

# KØGE UNIVERSITY HOSPITAL solution by PSQR

Read more about our logistic management system called STYR for the newly built University Hospital of Køge



## About **PSQR**

PSQR is a Danish software vendor providing <u>specialized</u> <u>industrial software</u> for Supply Chain Digitisation and Traceability related to compliance and business excellence.

The company partners with track and trace software integrators, solutions providers, consultancies and industry bodies to bring best-of-breed IT solutions to the world of traceability.

PSQR's mission is to empower manufacturers, corporations and governments across the globe with digital track and trace capabilities and the ability to tell the true story of the origin, journey, whereabouts, and consumption of products and resources across the supply chain.







## About the **KØGE HOSPITAL**

The newly built University Hospital of Køge has opted for an innovative and flexible logistic management system STYR to maintain the proper prioritization flow and relieve staff from administrative and manual

By implementing the STYR system developed by the track and trace software experts at PSQR - the University Hospital of Køge managed to solve a number of recurring issues within healthcare.











## **STYR Case**

The University Hospital of Køge approached PSQR with a need for a modern, fast, and reliable solution for hospital equipment distribution.

As the hospital is transporting thousands of products that differ vastly, there was an ongoing necessity for automation and control over the order flow and prioritization of orders.

With the new AMR (Autonomous Mobile Robot) system, the hospital needed a system to automatically contorl incoming orders and deliveries and carry out the orders.

KØGE UNIVERSITY HOSPITAL CASE BY PSQR | ©2024



## **STYR Case** Challenges

Building and felixbly adjusting the plans of product prioritization for everyday operation for different time slots and product categories.

Sequence flows of goods differ depending on the various conditions like product type, time, destination, return path, etc. It is impossible to define all of those up front, so STYR is adjusted and allows flexibility in the field of sequence setup.

An Active Directory authorisation and group rules must apply due to the infrastructure of Region Zealand being Microsoft-based.



The hospital is supplied by different companies, therefore, STYR allows a flexible future integration possibilities and also a user interface for those without their own logistic IT systems.

Integrating and coordinating the flow of products with underlying Physical Transport Systems that manage the physical movement of the goods. The orders for product movement are optimized to maintain system availability and throughput.

The logistic system collects, stores and connects all the information about logistic events and every alarm event sent to the system from other hospital systems like Security System or Physical Transport Systems. Alarms are flexible too, as the hospital is new, and a lot of interconnecting systems are still in the delivery phase.

## **STYR Case** Challenges



## **Project Goal**

# Visibility and compliance through traceability

- Enabling delivery of goods when needed and where needed to reduce storage needs
- Items can be tracked both upstream and downstream, ensuring total visibility
- Compliance with operational excellence standards as well as the corporate social responsibility goals





## **The Solution & Case Outcome**

#### Delivery prioritization

STYR gives control in prioritization - it is a system that automatically carries out the orders according to the priorities and orchestrates the movement of the products to and within the hospital. The system allows the most important/critical orders to be forwarded as transport orders.

#### **Time management**

STYR solution, to a large extent, takes away the need for human involvement. Accompanied by a notification service, the staff is also given a way to optimize and organize the time spent on delivery tasks. Furthermore, STYR also automates and sends aid for patients through FUO (Fælles Udsyrs Ordning).

#### Monitoring

STYR can, through the EPCIS event tracking system, notify the staff when orders are coming and are ready for pickup. Moreover, STYR monitors and notifies when empty wagons will be needed for the "automated-waste-chute" flow.





## **The Solution & Case Outcome**

#### Systems' Decoupling

STYR's flexibility and the ability to integrate and simultaneously control several different systems reduces the need for additional system implementation that would often intertwine.

#### Business Intelligence

Through the BI features, STYR provides information for making better management decisions and informs the right people at the correct times with the exact information they need. This allows the staff to carry out their tasks in an optimized way.

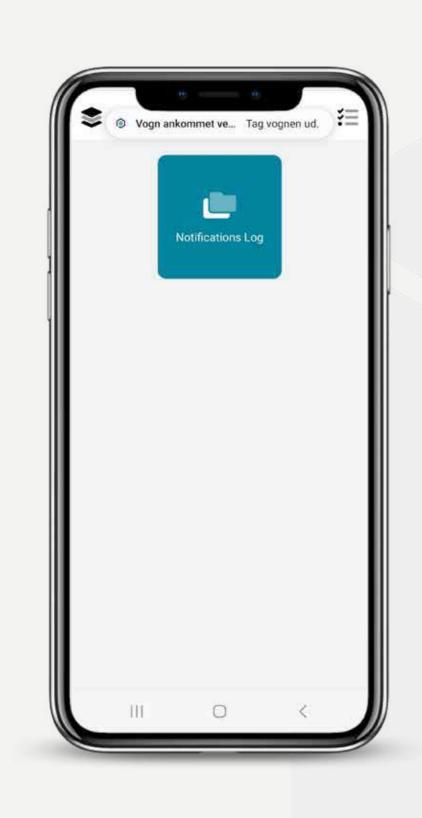
#### Crisis reduction with the Alarm Repository

