

CAPABILITIES OF THE NATIONAL AI PLATFORM

Capacities of the existing supercomputer and plans for further expansion



еУПРАВА

КАНЦЕЛАРИЈА
ЗА ИТ И еУПРАВУ

Existing Supercomputer

VENDOR: **NVIDIA**
SUPPLIER: **ЕВИДЕН (АТОС)**
DECEMBER **2021**.
VALUE: **2M** EURO

- 4 x nVIDIA DGX A100 systems
- 1024 CPU threads (AMD)
- 32 GPU A100, 40GB RAM per GPU
- DDN Storage 150TB
- Data Science software
- HDR (InfiniBand), 100Gb/s
- 5 PetaFLOPS AI performance
- Consumption 34,5kW



Data Science Platform

- **FMLe (Fast Machine Learning engine)**
- **User-friendly GUI**
- **Easily create AI training, experiments, and monitoring**
- **Easy manipulation of the data sets**
- **Monitoring resource usage, training duration, occupancy**
- **Jupyter Lab as a service**

The screenshot displays the FMLE web interface. On the left is a sidebar menu with icons and labels for 'Datasets', 'Experiments', 'Trainings', 'Monitorings', 'JupyterLab' (which is highlighted), 'Images', and 'Resources'. The main area shows the 'Create JupyterLab instance' form. The form includes a 'Name' field with the value 'testtrainingaimodela1', an 'Account' field with 'bstesevic', and a 'Datasets' dropdown menu set to 'MNIST'. Below these is a toggle switch for 'Override dataset path' which is currently turned off. Further down are fields for 'Shared memory' (64M), 'RAM' (20G), 'CPU' (160), and 'GPU' (2), each with a descriptive label below it.

FMLE	
JupyterLab instance	
Name	testtrainingaimodela1
The name of your JupyterLab instance	
Account	bstesevic
Datasets	MNIST
<input type="checkbox"/> Override dataset path	
Shared memory	64M
Container Shared memory size	
RAM	20G
The amount of RAM	
CPU	160
Number of CPU cores	
GPU	2



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Users of National AI Platform

- **38 INSTITUTIONS:**
 - UNIVERSITIES
 - FACULTIES
 - INSTITUTES
 - SCIENCE-TECHNOLOGY PARKS
 - INNOVATION FUND
- **38 STARTUP COMPANIES**
- **400 USER ACCOUNTS**

