Warehouse Management Systems

WMS Market Survey 2010

Comparison of user requirements
with currently available
warehouse management systems

IWL

THE SUPPLY CHAIN GROUP
www.the-scg.com
SCG

WMS Market Survey 2010

Abbreviations

IT	-	Information Technology
KPI	-	Key Performance Indicators
MIS	-	Management Information System
RFID	-	Radio-frequency Identification
SQM	-	Software Quality Management
VAS	-	Value-Added Services
WMS	-	Warehouse Management System
WOLF	-	Warehouse Management Systems Online Finder

Tables

WMS Market Survey 2010

CIM GmbH Logistik-Systeme	PROLAG® World	
Dr. Thomas + Partner GmbH & Co. KG	TWS	
Ehrhardt + Partner GmbH & Co. KG Software-Systeme für Warehouse-Logistik	LFS	
GIGATON GmbH EDV- und Netzwerkberatung	LogoS C/S	
inconso AG	inconsoWMS	
InnoLOG GmbH	MoTIS® LSV	
ISA - Innovative System Solution for Automation	ISASTORE	
Klug GmbH integrierte Systeme	iWACS	
KNAPP AG	KiSoft	
S&P Computersysteme GmbH Systemhaus für Logistik	SuPCIS-L	
Salomon Automation GmbH	WAMAS	
SALT Solutions GmbH	SAP EWM / LES TRM	
SIC Software Industrie Consult GmbH	SICSone/lvd®	
STILL GmbH	MMS.i	
TGW Systems Integration GmbH	CI_WMS	
Vanderlande Industries Logistics Software GmbH	VISION ™	
XELOG AG	XELOG LagerSuite	

Table 1: List of study participants

WMS Market Survey 2010

Background

Optimised processes are the heart of logistics processes of every warehouse. The interplay of client orders, personnel, available storage area, materials and warehouse technology is supported in most cases by a warehouse management system.

The market for warehouse management systems tends to have a high level of maturity due to the modular construction of the systems that can be parameterised based on client needs and expanded on demand.

But are the needs of users met by the warehouse management systems available on the market?

The current requirements of intralogistics users were documented in a separate survey. In order to estimate upcoming demands, the results of this survey were compared with the results of the annual WMS study.

To differentiate the potential that arises from these demands for the users, the following user types are used in the WMS Market Survey:

- Users that are satisfied with their current WMS
- Users who are considering a new system or replacing the old system

Developments in the WMS market

The global economic crisis also affected the logistics branch. While some companies partially froze large investment plans, a few others used the chance of economically investing. It was on the whole quite clear that business was very quiet. The situation changed markedly in the first half of 2010. Business activity is once again increasing and the accumulated backlog demand has to be reduced again.

The WMS market was particularly affected by the crisis. According to a study published in mid-2010 by the ARC Advisory Group, the global recession shrank the WMS market in 2009 by the growth of the last five years. The global WMS market in 2005 was thus larger than in 2009. It will take many years to recover this deficit.

The first new planning activities in logistics were begun in the first half of 2010. The ascent in logistics has also been seen in WMS suppliers: The demand to implement warehouse management systems increased in late 2010 so strongly that some companies had reached their capacity limit up to the first half of 2011 and thus had to decline requests for projects to be realised in early 2011.

WMS Market Survey 2010

Suppliers	Product	Clients total	Installations	New clients WMS 2010	New installations 2010
KNAPP AG	KiSoft	380	1,200	51	52
inconso AG	inconsoWMS	280	310	30	30
GIGATON GmbH EDV- und Netzwerkberatung	LogoS C/S	250	350	25	25
Ehrhardt + Partner GmbH & Co. KG Software-Systeme für Warehouse-Logistik	LFS	350	600	20	35
Salomon Automation GmbH	WAMAS	226	372	16	20
Klug GmbH integrierte Systeme	iWACS	225	370	10	15
InnoLOG GmbH	MoTIS® LSV	100	160	10	15
TGW Systems Integration GmbH	CI_WMS	270	290	10	10
Dr. Thomas + Partner GmbH & Co. KG	TWS	39	62	9	14
ISA - Innovative System Solution for Automation	ISASTORE	150	325	8	32
CIM GmbH Logistik-Systeme	PROLAG® World	85	100	8	8
SALT Solutions GmbH	SAP EWM / LES TRM	58	82	7	12
XELOG AG	XELOG LagerSuite	78	145	6	17
S&P Computersysteme GmbH Systemhaus für Logistik	SuPCIS-L	81	115	6	9
STILL GmbH	MMS.i	105	115	6	8
SIC Software Industrie Consult GmbH	SICSone/lvd®	40	40	5	5
Vanderlande Industries Logistics Software GmbH	VISION ™	62	76	n.a.	n.a.

