



THE LEADING STANDARD IN ENTERPRISE MOBILITY & SHOPFLOOR-INTEGRATION

## SAP mobile with MembrainPAS

Warehouse management  
Goods receipts  
Goods issues  
Picking  
Dispatch  
HU management  
Inventory management

December 2015

SUCCESS-STORY

# Mobile management of one million stock movements

## About Chemion logistics GmbH

Chemion provides logistics services for various companies in the chemical industry including, e.g. postal, courier, express and parcel services, container logistics, port logistics, general cargo logistics, silo logistics, production logistics, railway logistics and expedition (handling goods receipts and goods issues and customs for HGVs, railways and inland water vessels, etc.).

Chemion provides professional total container solutions, in particular for hazardous substances and materials. These include transportation, loading or warehousing, as well as expediting, procurement and leasing, including advisory services.

## How it all began

In the beginning there was the SAP implementation. As if this were not enough expense, in 2009, Chemion decided to simultaneously introduce several SAP modules - MM, WM, PM, SD and QM. Parallel to this implementation, a "warehouse logistics" subproject was also called into being, which was managed by Oliver-Markus Pusnik.

In order to enable mobile operation in the warehouse, SAP wireless communications were first installed. This is a SAP solution with a custom set of standard tools that quickly reached its limits, however, because it only had restricted use. The layout of the mobile application therefore only has a specific field length and was extremely user-unfriendly. Individual customer requirements were very complex and expensive.

A modern solution was required. It ought to be state of the art and allow optimal mobile operation, i.e. most important of all, it ought to meet individual requirements.

Oliver-Markus Pusnik recalls that, "we held workshops that lasted several days in which the providers could present their concepts. Within two days, not only had Membrain come up with a concept, the company had presented what was almost a turnkey solution. The modular principle of MembrainPAS and the many years of experience in this environment impressed us immediately."

## The requirements

The requirements placed on MembrainPAS encompass several areas of warehouse logistics – from goods receipts and inventory management to picking and dispatch.

### I. The workshops

The Chemion workshops are handled using SAP MM. In other words, material withdrawal is mapped in terms of quantities and value.

### II. The warehouse

Structured according to material number, batch and weight, the solution should ensure that even the smallest of parts can be allocated to a delivery. The real-time availability of current data was key to this. Before MembrainPAS was introduced, dockets were used that, due to the large numbers of material movements, were particularly error-prone.



Main Menu of MembrainPAS

Notes were made during the day, and these were all entered into SAP manually in the evening. This process resulted in the company being in constant danger of data being entered incorrectly at various points. It also required considerably more checking to determine the exact day on which movements of goods had taken place, as they regularly had to be entered subsequent to the event.ten.

# Requesting SAP rules and standards by scanning

When storing hazardous substances it is very important to observe the specific rules and regulations of the Technical Rules for Hazardous Substances (TGRS - Technische Regeln für Gefahrstoffe) of the German Chemicals Industry Association (Verband der Chemischen Industrie - VCI). For example, highly flammable materials must not be stored next to easily combustible materials. These regulations are contained in SAP and checked during the mobile acquisition of the material data. If one of the regulations has been contravened, the MembrainPAS client issues a warning.



## III. Picking and dispatch

Several thousand material movements take place on a daily basis in the Chemion warehouses, and the overall picture is regularly changing. To document the process, Chemion came up with a documentation system based on a digital camera. During the loading process, the cargo space was photographed before and after loading to document the state of the load surface and the final load securing. "You can just imagine how much time and effort that took," says Oliver-Markus Pusnik. "Hundreds of images were being transferred by USB cable each day, and then manually assigned to delivery numbers. Not to mention the high error rate and subsequent corrections."

The MembrainPAS client has an integrated photo-documentation function for this very purpose. The order picker / shipping agent can now generate documentation photos - from the individual container to the complete load - with the handheld device and

"With over 1,000 material movements per day our documentation system came to its limits."

store the images centrally where they can be retrieved online. Chemion is implementing this solution across multiple locations.

## IV. Goods receipts

Chemion stores the materials of numerous customers in its warehouses. In SAP, the goods receipts for delivery are manually recorded via the warehouse office. For the put-away, paper lists are printed from SAP and the material booked in or out in retrospect.

With MembrainPAS, the lift truck operator can now scan the batch of material without any knowledge of SAP, saving themselves the time-consuming trip to the warehouse office.

## GETRENNTLAGERUNG

"Cyanide must not be stored with materials such as acids, as together they can create hydrogen cyanide."