**ЈАВНИ ПОЗИВ
СТАРТАП КОМПАНИЈАМА**

ЗА КОРИШЋЕЊЕ НАЦИОНАЛНЕ ПЛАТФОРМЕ
ЗА ВЕШТАЧКУ ИНТЕЛИГЕНЦИЈУ

4 научно-технолошка парка

- НТП Београд
- НТП Нови Сад
- НТП Чачак
- НТП Ниш

Рок за подношење пријава је
од **15.08.** до **15.09.2023.** године

НАУЧНО-ТЕХНОЛОШКИ ПАРК Београд

НАУЧНО-ТЕХНОЛОШКИ ПАРК Нови Сад

НАУЧНО-ТЕХНОЛОШКИ ПАРК ЧАЧАК

SCIENCE TECHNOLOGY PARK NIS

НАУЧНО-ТЕХНОЛОШКИ ПАРК НИШ

**ЈАВНИ ПОЗИВ
СТАРТАП КОМПАНИЈАМА**

за коришћење Националне платформе за
вештачку интелигенцију

4 научно-технолошка парка

- НТП Београд,
- НТП Нови Сад,
- НТП Чачак и
- НТП Ниш

Рок за подношење пријава је од 01.03.2022. до 01.04.2022. године

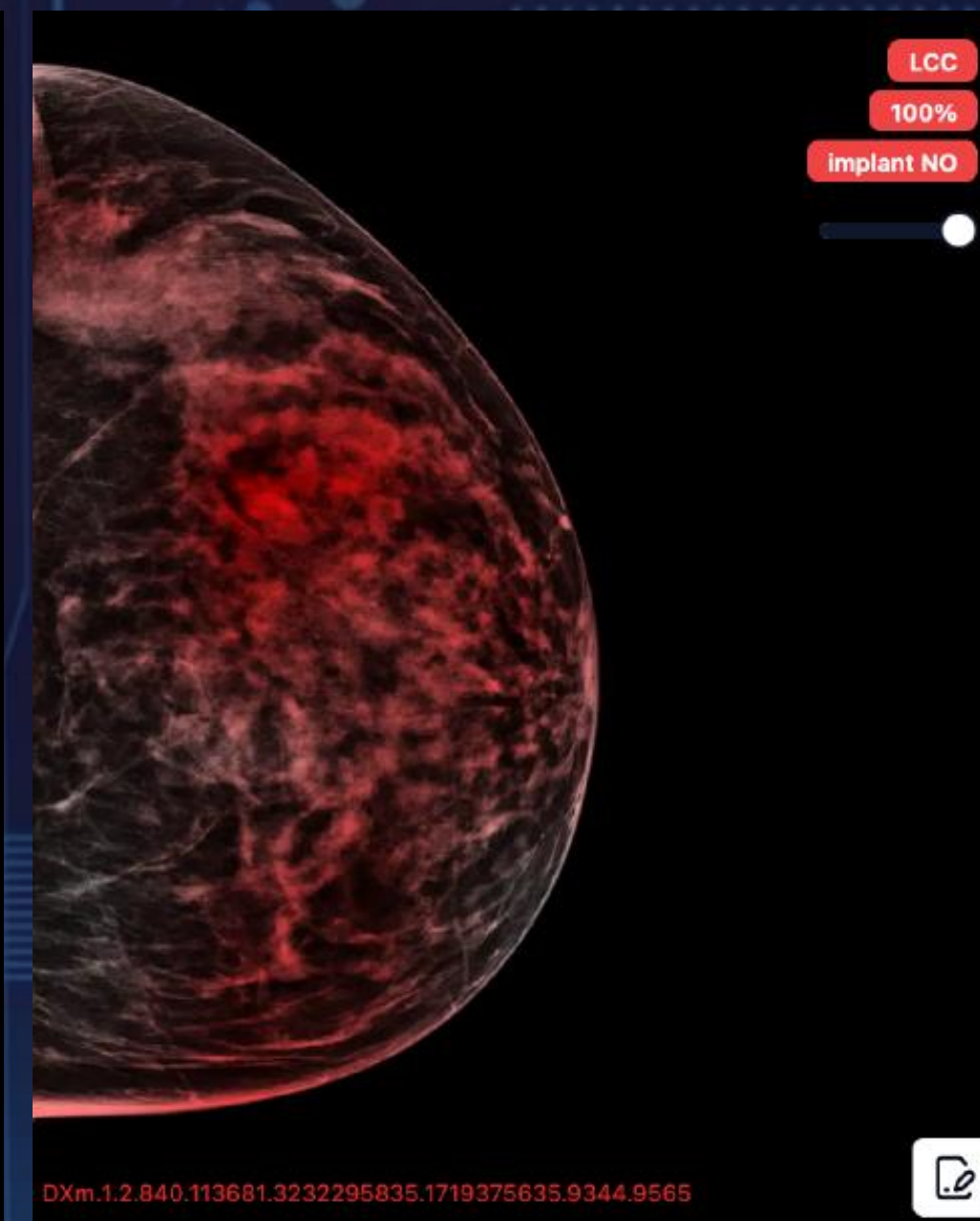
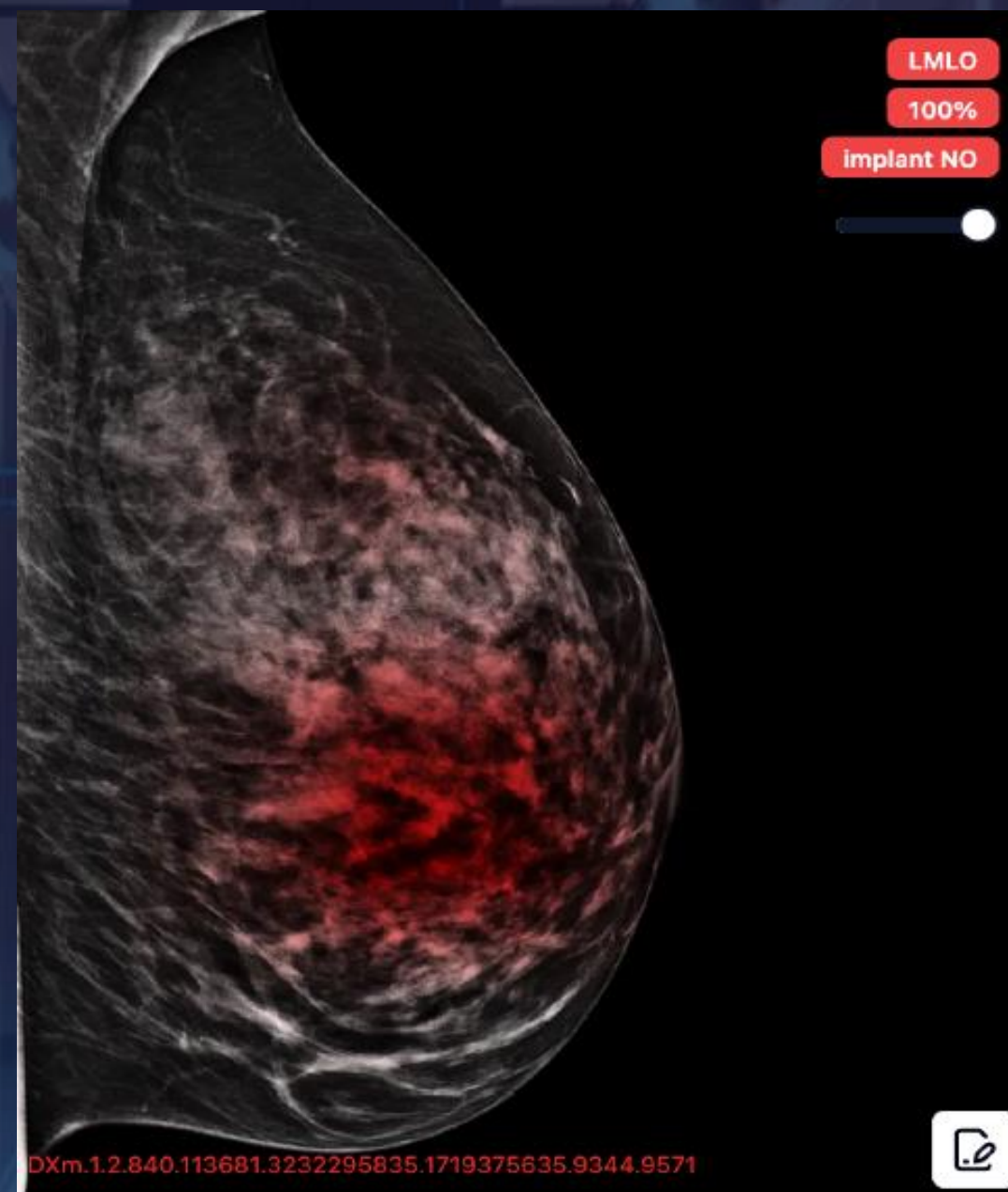


