the handling of incoming deliveries and returns, put-away, picking and packing processes.

Space and labour can constitute up to 65% of the warehouse operating budget in a labour-intensive environment

Manual systems are not able to provide in-depth reports and analyses of every process in the warehouse. Fluctuations in demand and seasonality require real-time, accurate current and historical information. Have you got too much data and not enough information?

BUILDING A BUSINESS CASE

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Clearly articulate what you are looking to achieve from an investment in WMS. To justify your decision to source and implement a WMS, the cost, the payback period and the benefits must be identified to establish the Return on Investment (ROI). It is important to understand the overall business and automation strategy to which it must be aligned.

WHY IS IT IMPORTANT TO ADDRESS THESE PROBLEMS NOW

Poor productivity and rising cost will continue to cause delays and customer frustration and drive down profits.

Key questions to ask when building a business case:

🔗 How accurate is your current inventory system?

🔗 Are your operation processes optimised?

🔗 Do you have a clear and detailed view of your current space and labour expenses?

🔗 Can you easily manage worker productivity and track warehouse KPIs?

Be able to clearly articulate what you are looking to achieve from an investment in WMS

- 🔗 Physical Process Improvement
- 🔗 Support for RF/Voice/Vision/Other
- 🔗 Reduced Administration
- 🔗 Performance Management Capability
- 🔗 Site Capacity
- 🔗 Support Automation Investments
- 🔗 Customer Offer Improvement
- 🔗 Reporting/Compliance/Track and Trace
- 🔗 Flexibility and Adaptability
- 🔗 Stability and Resilience
- 🔗 Support Network Strategy

UNDERSTANDING THE MARKET

Understanding both the WMS market and where you fit in is key to making the right selection decision.

🔗 Are you a small/medium organisation growing into a full enterprise?

🔗 Do you have an established ERP or another in-house system to link to?

🔗 Are you better suited to on-premises deployment, or a cloud-based Software-as-a-Service (SaaS) solution?

🔗 Can all your requirements be satisfied by the correct off-the-shelf solution, or will you need elements of a bespoke process to fit your operation?

🔗 Will you need help from the vendor and/or from an implementation specialist?

🔗 Are extended warehouse capabilities such as slotting, labour management or yard management required either now or in the future?

CHOOSING THE RIGHT WMS

There are no one-size fits all solution. Every organisation is different. It depends on the size and maturity of your business, your expertise, the industry you are operating in, your systems landscape and your current level of automation if any.

Making an informed decision means being clear on your requirements and clearly articulating the warehouse processes which the WMS will need to deliver.

As well as the requirements, the selection process must consider financial elements, system support and service options, flexibility, customer references, etc. Picking a solution that aligns well with your operation is key to unlocking value and avoiding costly modifications.

Choosing the wrong system can be costly, damaging and frustrating. Even the 'best fit' solution can fail to deliver due to poor implementation, so selecting a trusted partner with experience in delivery is essential.

The right WMS will save you time and money, increase accuracy, optimise your team's performance and streamline your operations.

WMS vendors are experts in WMS, but not necessarily experts in warehouse design, logistics strategy, warehouse process, or your industry.

Before engaging with potential WMS vendors, you need to understand:

- how you want to operate in the future,
- what resources you will require,
- how you will establish the capability of each vendor to deliver and implement.

CHOOSING THE RIGHT WMS

Sourcing the 'best' WMS is usually done through a robust tender process and negotiation before contracting.

Evaluation criteria decided at the outset, are based on functionality, cost, company viability, reputation and customer service. The right solution is the one that meets the requirements of the business, provided by a long-term partner that can deliver continuous value, at the right cost.

Functional requirements (what the system must do and why) and non-functional requirements (how the system must deliver) are equally important.

In order to ensure the WMS matches the business process, functional requirements must be gathered prior to a vendor selection.