Table 2: WMS suppliers with number of new clients

Success factors

Success factor	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Special functions	22%	93%	53%	67%	23%
Integration, modular construction	19%	87%	84%	87%	77%
Quick and easy implementation	15%	80%	79%	77%	85%
Latest technology	10%	53%	21%	20%	23%
Partnerships	15%	67%	37%	37%	38%
Continuity of supplier and system	15%	80%	74%	73%	77%
Best price	5%	27%	26%	30%	15%

Table 3: Sales arguments of suppliers / Success factors for users

The top 3 success factors that **vendors** rely on for their products are:

- Special functions,
- Quick and easy implementation,
- Integration via interfaces, modular construction.

Users additionally focus on

- Continuity of supplier and system.

On the one hand, this means that services are rated highly for the client and a structured change management; on the other hand, the stability of the supplier and most importantly a constant staff support are important selection criteria for users.

This point is probably not weighted so strongly by medium-sized WMS suppliers since a constant market presence is the basis of their business. This assumption alone however does not offer the security that a user needs when he plans the implementation of a system.

WMS users that are unsatisfied with their systems give above-average importance to the point “Continuity of supplier and system” thereby indicating problems in this field.

Special functions play a rather subordinate role for users that seek a new orientation or have not yet implemented a system. This can be attributed to the fact that users

generally assume that today's warehouse management systems are largely standardised.

The experience with several implementations seems to indicate that many users are not aware of the special processes in their warehouse. These special processes however cause considerable customisation in many projects.

The low weighting of "best price" on both sides shows that suppliers correctly evaluate the needs of potential clients and plan for long-term success factors.

User interface

An important criterion for a warehouse management system is its look and feel. This is most apparent in the first step through the user interface.

While users that are satisfied with their implemented systems primarily have graphic user interfaces, new systems increasingly user graphic as well as web-based user interfaces.

This has the advantage that clients can receive a slim and cost-effective hardware. There are also no installation costs for the clients since they have access to the server via the web interface and view the contents on their browser. Even updates thereby don't present problems for the clients with older versions.

The disadvantage of web-based interfaces is the limited presentation possibilities. Only that what can be programmed in HTML can be shown. HTML code is also shown differently in different browsers. This means that the manufacturer has to be consulted in order to find out the browser(s) for which the software has been optimised.

User interface	Suppliers		Users	Satisfied	Implementation
	Focus	Coverage			
Character-based user interface ("DOS" interface)	3%	13%	10%	10%	8%
Graphic user interface ("Windows" interface)	53%	93%	71%	80%	46%
Web-based user interface (access with internet browser)	44%	87%	20%	7%	46%

Table 4: Developments of WMS user interfaces

Communication support

Suppliers focus on the following points concerning communication support in warehouses:

- Pick by voice
- Mobile terminals
- Barcodes

Users that are satisfied with their WMS continue to use paper as a medium for communication support in addition to barcodes and mobile terminals; the trend in new implementations is however towards technical communication support.

Along the lines of the suppliers, these users rely strongly on mobile-terminal and barcode solutions. Pick by voice and RFID support are clearly demanded by them: the new systems should be equipped for future technologies. While RFID was rated in the past years as future-oriented by 12-16% of WMS suppliers, only 7% of the suppliers focussed on this technology this year.

Administrative support

Since the WMS controls operational running in the warehouse, important information for administrative functions is vital in this system. Based on this information, capacity requirements can be viewed or even changes in delivery structures can be presented.