Source: Guidelines for the storage of chemicals [Leitfaden für die Zusammenlagerung von Chemikalien], p. 21.

## Screenshots of the mobile application

The screenshots display the Membrain PAS mobile application interface. The first screenshot shows the 'Wareneingang' (Goods In) screen with options for 'WE geplant Einzel', 'WE geplant Sammel', and 'WE ungeplant anlegen'. The second screenshot shows the 'Warenausgang' (Goods Out) screen with options for 'Kommissionieren & Versandbereit', 'Verladen versandbereit', and 'Kommissionieren & verladen'. The third screenshot shows a detailed 'Kommissionieren L40' screen with fields for 'Lieferung', 'Material', 'Charge', 'Menge', 'Von-LE', 'Ext. LE', 'Von', and 'Nach', along with a table of delivery numbers and dates.

Liefer-Nr	Ext. Lie...	An...	WA Datum
80563346	300819...	24	09.04.2011
80563359	300819...	9	09.04.2011
80561450	301335...	6	04.04.2011
80563064	300818...	7	08.04.2011
80561378	300818...	23	04.04.2011
80563331	300819...	26	09.04.2011
80561369	300818...	6	04.04.2011
80561362	300818...	16	04.04.2011
80563327	300819...	20	09.04.2011
80559710	300816...	7	02.04.2011
80563316	300819...	8	09.04.2011
80563322	300819...	7	09.04.2011

## CHEMION LOGISTIK GMBH



The company, which has locations in Leverkusen, Dormagen, Krefeld-Uerdingen and Duisburg, employs around 1,000 people.

## FAST FACTS

40.000

letters sent each day, along with 650 packages

2.000

industrial trucks, of which 400 are ex-protected trucks

1.040.000

stock movements in 2014 over three locations

100.000

pallet bays in block, high-bay and free warehouses

## FURTHER INFORMATION

[www.chemion.de](http://www.chemion.de)

# Inventory management at a dummy location

## V. Mobile inventory management

Chemion keeps stocks of materials of numerous customers in its warehouses and manages these inventories on their behalf. Keeping an overview of what belongs to which customer is not an easy task. Especially when not all of the customers balance their annual accounts at the same time.

It was possible to initiate the stock-take in SAP on behalf of a customer and make an inventory of everything that was in this location – and only that which belonged to that specific customer. In other words, the employees had to know exactly which materials belong to the customer they were currently dealing with - and with the large quantities and similar appearances, this was no mean feat.

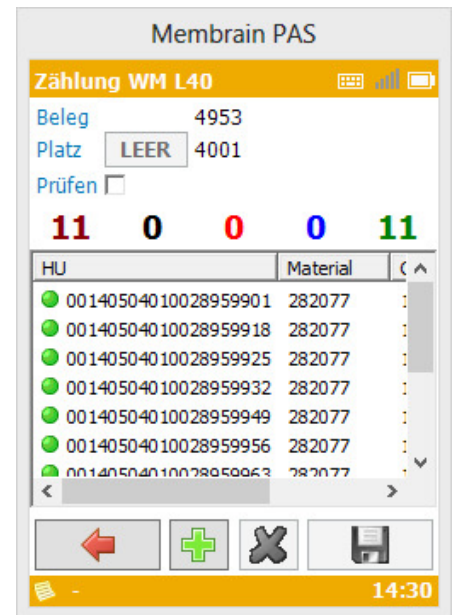
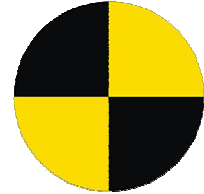
Chemion had the choice of either dividing the warehouse up into separate areas according to customer, which would not make optimal use of the capacities, or carrying out several full stock-takes each year.

Membrain developed a neat solution for this. The SAP-integrated, scanner-supported software makes SAP more user-friendly and makes it possible to carry out a dummy location stock-take based on a SAP inventory document. A dummy location stock-take only includes those HU/stock levels of a specific customer.

By creating a dummy location, it is possible to carry out a bin inventory anywhere. The employee can record everything in that bin with the scanner in their hand and, based on the acquired data, decide what to book in and what not. Another important additional advantage of the dummy location stock-take is that the material does not have to be locked for the stock-take.

Other features of the mobile inventory management solution include:

- Differences can be identified immediately during the inventory management process on the Membrain inventory management monitor, making it possible to clean up mistakes prior to the booking process.
- Corrections (e.g. the entered quantities) can be made at any time.
- Notes can be added to HUs/bins (e.g. "pallet timber is damaged" or "label missing").



Screenshot of the inventory management system for at a dummy location ("Bin EMPTY"). This makes it possible to carry out a stock-take without previously having locked all of the materials.