Somewhere in-between

SME	Enterprise
SaaS	Traditional Deployment
Bespoke	OOTB
Implementation Partner	Software Vendor
WMS Level 1	WMS Level 5
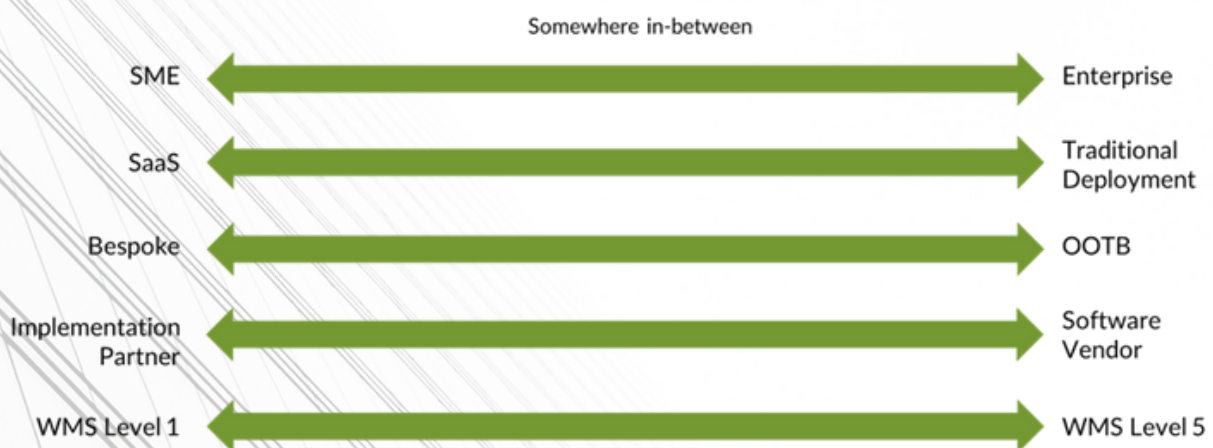
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FUNCTIONAL REQUIREMENTS

These describe what the system needs to achieve in terms of the warehouse process and what end-users will experience within the warehouse. One tool often used to define functional requirements is the idea of 'user stories', which aim to describe the **WHO, WHAT** and **REASON** of a particular process.

The typical structure for this is to describe your warehouse processes in the structure 'As a {role} I want to {process} so that {purpose}'.

Two examples would be:

🔗 'I want the ability to scan a barcode on the paperwork from drivers so that their inbound vehicle can be automatically reconciled with an Advance Shipping Notice (ASN) on the system without typing/searching.' – Receiving Clerk

🔗 'I want the ability to view the full order on a handset so that I can identify if a base pick is required, e.g. if there are 20 heavy boxes, I may want to pick these first before picking the remainder of the order.' – Warehouse Picker

Specifying the who, what and reason provides both clarities on what the system is supposed to achieve and why it is supposed to achieve it. This can also help identify alternative ways to achieve the same end goal. For example, in the second quote, can the system automatically detect if a base pick is appropriate automatically, based on rules?
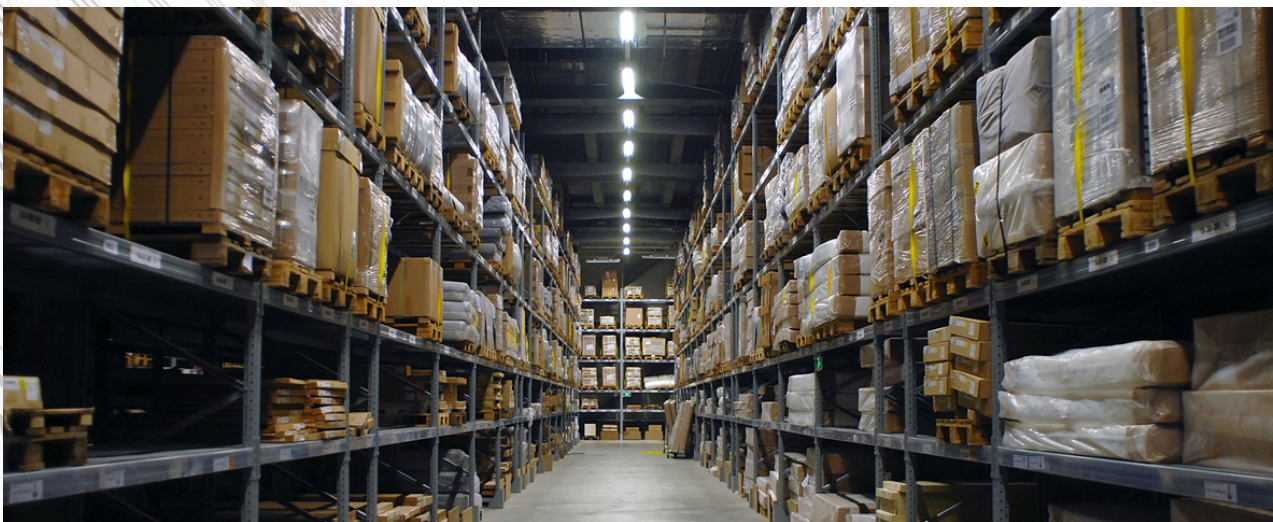
NON-FUNCTIONAL REQUIREMENTS

These describe system attributes or qualities that the software must have that sit outside of process and functionality.

