## How IBM Maximo Application Suite accelerates innovation in Industry 4.0 for the Kielce University of Technology









#### The Background

The CENWIS Modeling Laboratory of Intelligent Production Systems, which is a key element of the research and development infrastructure of the Kielce University of Technology (KUT), has been specializing in research on smart factories for years, and the advanced equipment at the University's disposal reflects modern solutions in the field of Industry 4.0.

The laboratory is equipped with a modular CPFactory® production system which takes the form of a computer-integrated, automated, flexible assembly line that reproduces with high fidelity the operational conditions of an Industry 4.0 production system.



#### The Challenges

KUT was looking for a highly configurable integrated EAM (Enterprise Asset Management) IT system for the advanced management of its operational resources. The system's capabilities needed to be considerable, as the needs of researchers and students were tailored to the real needs of the market, which are constantly evolving in the digital world.

KUT chose to implement IBM Maximo Application Suite (MAS) for the project, which also helps to expand the scope of the R&D offering for the university, with students gaining access to tools that will enable them to acquire practical knowledge, such as:

- creation and management of modern production lines
- designing smart factories
- performing optimization of available resources
- predicting demand at individual stages of production

By adopting MAS, another important step is achieved by the University in terms of building infrastructure and competencies, with KUT currently pursuing the status of "University Competence Center" for IBM Maximo Application Suite, which will confirm its knowledge and resources in this area.





### The Solution

As the leading IBM Maximo implementation partner in the region, Cohesive Polska was chosen to deliver the solution.

Services included the deployment of Red Hat OpenShift on University infrastructure as the platform to host MAS and the deployment of MAS v8.11 with the following applications:

- Manage
- Health
- Monitor
- Optimizer
- Visual Inspection
- Predict (along with Cloud Pak for Data).

Further services included training for selected members of the University staff.

The entire installation was delivered in less than a month and deployed on on-premise local infrastructure – which is important to note because it offers a much greater challenge than a cloud installation. Furthermore, this implementation is a regional first for both IBM and Cohesive.

IBM Maximo Application Suite			Obejrzyj prezent	ację
©	mas ∠			
Administrowanie pakietem		racia i wersia aplikacii, ki	tóre są aktywne w obszarze roboczym.	
Przegląd	1000 10 D			
Katalog Aplikacje	Przegląd	Zewnętrzne progr		
Obszar roboczy	Cranadilu abara			
onfiguracje	Szczegóły obsza	a second and the second second		
/ykorzystanie licencji	Nazwa wyświetlana obszaru roboczego	Identyfikator obszaru roboczego	Utworzono dnia 5 października 2023	
ytkownicy	mas	mas	16:10	
te interfejsu API				
	Aplikacje			
	S.		IoT	~
	Manage		IBM · 8.8.0	Monitor
	IBM · 8.7.0		Nawiązuj połączenia z urządzeniami IoT, sieciami i bramami z wykorzystaniem	IBM · 8.11.0
	Zarządzaj przepływem cyklem eksploatacji za	isobów oraz	otwartych, opartych na standardach technik komunikacji z funkcjami filtrowania i	Możesz analizować awarie i optymaliz wydajność operacyjną poprzez zdalne
	procesami biznesowyr aplikacjami korporacyj	ni i integruj je z innymi jnymi.	odwzorowywania danych IoT oraz narzędziami do zarządzania urządzeniami.	monitorowanie zasobów ze wsparciem sztucznej inteligencji.
	Aktywne		<ul> <li>Aktywne</li> </ul>	Aktywne
Optimizer		Q	5	
	IBM · 8.4.1		Visual Inspection	Predict
	Produkt automatyzuje podejmowanie decyzji		IBM · 8.8.1	IBM · 8.8.2
	długoterminowych, ha udostępniania zasobó	rmonogramów i	Sięgnij po potencjał uczenia głębokiego i sztucznej inteligencji, aby szybko wykrywać	Możesz prognozować i kontrolować prawdopodobieństwo wystąpienia awa
	konserwacji, przy jedn równoważeniu konkur	oczesnym	wady produkcyjne i monitorować zasoby pod kątem potencjalnych zakłóceń.	wykorzystaniem uczenia maszynowego analizy danych.
	ograniczeń.	encyjnych celow i		
<ul> <li>Aktywne</li> </ul>			<ul> <li>Aktywne</li> </ul>	Aktywne



### The Results

The introduction of the MAS system at the University of Technology contributes to more effective, safe and sustainable management of operational resources, which in turn supports the institution's mission in the field of education, research and innovation.

For technical universities such as KUT, effective management of operational resources is crucial to support research activities. The availability of equipment, tools and laboratory infrastructure can significantly affect the quality and efficiency of experiments..

The implementation of the integrated EAM MAS system also allows for easy integration with other systems used at the university, which will facilitate the exchange of information and data between various departments and units, and Cohesive Polska is eager to maintain a positive relationship with the client, to provide further support as the need arises in the future.

#### Prof. PhD engineer Zbigniew Koruba, Rector of the Kielce University of Technology, says:

"We strive to ensure that our students are not only very well prepared theoretically to solve the problems of modern industry, but also have practical tools to carry out these tasks, and our research and teaching staff have modern tools for research and development work. This cooperation will enable he implementation of classes showing the possibilities of using the latest technologies in business. We believe that thanks to the IBM Maximo Application Suite software, members of the academic community of the Kielce University of Technology will be able to cooperate even more effectively with local enterprises, offering support in the field of robotic supply chains and logistics."







www.cohesivegroup.com hello@cohesivegroup.com

# Cohesive