For example, it is relevant for the user that documents and labels can be printed from the system, management information such as performance key figures and 3PL accounts can be created along with support for customs processes.

Communication support for the target group	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Paper	5%	44%	40%	57%	0%
Barcodes	22%	89%	79%	87%	62%
Pick to light	19%	89%	21%	27%	8%
RFID	7%	67%	9%	7%	15%
Pick by voice	23%	100%	12%	3%	31%
Mobile terminals	23%	89%	58%	53%	69%

Table 5: Distribution of communication interfaces

Administrative support	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Documents and labels	33%	100%	84%	80%	92%
3PL accounts	21%	80%	28%	23%	38%
Management information / Performance key figures	39%	100%	84%	80%	92%
Customs processing	7%	47%	16%	10%	31%
None	0%	0%	7%	7%	8%

Table 6: Administrative support by the WMS

Suppliers don't focus much on the relevance of customs processing or also of shipping functions such as routing and tracking & tracing. These are covered to some extent, but a large number of suppliers make use of specialised sub-systems that are provided with the necessary information. Users planning the implementation of a new system see a huge demand in this field.

The experience with several implementations has proven with regard to management-information functions (regular compilation of KPIs and support of operations with online information such as monitoring of workload etc.) that all suppliers can provide this information. The compilation, preparation and necessary up-to-dateness require intensive cooperation. Standardised MIS modules based on target groups/ branches were desirable in this regard.

Additional warehouse functions

Warehouse zoning and task management are important additional warehouse functions that are to be supported by the software. It is surprising that focus on resource planning by the users is not so strong, but a large part of the suppliers can provide such functions.

Value-added logistics is practised in many warehouses for clients; this begins with small tasks such as client-specific labelling of shipping cartons and client-specific packaging of goods. So-called Value Added Services (VAS) can be supported in the processes by the system.

The requirements of individuality currently required on the market are a known fact for the users; the system-support demand for clients planning a new system is at around 50%.

Additional warehouse functions	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Yard Management	12%	73%	12%	10%	15%
Warehouse zoning	21%	93%	51%	53%	46%
Task control	23%	93%	51%	50%	54%
Value-adding logistics	25%	93%	37%	33%	46%
Resource planning / technical work guidelines	18%	93%	28%	27%	31%
None	1%	7%	9%	3%	23%

Table 7: Additional warehouse functions

Software quality management	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Standardised procedure	45%	93%	49%	50%	46%
SQM software	14%	47%	7%	3%	15%
Certified corporate processes as per ISO9001	28%	67%	26%	20%	38%
Certified testers	12%	53%	5%	3%	8%
None	0%	0%	23%	33%	0%

Table 8: Features of software quality management

Software Quality Management (SQM)

The sensitivity for high-quality software has been strongly increasing for users. Thos planning a system implementation pay high attention to certified corporate processes of the software partner; standardised procedures seem to be compulsory.

The implementation of SQM software has also become increasingly important. Suppliers seem to take this development into account.

Satisfied WMS users naturally don't see any focus on further quality steps.

Configuration

Configuration	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Standard software	58%	100%	56%	47%	77%
Client-specific software	42%	93%	44%	53%	23%

Table 9: Configuration

53% of users satisfied with their WMS say that they use a customised software, 47% use standard software.

The demand for standard software is expressed by 80% of the users who currently use a WMS, but are not satisfied with it. Around 70% of survey participants who do not use a WMS but are planning to implement one have a demand for standard software.

The need for standard software is heard quite often. But where does standard software end and customised software begin?

One point that is probably not aware to many WMS users is that there is a minimally necessary configuration of software for the client. This means that the user has software that has to be customised to a certain extent according to the client-specific demands. The time and effort for this sort of configuration must not be underestimated in the project budget.

The complexity level of warehouse processes and number of system-based special processes to be covered are proportional to the probability that additional programming is necessary for the software.

Further programming aspects are branch-specific demands that have not yet been covered by the suppliers.

The number of executed projects has caused the standards of each software supplier to become more comprehensive. Client-specific modules can be chosen from this standard and configured based on client demands.