These include:

- **Response Times/Speed** – can the system match your expectations in terms of responsiveness, including handset response and print speeds? An example would be the time from a user requesting a carrier label on a handset, to the time when the printer has received the carrier label ZPL and begins printing, must be less than X seconds.

- **Scalability** – can the system support your peak period volume without impacting the response times above?

- **Integration** – what options are there for integration into your wider systems' landscape and do these match your requirements? Do existing pre-built integrations already exist?

- **Deployment Options** – does the vendor support your preferred deployment method (e.g. on-premises, centralised, IaaS self-managed cloud-based or SaaS cloud-based).

- **Security/Regulatory Attributes** – does the vendor meet your requirements in terms of security, including any specific industry regulatory/technical requirements.

WMS AVAILABLE ON THE MARKET

There are four main types of WMS available::

- Large-scale ERP systems that include WMS functionality as part of their offering. Vendors include Oracle, Dynamics and SAP.

- Supply chain systems providers, where the WMS forms part of a portfolio of two or more other supply chain applications (for example, upstream demand planning).

- Stand-alone WMS products are typically developed by independent vendors who are specialists in warehouse management.

- Automation-focused WMS products, including packages from system integrators that offer a combination of WMS and WES/WCS capabilities as part of their overall package.

WMS offerings differ in areas such as usability, adaptability, intelligence, scalability and life cycle costs.
Although the WMS market is mature, competition between vendors is growing and functionality is being continually added.

Advanced technologies such as Artificial Intelligence (AI) and the increased connectivity of tools such as voice, augmented reality and easy automation integration will continue to be embedded in the latest offerings.

WMS providers also continue to work on ensuring that their systems are highly configurable and flexible so they can match more warehouses 'out of the box' without heavy customisation.

UNDERSTAND THE MARKET AND WHERE YOU WANT TO BE

	Level 1	Level 2	Level 3	Level 4	Level 5
Key Characteristics	• Inventory management and control are secondary processes • Manual processes with minimal use of technology • Typically use whatever capabilities provided by ERP or manual processes	• Focus on execution • Minimal complexity with typically rudimentary needs for product locating for put away, picking and packing. • Focus on simple storage and retrieval • Some RF activities, but often aspects are paper based or off system	• Increased WMS capability but still focussed on process execution • End to end coverage of warehouse processes • Extensive use of RF or voice for execution • Focus on improving warehouse task execution performance	• Focus moves more towards warehouse productivity, efficiency, and throughput rather than just execution • Utilised in facilities handling more demand, typically with more users, which need for decision support and extended WMS capabilities	• Seen in highly automated sites, where warehouse and automation design are often done in conjunction • These types of facilities are highly automated with the automation intrinsically woven into warehouse processes
Example Functionality	The most basic functionality, often without location tracking.	Stock location, putaway, inventory management routines, basic user productivity management, basic reporting,	Comprehensive order management (e.g. palletisation), multiple receiving, putaway and pick strategies including directed work assignments, self service reporting.	Order streaming, Task interleaving, multi customer picking, labour management, dock scheduling, yard management, adaptable architecture,	Highly mature material flow adapters, often with SCADA capability. Generic support for ASRS, Pick to light, GTP, Bulk pick to belt as standard.

Understand the ideal complexity level
for your organisation - Higher 'level'
does not necessarily mean 'better fit'

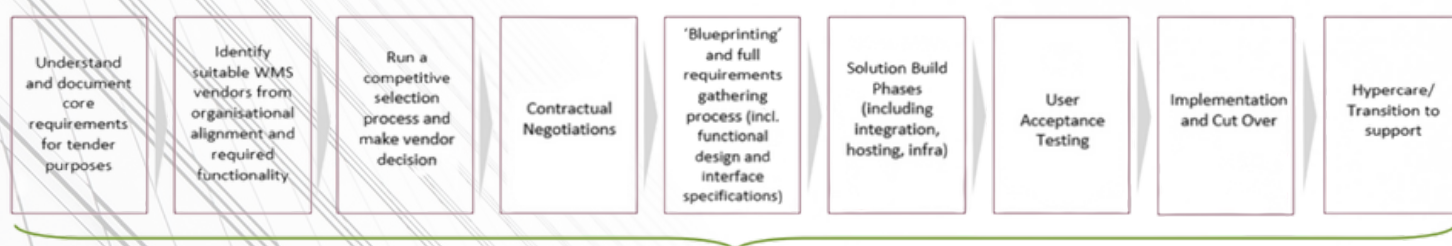# HOW CAN THE SUPPLY CHAIN CONSULTING GROUP SUPPORT YOU

Whether you are considering a WMS for the first time or replacing a WMS that is not delivering, selecting the right vendor is vital. After establishing your requirements and deciding to go ahead there are some considerations.