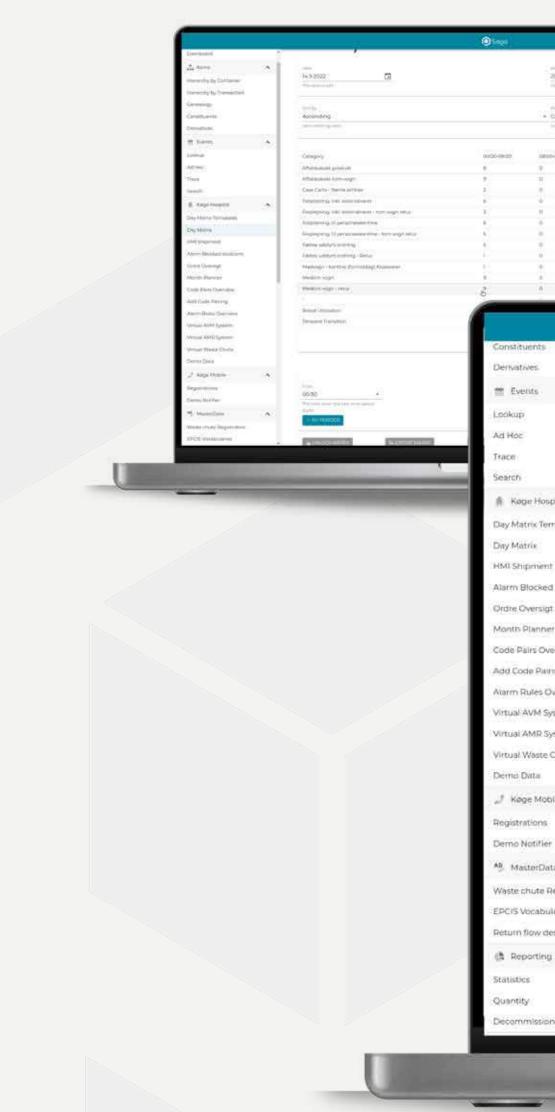
STYR system is recording alarms in the form of the EPCIS events created internally by Saga. Alarm Rules allow system rules to be set up for assigning the action, severity, and name based on the timestamp, type, and location of the fired alarm.