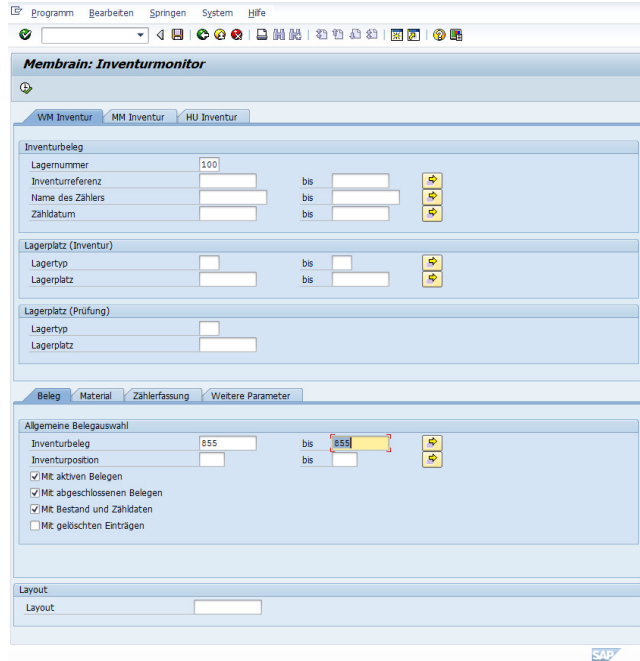
Oliver-Markus Pusnik has been part of the IT project management team at Chemion logistics GmbH since 2005.

# The inventory management monitor for SAP MM and WM with HUs and FI

## Additional control level at Chemion

The ease with which the mobile inventory management process functions with MembrainPAS – for all parties concerned – is best illustrated using the inventory management monitor. An employee records the stock level using a mobile data acquisition device (e.g. scanner or smartphone). It is therefore also possible to record materials that were not expected to be at this warehouse location or in this bin, and then provide feedback. Before the data can be transferred directly into SAP, it first appears in the Membrain inventory management monitor. This is a form of intermediary table in the Membrain custom namespace of SAP that immediately displays differences, discrepancies, etc. The person carrying out the stock-take can then decide whether to transfer the data direct to SAP, or generate a new correction order.

Of course, it is also possible to carry out the stock-take without this additional control level. However, in practice, corrections and changes have proven to be easier to carry out in the monitor than in SAP. The monitor also gives a higher degree of flexibility (e.g. recording materials not in SAP) not offered by the SAP standard.



