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ErgoDesign Improving digital skills for Ergonomics and Bioengineering Innovations for inclusive Health Care

Starting date
01.09.2022

Duration:
36 months

Contact us:
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Project website:
www.ergodesigner.eu

NEWSLETTER 03/2023 (07)

Co-funded by the European Union

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Newsletter 03/2023 (7)

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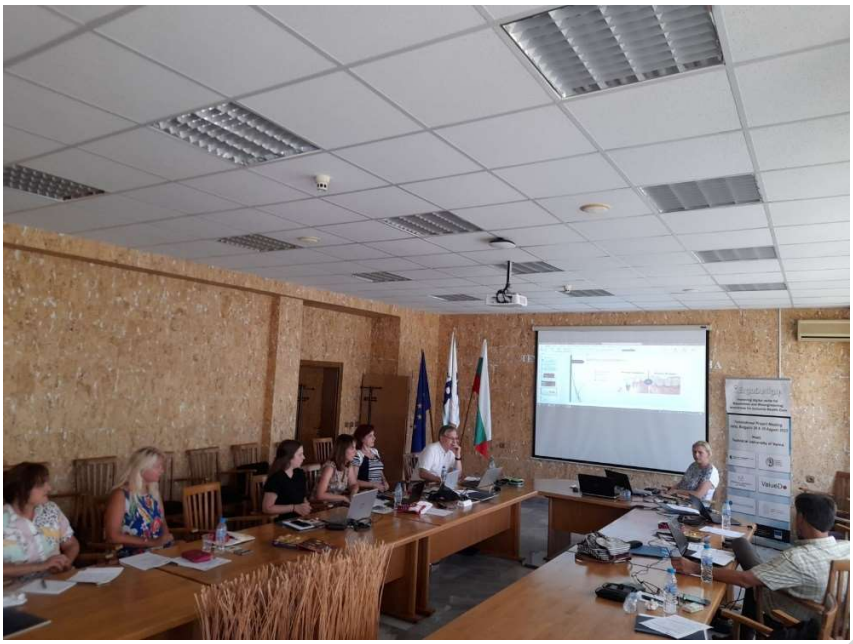
About Project

Project Meeting in Varna – August 2023

PR4 is now our main task. At the meeting in Varna, we decided to undertake actions to make the course interactive as much as possible. We also agreed on the final outlook of the Collaborative Platform so we need to introduce improvements within the next weeks. We focused a lot of attention to the templates for videos, presentations and quizzes.

All partners agreed to have a single course composed of 14 topics. The full title of the course will be "3D PRINTING FOR INCLUSIVE HEALTH CARE (improving digital skills for ergonomics and bioengineering)". We're working! Yupi!



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Project Context

The necessity of 3D CAD software in biomedical technology

3D CAD in the biomedical field is used for accurate modeling of complex geometries, customization, and patient-specific solutions, iterative design processes, simulation and analysis, collaboration, and communication, as well as facilitating manufacturing and production. More specifically CAD is necessary for the following reasons:

- *Precise Design: Biomedical technology often involves intricate and complex designs, such as medical devices, implants, and prosthetics.*
- *Visualization and Simulation: CAD software provides visualization tools that allow designers to see the virtual representation of their designs in 3D.*
- *Customization and Personalization: Biomedical technology often requires customized and patient-specific solutions. CAD software enables the creation of personalized designs based on patient data, such as medical imaging scans.*

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Popularization of surgery with the use of 3D implants i.e. a few pieces of (albeit local) information about the use of 3D in medicine

In recent days, the use of an endoprosthesis produced using of 3D printing was the subject of the Polish media.

The operated person, suffering from many different diseases, has not been able to take a step for the last year. It was caused by a defect in the pelvic bone, as a result of moving around for many years with too loose an endoprosthesis. Now, after implanting an implant that takes into account the anatomy of that person, the patient can walk again.

The use of implants can be also a therapy for people after oncological treatment, when the cancer attacks the bones and they need to be removed. In large cavities, a typical implant cannot be used - it must be made specifically for a specific patient. Precise specification is necessary before the procedure, using, among others, computed tomography and magnetic resonance imaging. Only then the implants are printed.

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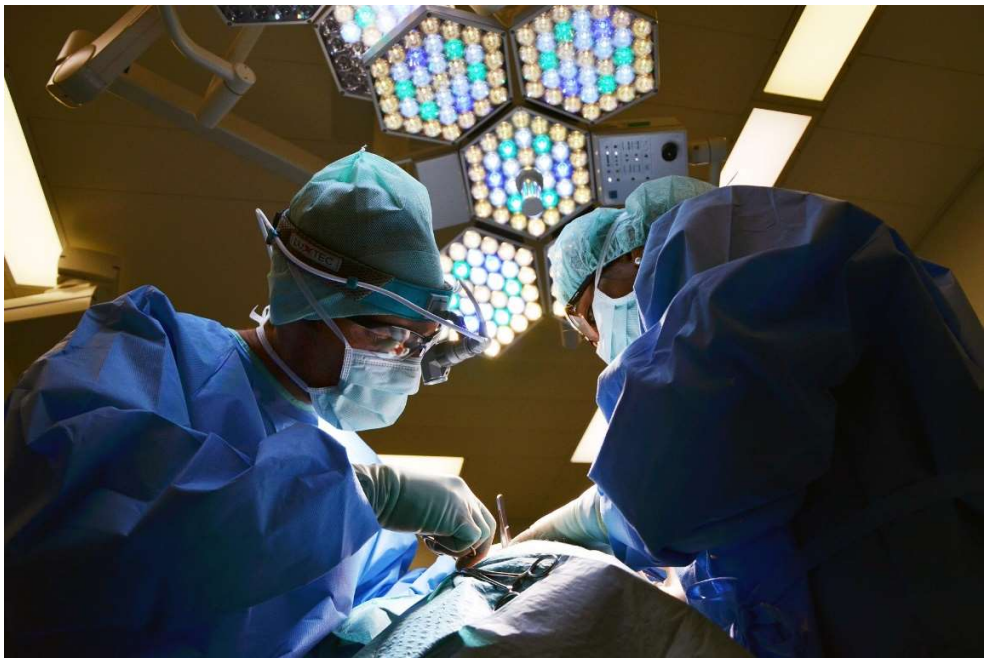
At present, in Poland, endoprostheses made in 3D technology are implanted only in a small group of patients. The problem is particularly important because each of us is different and tailor-made prostheses are the future! For comparison, specialists from the City Hospital. J. Strusia in Poznań install approx. 500 mass-produced hip and knee endoprostheses annually. 3D printing gives a chance to treat those patients who were previously unqualified for it. In recent years, only 3 such procedures have been performed in Poland.



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Are you interested in:

- 3d printing in medicine
- a modern, inclusive approach to health
- design for people with disabilities
- ergonomics of work

If you said 

follow us on the website, facebook, linkedin or just contact us.

Our design activities results could be appealing to you!

See you soon!

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