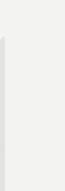


## The Solution

						1. T. I.				🔘 Saga				
						Territoria Ju Immi		HMI Shir	oment - Stat	us				
						Hereitig by Collonate	1							
						Herenity in Transition Commongs			0.48719014-340368864065 www.executioncc.012343629800000000	6		DISCUTED		
						Constituents		Source: Affatosplate Correct Institute; Affa	OA grants		Destricted	sion Attuidagalest		
		2.				Development					inst the	HEK.		
						The Control of Control	1	A.						
						And South		Comment	e					
6.413292						Traps Second	- 1	14.09.202215-39- Test		Vognen dial til reparation i	dar terring	e ::	ACC DIS CONTROL	
a prove						R. Approximited		14.09	2022 Hold - Test Admin Utar	Vogrein er	nimed juryd o	og er kan tit repetation		
						Day Matrix Templotos		-convectment						
						Line Halos								
		0786/20				Alwey (Rocald Science)		Form Type Dependingen	Burnet Tarriel (w. 8 proze) (6.87 kp. (255))	Mincord Tohe Net Substantial Color		Based Robert	Reading Total	Actor
19406-5260 12	00-Mah #00-2000	2000-04-00 3				Online Chamage Harms Frances		Object(inc-0	14 E2/02 N F1G CE3P	No 2022 No 3752 CENT			C	620
	1					Coor Pails Outnome	- 1	Operflare	14.8.202115.7136-0117	14 5 502 1L 81 16 CE17 14 0 2020 1L 81 16 CE17			Constant	Card
	1	1. 1.				Add Code Printing August Bugs Durrenne		Operations	14,020233219	N-9 2023 1L 87 AV CULT			flaresofting	CHS
0	8	1				Velan Arts Spence		Openflaire Openflaire	NA 2021 NUT AN CENT	54 9 2022 10 PT 58 CEVT			Storeg Storeg	GIS
1 - 3		1				Normal Article Specific		Operflore	14-8 June 15 2149 (2017) 14-9 2012 15 28-00 (2017)	54.5 2022 16.8159 (2517		100	(tarianting) Taranating	CRS CRS
3	*	( )				Vehick Weeks Chules Vehick Chules		Opothers Opothers	14.9.2022 N. BLOD CENT	94.620223L3630 CE21 14.520223L3630 CE21		6	Terupting	000
		10				J Republics	5 <b>6</b> 5	Dignifiers Oberthers	14-8 2022 15 34 02 0557 14-8 2022 15 36 02 0557	14.9.2532 (L.Bootz CEUT 14.5.2022 (S.SOVO CEUT			Boothing Planting	CHS
		1				Reprintation Committee		Opentiare	N-EXECUTION OF CENT	H 9 2002 10 Mildle CKST			Dearmaserra	CITY CITY
	Active	- 17m) (Inc. alivers) - Can				HIGHEST The aventy (The alered	H 1500	eid)!				- E		
×	The same life of					HIGHEST	h li si	(cd))				8		
×	the came line of					HIGHEST	H Trisca	eed):				8		
×	The came life and Active EDIT RULE Triggers Name					HIGHEST	W	alue		Edited	24	Actions:		
×	Triggers	Ђре	ar.saga.hospitai.atarm.trigge	rs.locationtrigger,Location1	nTrigger	Comparator Contains Location	V			2022-09- 14T13:47.90Z		Actions		
~	The same life of Active EDIT RULE Triggers Name Lokations-	Type com.persequ	or,saga.hospital.atarm.trigge or.saga.hospital.atarm.trigge		0010 <b>0</b> 020	Comparator	W B D	slue 0 - stunn - Modt		2022-09-		×11 ×11		
*	The came that or Active EDIT RULE Triggers Naroe Lokations- forterile	Type com.persequ			0010 <b>0</b> 020	Comparator Contains Location	W B D	alue 0 - stuen - Modt skningsområde		2022-09- 14113-4730Z 2022-09- 14113-4231Z		+ >1		
×	The came that or Active EDIT RULE Triggers Naroe Lokations- forterile	Type compersequi compensequi			0010 <b>0</b> 020	Comparator Contains Location	W B D	alue 0 - stuen - Modt skningsområde		2022-09- 14113-4730Z 2022-09- 14113-4231Z		×11 ×11		
	The came that ou Active EDITRULE Triggers Name Lokations- kosterile Type Actions Name	Type compersequi compensequi			TypeTrigger Data	ENGREST The workly Produces Comparator Contains Location Is Equals To Alarm Type	V B D	alue 0 - stuen - Modt skningsområde IRE_ALARM		2022-09- 14113:47302 2022-09- 14113:42:112 Edited		+ >1		
*	The came that or Active EDITRULE Triggers Name Lokations- kriterie Type Actions Name Orienter afsendere	Type comporseque compenseque		usalarmtypetrigger.AlarmT	TypeTrigger Data ("sub)	HIGHEST The second The second Comparator Contains Location Is Equals To Alarm Type	Vi B Pi Fl	slue 0 - stuen - Modt skningsområde RE_ALARM	n bliver muligvis farsunia	2022-09- 14113-47302 2022-09- 14113-42312 Edited et som 2022-09- 14113-462	6 0	/ 11 + 1-50 N		
*	The came that or Active EDITRULE Triggers Narroe Lokations- Kriterie Type Actions Narroe Narroe Orienter	Type compersequi compensequi Type compensequorso	or.sega.hospital.atarm.trigge	nailEmailAlarmAction	TypeTrigger Data Fsub følge	Comparator Contains Location Is Equals To Alarm Type	W B Po FI	slue 0 - stuen - Modt skningsområde RE_ALARM	n bliver muligvis farsunia	2022-09- 14113:47302 2022-09- 14113:42:112 Edited et som 2022-09-	< < 4Z	/ 1 + Actions		
	The carrie line of Active EDITRULE Triggers Narrie Lokations- kriterie Type Actions Narrie Orienter afsendere Stop new	Type compersequi compensequi Type compensequorso	or sega hospital atarm trigge ga hospital alarm actions em	nailEmailAlarmAction	TypeTrigger Data Fsub følge	Endertest The second parameter Comparator Contains Location Is Equals To Alarm Type edt "Ordren bliver forsing af brandstarm i sektor 7	W B Po FI	slue 0 - stuen - Modt skningsområde RE_ALARM	n bliver muligvis farsunia	2022-09- 14113-47302 2022-09- 14113-42112 Edited et som 2022-09- 14113-462 2022-09- 14113-462	< < 4Z 0Z	/ 1 + Actions		
	The carrie line of Active EDITRULE Triggers Narrie Lokations- kriterie Type Actions Narrie Orienter afsendere Stop new	Type compersequi compensequi Type compensequorso	or sega hospital atarm trigge ga hospital alarm actions em	nailEmailAlarmAction	TypeTrigger Data Fsub følge	Endertest The second parameter Comparator Contains Location Is Equals To Alarm Type edt "Ordren bliver forsing af brandstarm i sektor 7	W B Po FI	slue 0 - stuen - Modt skningsområde RE_ALARM	n bliver muligvis farsunia	2022-09- 14113-47302 2022-09- 14113-42112 Edited et som 2022-09- 14113-462 2022-09- 14113-462	< < 4Z 0Z	Actions		
*	The carrie line of Active EDITRULE Triggers Narrie Lokations- kriterie Type Actions Narrie Orienter afsendere Stop new	Type compersequi compensequi Type compensequorso	or sega hospital atarm trigge ga hospital alarm actions em	nailEmailAlarmAction	TypeTrigger Data Fsub følge	Endertest The second parameter Comparator Contains Location Is Equals To Alarm Type edt "Ordren bliver forsing af brandstarm i sektor 7	W B Po FI	slue 0 - stuen - Modt skningsområde RE_ALARM	n bliver muligvis farsunia	2022-09- 14113-47302 2022-09- 14113-42112 Edited et som 2022-09- 14113-462 2022-09- 14113-462	< < 4Z 0Z	Actions		
*	The carrie line of Active EDITRULE Triggers Narrie Lokations- kriterie Type Actions Narrie Orienter afsendere Stop new	Type compersequi compensequi Type compensequorso	or sega hospital atarm trigge ga hospital alarm actions em	nailEmailAlarmAction	TypeTrigger Data Fsub følge	Endertest The second parameter Comparator Contains Location Is Equals To Alarm Type edt "Ordren bliver forsing af brandstarm i sektor 7	W B Po FI	slue 0 - stuen - Modt skningsområde RE_ALARM	n bliver muligvis farsunia	2022-09- 14113-47302 2022-09- 14113-42112 Edited et som 2022-09- 14113-462 2022-09- 14113-462	< < 4Z 0Z	Actions		
	The carrie line of Active EDITRULE Triggers Narrie Lokations- kriterie Type Actions Narrie Orienter afsendere Stop new	Type compersequi compensequi Type compensequorso	or sega hospital atarm trigge ga hospital alarm actions em	nailEmailAlarmAction	TypeTrigger Data Fsub følge	Endertest The second parameter Comparator Contains Location Is Equals To Alarm Type edt "Ordren bliver forsing af brandstarm i sektor 7	W B Po FI	slue 0 - stuen - Modt skningsområde RE_ALARM	n bliver muligvis farsunia	2022-09- 14113-47302 2022-09- 14113-42112 Edited et som 2022-09- 14113-462 2022-09- 14113-462	< < 4Z 0Z	Actions		