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КАНЦЕЛАРИЈА
ЗА ИТ И еУПРАВУ

AI Mammography Project

- DEVELOPED BY AI INSTITUTE OF SERBIA
- DEVELOPED ON NATIONAL AI PLATFORM
- APPLICATION IS HOSTED IN THE STATE DATA CENTER IN KRAGUJEVEC
- AUTOMATIC RANKING OF MAMMOGRAPHIC IMAGES
- EXPLAINABLE AI – MARKED REGIONS WHERE THE SOFTWARE DETECTED A POTENTIAL ISSUE
- IORS FIRST USER



Expansion of the National AI Platform Phase 1

VENDOR: **NVIDIA**
SUPPLIER: **EVIDEN (ATOS)**
FIRST HALF OF **2024**.
VALUE: **5M** EURO

- **6 x nVIDIA DGX H200 systems**
- **1344 CPU threads (Intel)**
- **48 GPU H200, 141GB RAM per GPU**
- **DDN Storage 120TB**

- **NDR (InfiniBand) network technology, 200Gb/s**
- **32 PetaFLOPS AI performance**
- **Consumption 72kW**
- **Planned Launch - Second Half of 2025.**



eУПРАВА

КАНЦЕЛАРИЈА
ЗА ИТ И eУПРАВУ

*** 7 X faster performance than the existing GPUs**

Expansion of the National AI Platform Phase 2

VENDOR: **NVIDIA, EVIDEN**
SUPPLIER: **EVIDEN (ATOS)**
FIRST HALF OF **2025**.
VALUE: **36M** EURO

- Loan from the French government
- HPC + Software stack + Mistral AI
- 4 x BullSequana XH3000 racks
- 640 x nVIDIA GraceHopper Superchip
- 96GB RAM per GPU
- Jarvice AI

- Inference
- DDN Storage 2.5PB
- NDR (InfiniBand), 200Gb/s
- 22.5 PetaFLOPS AI performance
- Consumption 550kW
- Planned Launch - 2026.