Structure

Structure	2004	2005	2006/07	2008	2009	2010	Interest for 2010
Integrated system	23%	32%	38%	46%	42%	42%	73%
Best-of-breed system	77%	68%	63%	54%	58%	58%	93%

Table 10: System architecture – Development of supplier values

Suppliers estimate that the relevance of integrated systems has increased in the last years from 2004 to 2008 (see survey results). There has however been a slight reverse in the trend since 2009.

Developments, particularly in the SAP field, have led to an increase in acceptance of implementing ERP modules in the warehousing branch.

This has also been reflected in the user survey in which 18% of the participants have relied on system integration between ERP and WMS.

Classical WMS suppliers that have carried out modifications towards new technologies and interfaces still have – in their opinion – a relatively stable market share with their best-of-breed solutions.

Additional warehouse functions	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Less than 20,000 €	2%	13%	14%	10%	23%
20,000 € to 100,000 €	26%	93%	19%	13%	31%
100,000 € to 250,000 €	40%	100%	35%	37%	31%
250,000 € to 500,000 €	24%	87%	19%	23%	8%
More than 500,000 €	8%	40%	14%	17%	8%

Table 12: Additional warehouse functions

Configuration	Suppliers Focus	Suppliers Coverage	Users	Satisfied	Implementation
Purchase	81%	100%	82%	83%	80%
Rent	7%	33%	10%	7%	20%
ASP (Application Service Provider)	12%	47%	8%	10%	0%

Table 11: Configuration

Price segments

An important question regarding implementation of a WMS is the price. Suppliers primarily focus here on the mid-range price segment.

The focus for the users also lies within the price segment of 100,000 € to 250,000 €, but the range is much larger than in the focus of the suppliers. There is also a strong demand for economical WMS solutions (less than 20,000 €), but there is also a willingness to invest more than a half million Euros for warehouse management systems depending on the requirements.

Sales structure

WMS suppliers focus the most on selling their software. Leasing and offering ASP solutions are not very strong.

This mostly matches the tendency of the users. 20% of those seeking a new orientation or who are unsatisfied with their WMS feel the need for leasing or renting solutions that are currently not offered by all suppliers.

WMS Market Survey 2010

Summary

- Apart from integration / modular construction of the WMS and quick, easy implementation, users also specially focus on the continuity of supplier and system.
- The trend in communication support is clearly going towards use of technology. New systems focus the most on barcodes and mobile terminals followed by pick-by-voice solutions.
- Many users are not aware of the special processes in their warehouse prior to implementation of a WMS.
- The best price plays a subordinate roll for both sides – WMS users and suppliers.
- Standardised, branch-specific MIS modules are preferred.
- Many users underestimate the effort towards configuration and the range of special processes in their warehouse.
- Developments in SAP have led to an increased acceptance of implementing ERP modules in the warehousing field.
- While WMS suppliers focus on a price segment between 100,000 and 250,000 €, the range is much larger for users.
- 20% of users planning a new implementation would prefer a leasing solution for their WMS.

Contact

IWL AG
Muehlsteige 4
89075 Ulm, Germany

Michael Muhsal
T +49.731.14050.13
F +49.731.14050.50
M michael.muhsal@iwl.de

Claudia Nettesheim
T +49.731.14050.23
F +49.731.14050.33
M claudia.nettesheim@iwl.de

WMS Market Survey 2010

From ideas to solutions

Since 1985, IWL offers consultation and planning services in the fields of logistics and process optimisation to clients from industry and trade. We are based in Ulm, Germany.
We are part of the international corporate group “The Supply Chain Group” that is specialised in international logistics projects. This group employs over 100 logistics consultants.

Please contact us for more information:

IWL AG
Muehlsteige 4
89075 Ulm, Germany

Michael Muhsal
+49.731.14050.13
michael.muhsal@iwl.de

Claudia Nettesheim
+49.731.14050.23
claudia.nettesheim@iwl.de

www.iwl.de
www.the-scg.com
www.wmsfinder.com

THE SUPPLY CHAIN GROUP
www.the-scg.com
SCG