Selection is only the first step however, ensuring the correct partner is implemented effectively is critical to ensuring business success.

WMS products vary dramatically in their functional breadth, the industry sectors they serve and their long-term flexibility. Vendors may confirm that their product will be able to match your requirements without modification, but the reality may be different at the implementation stage. There are dozens of vendors, some are specialists in your market segment, but which ones

Effective implementation of a WMS is an extended process with several phases and SCCG can help with all of them, from preparing tender documentation to testing and transition support. Further on, our consultancy services include post-implementation reviews to maximise benefits and improve processes.

SCCG will assist with running a WMS selection process and tender, ensuring a fair process, where the best-fit solution can be selected and ensuring competitive pricing. SCCG have no affiliation with any vendor and are always impartial.

| Understand and document core requirements for tender purposes | Identify suitable WMS vendors from organisational alignment and required functionality | Run a competitive selection process and make vendor decision | Contractual Negotiations | 'Blueprinting' and full requirements gathering process (incl. functional design and interface specifications) | Solution Build Phases (including integration, hosting, infra) | User Acceptance Testing | Implementation and Cut Over | Hypercare/ Transition to support |

SCCG can help with all sections, or part of the process.

The WMS sourcing and implementation process must be well-planned, well-executed and detail-oriented. Working with specialists, such as SCCG, you can expect a successful outcome, avoiding unnecessary costs and stakeholder problems at the implementation stage.

WHERE HAVE WE BEEN SUCCESSFUL

A MAJOR UK RETAILER WITH A GROWING E-COMMERCE BUSINESS

SCCG were engaged by a major UK retailer to define requirements and run a structured vendor selection process for a new WMS

SCCG worked closely with the client, reviewing existing processes in detail and considering potential future needs to put together a requirements specification. The client had some industry-specific needs that were outside of 'standard' WMS functionality, so it was important to capture these accurately and challenge the vendors' capability to deliver.

The tender process included a Request for Information (RFI) and Request for Price (RFP) stages to reach a shortlist of suitable vendors, with multiple rounds of scoring involving operational, commercial and IT stakeholders.

Conference room pilots were arranged and facilitated by SCCG, to demonstrate vendors' abilities to meet the client's needs and get a feel for working with the shortlisted vendors.

SCCG analysed cost proposals to ensure a like-for-like comparison. A preferred vendor was selected and negotiations were finalised.

A LEADING E-COMMERCE LIGHTING RETAILER

SCCG was engaged by a leading retailer of lighting products to support its implementation of a new WMS at its Fulfilment Centre. SCCG reviewed the functional design specification to ensure that it met the client's requirements. Next, SCCG set up project governance, defining workstream responsibilities and establishing project management tools, such as risk and issue logs, regular workstream updates, etc.

SCCG provided project management resources and subject matter expertise to ensure the project progressed as planned. Finally, SCCG planned and facilitated User Acceptance Testing (UAT).

ABOUT US

T**he Supply Chain Consulting Group (SCCG)** is a leading UK-based logistics and supply chain consultancy firm, undertaking projects throughout the UK, EMEA and beyond.

Established in 2004, SCCG provides high-quality, pragmatic and implementable Logistics, Warehousing and Supply Chain solutions, specifically tailored to the client's requirements. SCCG bring strategies and expertise from 500+ projects for 300+ clients globally across all sectors.

SCCG has a strong reputation for building sustainable partnerships with clients.

Offering truly independent advice, SCCG is owned by its Directors, who are actively involved in projects and are supported by an experienced team of consultants and analysts.

Retail
E-Commerce
Fashion
Pharmaceutical
FMCG
Foodservice
Drinks
Automotive
Construction
Technology

SCCG's mix of operational experience and analytical capability helps to ensure our solutions are both evidence-based and pragmatic.
Where required we provide implementation support, from procurement advice to full project management.