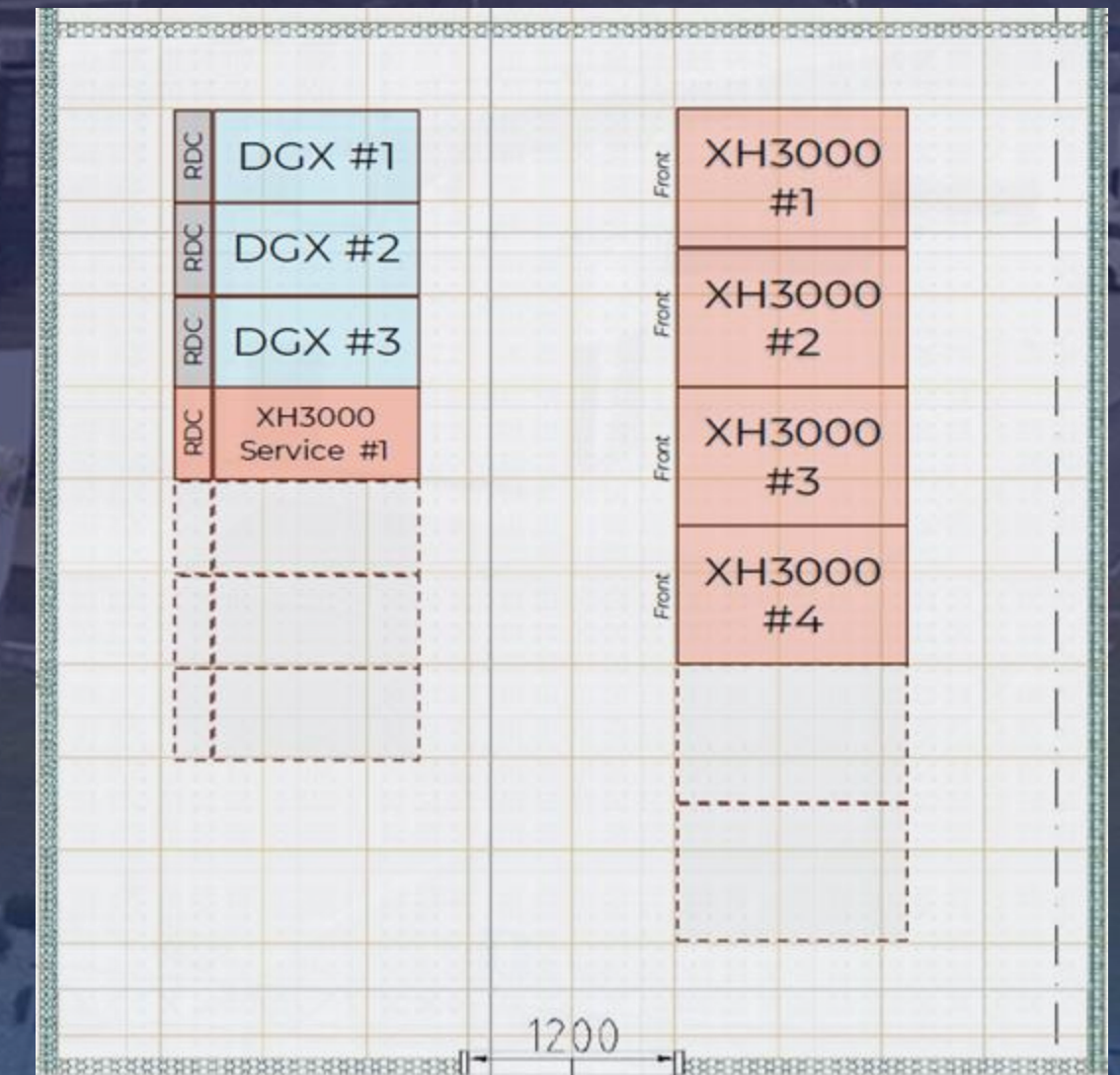


eУПРАВА

КАНЦЕЛАРИЈА
ЗА ИТ И еУПРАВУ

Integration of 3 Supercomputers into one cluster

- **Planned integration of three supercomputers**
- **Designed mini module with a water-cooling system (two technologies)**
- **Double floor designed to support a weight of 2.5 tons per rack**
- **Integration of all storages so that users perceive it as a one name space**
- **Total consumption 656,5kW**



Thank you for your attention!

In 2023, the OECD ranked the National Artificial Intelligence Platform as one of the 9 best innovative projects in the public sector, from a competition of 1,048 projects across 94 countries worldwide.