

## Case Study

# OS&D System keeps records of faulty and damaged goods in production Hyundai Motor Manufacturing Czech s.r.o.

### Hyundai Motor Manufacturing Czech s.r.o.

Hyundai Motor Manufacturing Czech s.r.o. (HMMC), based in the industrial zone Nošovice was founded on 7.7.2006. It is one of the most innovative automobile manufacturers in Europe. All car models produced in the HMMC plant (Hyundai i30, Hyundai i30 combi, Hyundai i30 three-door, Hyundai ix20 and Hyundai Tucson) were specially developed for the European market. The number of employees is currently about 3 400 and the production capacity counts an impressive number of 350 000 cars. HMMC is a proud winner of the „Employer of the year 2015“ award in category of companies employing up to 5 000 employees.



**HYUNDAI**

### Realization period

July 2015 – February 2016

### Comment

*„The Cleverlance (formerly AutoCont) company has used IT technologies to computerize the process of approval and monitoring of faulty products to provide all users from departments involved in the processes with access to the information on their PC screens. Thanks to the implementation of the OS&D application it is now possible to check the faulty from all the various departments and update information about the defect, all that in a user-friendly graphical interface. At the same time the solution helped to significantly reduce the error rate of the products.“*

Lukáš Kalman, Production Control Specialist.

### Initial Project Objectives

Even a company with such great emphasis on the quality of its products and inputs cannot avoid having some parts damaged in the production process or not meeting the quality standards due to an error of assembly, logistics, material etc. Such components must be properly recorded in the system, users must know how to handle them as well as the processes related to managing their way back to the manufacturer or their final disposal. The original solution used paper tags to mark the parts, which were then assembled at predetermined locations. However, due to a number of inaccuracies and full dependency on the human factor, this solution was abandoned in order to switch to the digitalization of the data and its interconnection with ERP system to create a functional OS&D unit (Overall Scrap and Damage). This application is used to record the defective or damaged parts of the production and replaces in full the paper version of these records.

## Benefits

- Intuitive graphical interface
- Elimination of errors thanks to the use of barcodes
- Touchscreen monitors
- Powerful industrial wireless barcode scanner
- A possibility to view data remotely
- Use of modern technologies for maximum user comfort

## The system was designed to meet the following requirements:

- Simple and intuitive control of the system
- The system should reflect suitable procedures and processes
- An option to view data remotely
- Use of innovative technologies for maximum user comfort

## Solution

The most challenging part of the solution was probably the analysis of the processes and the correct and appropriate setting of all the procedures so that they are easily understandable to all users and at the same time provide clear and comprehensive information without any inaccuracies and with the ability of the system to recognize invalid data. This solution is based on MS SQL Server platform with communication with the SAP system, where you can display a thin client in a web browser on the user station. The whole graphical interface is then adjusted to the use of a touch screen and the system is intuitive and easy to use. The key element of the solution is the interconnection of a high number of modern technologies to achieve the maximum benefit for the customer.

The pillars of the solution are the touchscreen monitors designed to be used in dusty conditions of production lines in a large enough format, complemented by a key element, which replaces the previous manual writing, i.e., barcode printer, which prints special filled-in tags on a special segmented self-adhesive label. The solution includes a powerful wireless industrial barcode reader so that it is possible to easily trace the individual labels in the system without the need to use any other individual components. The entire application is written in .NET 4.5 and as such provides a powerful tool for the future development and expansion. The main emphasis was then placed on the graphical interface which makes navigation easy for the users and on the user-friendliness supported by the option to retrieve information about the individual items using the bar code, without requiring any complicated written records, which were prone to errors.

## Applied technologies

MS SQL platform  
NET 4.5

## Reject Tag (RT) record of defective components

Číslo RT	Přičina RT	Potrubí	PN	Název součásti	Množství	RT	Defekty	Odpovědnost	Detail účtu	Dodatek	Materiálové skupiny	Model	Zápis	Výsledná y SAP	Zápis v SAP	PC-PC	PC-CC	Stav	Datum vytvoření	Glovis out	Rukovnice	
11			8004116010	SEAL PLUG	A	1	PAINTZ	Defektní	Staváři	Supplier	HYUNDAI GLOVIS CO	CP40-PT	DT	OKD	Uveden na sklad	Chyba při výrobě			OK	12.02.2016		OK
11			7371140000	PN-TAL GATE OTE. (OZ)	A	1	PAINTZ	Chyba operátora	WPC	Line		OSND_MKP	OD	-	-			OK	12.02.2016			
11			7370021900	PN-ASSEMBLY GATE	A	5	PAINTZ	Špinavost	Paint	Repair		OSND_MKV	EL	-	-			OK	12.02.2016			
11			8405110000	EXTRA ASSEMBLY FOR OZ	A	10	PAINTZ	Tržba	Paint	Repair	SUROKOROO K.T.C.	MCCP	JC	LP	-			PC	12.02.2016			
11			8510100001	PN-ASSEMBLY OTE. (OZ)	A	2	METAL FINISH	Defektní	GLOVIS	Line	SEANOROO WRECH K.T.C.	AN11-740	OD	LP	Uveden na sklad	Chyba při výrobě			Uveden	12.02.2016		