oned EPCs







## **Benefits** of the Solution

### **Complex Orchestration**

**Saga Enterprise** enables the very complex hospital orchestration setup to ensure patients are served in the best possible way, and as economically as possible.

#### **Flexible Setup**

**Saga Mobile** allows them to have a flexible setup in day-to-day operations without disrupting the workflow of the individual employee.



#### **AMR Control**

STYR has the ability to control and orchestrate hospital's AMRs as well as provide the key decision makers with all the relevant information needed for facilitating informed decisions.

## 4

## **Automated Logistics System**

With the EPCIS events as the main driver behind the STYR system, PSQR has created an automated logistics system, able to prioritize and arrange the medical equipment delivery accordingly.

5

#### **Alarm System**

By setting up alerts and sending notifications about sending and receiving wagons to the relevant personnel, Saga has helped improve prioritization and time management.



As a project manager at the University Hospital of Køge, I have had the privilege of working with PSQR on our logistic management system implementation, that manage thousands of products which differ vastly.

From the outset, it was clear that their Saga application was a complete match to our logistic transformation towards automation and product control. The delivery prioritization feature has been beneficial in ensuring timely and efficient delivery to various departments, while the crisis reduction feature has helped us to mitigate risk and improve overall safety.

One of the most impressive things about PSQR is their commitment to delivering a solution that truly meets our needs. They worked closely with us throughout the implementation process, providing us with valuable guidance and support, and ensuring that we were able to optimize the system to fit our specific requirements.

I highly recommend PSQR to any hospital looking to streamline their operations and improve their supply chain management. Their expertise and dedication to collaboration makes them an invaluable partner, and we are thrilled with the results of our project.

#### Henrik Eriksen

Senior Project Manager at Region Sjælland





## **Christian Lindberg**

Customer Solutions Advocate

christian.lindberg@psqr.eu

## **Edward Andersson**

Business Development Representative

edward.andersson@psqr.eu

# **Contact us**





13

# **OPSOR**

## Track and Trace Software Experts

Frederiksborggade 15, 6th floor, 1360 Copenhagen K, Denmark

**www.psqr.eu** 

info@psqr.eu

