Project idea/ Field of expertise:

Creation of Digital Twin Development Platform and Standards / Digital Twins

Organisation Name:

Ford Otosan

Digital Twins Department

Addressed topic(s):

Developing digital twins—especially those with the ability to control actuators—is very time consuming and complex.

In addition, the available historical data are insufficient, as DoE is not possible, especially in large systems.

FORD OTOSAN

(Large OEM, Automotive)

Ford Otosan, being one of the top 3 exporting companies of Turkey since 2004, has achieved 9 consecutive years automotive industry championship and is Turkey's export champion for 5 years in a row.

Ford Otosan, operating in 4 main centers with its 3 Plants in Turkey, 1 Plant in Romania and Sancaktape R&D Center Turkey İstanbul, employs almost 15,000 people.

Ongoing EU funded projects in AI & Physics-Based Digital Twin Development	Ford Otosan's Use Case	
AITOC ITEA Project https://itea4.org/project/aitoc.html	To develop AI-Driven DT For machining process	
FLEX-INDUSTRIES Horizon Project https://flexindustries.eu/project/	To develop AI-Driven DT For painting process	
HI-CONNECTS Horizon Project (Will be kicked off 2023-Q1)	To develop AI-Driven DT For stamping process	

Creation of a platform and standardization for AI-based Digital Twin development

- Ford Otosan's Digital Twin development team wants to develop a platform and standardization for AI-based Digital Twin development capable of industrial-scale self-process control.

- In particular, developing, testing and commissioning a self-control Digital Twin at major OEMs is extremely challenging and time consuming. At the same time, massive budgets are required and it becomes difficult to make a project investment decision as the benefits and risks are fuzzy at the beginning of the project is uncertain.

- Expected Outcomes

Industrial Standards for Digital Twin Development	Platform in which a DT can be developed virtually for large systems	Cognitive Map that could be simulated to generate estimations about a DT project under uncertainty

Contact details

Contact person		
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