**Membrain: Inventurmonitor - WM Inventur**

Liste

Utr	Typ	Wer.	Inv.	Z	Pos	Fe.	<>	Men.	Gez.	Null.	Prü.	Bem.	InvRefNr	Gezählt am	Gezählt u.	Gezählt von	Material	Materialkurztext	Charge	Lagerplatz	Platz SAP	LE SAP	
1...	C06	SK01	855	1	1	■	<	≡					WRB201...	01.12.2015	10:17:17	ZLYOP	LX00407	100 Jahre Synthese Kautschuk engl.	20112104	97-06-01	97-06-01	340504010026238989	
1...	C06	SK01	855	1	1	■	<	≡					WRB201...	01.12.2015	10:17:17	ZLYOP	LX00407	100 Jahre Synthese Kautschuk engl.	20110705	97-06-01	97-06-01	440504010015523178	
1...	C06	SK01	855	1	1	■	>	≡					WRB201...	01.12.2015	10:17:17	ZLYOP	LX00407	100 Jahre Synthese Kautschuk engl.	20110705	97-06-01	97-06-01	440504010015523185	
1...	C06	SK01	855	1	1	■	>	≡					WRB201...	01.12.2015	10:17:17	ZLYOP	LX00407	100 Jahre Synthese Kautschuk engl.	20110705	97-06-01	97-06-01	440504010023077199	
1...	C06	SK01	855	2	1	■	>	≡					WRB201...	01.12.2015	11:38:38	ZLYOP	LX00407	100 Jahre Synthese Kautschuk engl.	20121204	97-06-02	97-06-02	440504010043615302	
1...	C06	SK01	855	3	1	■	>	≡					WRB201...	01.12.2015	11:39:33	ZLYOP	LX00548	Mappe, Preventol B5 Broschüre	20120509	97-06-03	97-06-03	040504010022003061	
1...	C06	SK01	855	3	1	■	>	≡					WRB201...	01.12.2015	11:39:33	ZLYOP	LX00548	Mappe, Preventol B5 Broschüre	20120509	97-06-03	97-06-03	440504010045315248	
1...	C06	SK01	855	3	1	■	>	≡					WRB201...	01.12.2015	11:39:33	ZLYOP	LX00548	Mappe, Preventol B5 Broschüre	20120509	97-06-03	97-06-03	440504010045315255	
1...	C06	SK01	855	3	1	■	>	≡					WRB201...	01.12.2015	11:39:33	ZLYOP	LX00548	Mappe, Preventol B5 Broschüre	20120509	97-06-03	97-06-03	440504010045315262	
1...	C06	SK01	855	4	1	■	>	≡					WRB201...	01.12.2015	10:20:28	ZLYOP	LX00392	Velcorin® Flyer russisch allgemein	20100303	97-06-04	97-06-04	440504010005144888	
1...	C06	SK01	855	4	1	■	>	≡					WRB201...	01.12.2015	10:20:28	ZLYOP	LX00392	Velcorin® Flyer russisch allgemein	20100303	97-06-04	97-06-04	440504010005144895	
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1...	C06	SK01	855	4	1	■	>	≡					WRB201...	01.12.2015	10:20:28	ZLYOP	LX00392	Velcorin® Flyer russisch allgemein	20100303	97-06-04	97-06-04	440504010005144925	
1...	Cub	SKU1	855	4	1	■	<	≡					WRB201...	01.12.2015	10:20:28	ZLYOP	LX00392	Velcorin® Flyer russisch allgemein	20100303	97-06-04	97-06-04	440504010005144932	
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1...	C06	SK01	855	5	1	■	>	≡					WRB201...	01.12.2015	11:40:04	ZLYOP	LX00028	"Zollstock"™ Lanxess™	20140121	97-06-05	97-06-05	340504010038690799	
1...	C06	SK01	855	6	1	■	>	≡					WRB201...	01.12.2015	11:40:13	ZLYOP	LX05169	Steckdosenkombination ODESA	23480	97-06-06	97-06-06	340504010000035757	
1...	C06	SK01	855	7	1	■	>	≡					WRB201...	01.12.2015	11:40:23	ZLYOP				97-07-01			
1...	C06	SK01	855	8	1	■	>	≡					WRB201...	01.12.2015	11:40:49	ZLYOP	LX00200	Buch "Kautschuk bewegt"	20141111	97-07-02	97-07-02	440504010044474137	
1...	C06	SK01	855	8	1	■	>	≡					WRB201...	01.12.2015	11:40:49	ZLYOP	LX00266	Brochure-Some like it hot flame retardan	20140319	97-07-02	97-07-02	440504010045251621	
1...	C06	SK01	855	9	1	■	>	≡					WRB201...	01.12.2015	11:41:48	ZLYOP	LX00431	Book "Technical Rubbers", chinese	20090819	97-07-03	97-07-03	140504010002398962	
1...	C06	SK01	855	10	1	■	>	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00633	Estrich Wissen Anhydrid SA	20140616	97-07-04	97-07-04	440504010045247228	
1...	C06	SK01	855	10	1	■	>	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00633	Estrich Wissen Anhydrid SA	20140616	97-07-04	97-07-04	440504010045247235	
1...	C06	SK01	855	10	1	■	>	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00633	Estrich Wissen Anhydrid SA	20140616	97-07-04	97-07-04	440504010045247242	
1...	C06	SK01	855	10	1	■	>	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00635	Estrich Wissen Anhyplast	220140616	97-07-04	97-07-04	440504010045247310	
1...	C06	SK01	855	10	1	■	>	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00635	Estrich Wissen Anhyplast	220140616	97-07-04	97-07-04	440504010045247327	
1...	C06	SK01	855	10	1	■	>	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00635	Estrich Wissen Anhyplast	220140616	97-07-04	97-07-04	440504010045247334	
1...	C06	SK01	855	10	1	■	>	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00636	Estrich Wissen Mebodur	1720140616	97-07-04	97-07-04	440504010045251676	
1...	C06	SK01	855	10	1	■	<	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00636	Estrich Wissen Mebodur	1720140616	97-07-04	97-07-04	440504010045251690	
1...	C06	SK01	855	10	1	■	<	≡					WRB201...	01.12.2015	10:30:02	ZLYOP	LX00636	Estrich Wissen Mebodur	1720140616	97-07-04	97-07-04	440504010045251706	
1...	C06	SK01	855	11	1	■	>	≡					WRB201...	01.12.2015	11:44:59	ZLYOP	LX00634	Estrich Wissen Anhytmix	220140616	97-07-05	97-07-05	440504010045238530	

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