



# MDEM participation in the online meetup "CAD in Mechanical Engineering"

On August 26, MDEM participated in the online meetup "CAD in Mechanical Engineering". The event was organised by APPAU, IAM clusters from Zaporizhzhia, Kharkiv, as well as the Maritime Cluster of Ukraine, a member of which is MDEM.

Participants' presentations and further discussion focused on the development of CAD in various segments of CAD / CAE / CAM in the country: state, prospects, challenges and ways to overcome them.

Stanislav Seleznov, Head of MDEM Engineering Services, made a presentation on "NAVAIS based PLM introduction". As mentioned in previous publications, MDEM participates in NAVAIS – the program of the European Union (New, Advanced and Value-added Innovative Ships). The speaker's presentation covered aspects of PLM development based on NAVAIS, including: the role of MDEM in the project; planning of NAVAIS and PLM 3DX works

in the company; activities performed in PLM 3DX; new roles and required knowledge dictated by PLM; collaboration with project participants; acquisition of knowledge and management.

As the moderator of the event, Oleksandr Yurchak, noted: "In my opinion, Stanislav Seleznov (MDEM) made the best presentation, who described all the guidelines and parameters of tomorrow's engineering and shipbuilding engineering very clearly. Unfortunately, it was acknowledged that the vast majority of domestic enterprises are rapidly lagging behind this level (MDEM is part of the Netherland concern Damen). In Ukrainian shipbuilding, for example, only MDEM has begun the transition to PLM (3D Experience Dassault Systems)." ■

**NAVAIS based PLM introduction**

NAVAIS  
New Advanced Value Added Innovative Ships

**NAVAIS - MDEM**

**Objectives:**

- Platform-based design & production practices for ferries and workboats product families:
- Modular production;
- Production network;
- Physical & production design integrated.

- Development of low impact E-ferry & workboat concept
  - Emissions to air & energy demand reduction;
  - Sound emissions to water.
- Dassault 3D-experience platform to support developed design methodology and processes
  - Enabling decoupling of module engineering & product design
  - Propagation of product properties over series and versions
  - Simulation environment for production and operation

**Scope of NAVAIS:**

- To develop and validate advanced ferry concepts for european waters
- To develop and validate modular standardised workboat concept
- To explore and validate low impact ship designs and operations

**NAVAIS - MDEM**

**Objective:**

New, Advanced and Value-added Innovative Ships NAVAIS will develop a platform-based modular product family approach supported by the 3DEXPERIENCE® integrated business platform. This concept will increase efficiency in vessel design and flexibility in production networks. NAVAIS will specifically focus on passenger/road ferries and multi-use workboats integrating sustainability in the design of the ships. NAVAIS will support the transfer from an engineer-to-order business model to an assemble-to-order business model, which will allow shorter process lead-times, constant quality, reduced design and production costs and better integration of the SME supply chain, thereby increasing competitiveness of the European shipbuilding industry.

**Ambitions:**

- Platform-based product families;
- Modular ship architecture;
- Modular system engineering-based ship design procedure;
- Modular production engineering environment.

**Subjects:**

- Participate in an innovative project under the auspices of the European Union;
- Checking and tuning modules of PLM platform;
- Complete 3D model of demonstrators;
- R&D investigations in programming of the algorithm for the definition of the propeller parameters based on the propulsion system configuration
- Learn to work in the new CAD/PDM system and develop processes for the company.
- Popularize, maintain and deployment of knowledge about the PLM platform among and for the company's employees

