

# Montenegrin Digital Academic Innovation Hub: Supporting Digital Education, Business and Innovations in Medical Informatics

Ivana OGNJANOVIĆ<sup>1,a</sup>, Ramo ŠENDELJ<sup>a</sup>, Luka LAKOVIĆ<sup>a</sup>, John MANTAS<sup>b</sup>, Emmanouil ZOULIAS<sup>b</sup>, Laszlo BOKOR<sup>c</sup>, Peter A. KARA<sup>c</sup>, Christoph REICH<sup>d</sup>, Irena OROVIĆ<sup>e</sup>, Milovan ROGANOVIĆ<sup>f</sup>, Tanja RADUSINOVIĆ<sup>g</sup>, Nada RAKOČEVIĆ<sup>g</sup>, Nataša ŽUGIĆ<sup>h</sup>

<sup>a</sup>University of Donja Gorica, Podgorica, Montenegro

<sup>b</sup>National and Kapodistrian University of Athens, Goudi, Greece

<sup>c</sup>Budapest University of Technology and Economics, Budapest, Hungary

<sup>d</sup>Furtwangen University, Furtwangen, Germany

<sup>e</sup>University of Montenegro, Montenegro

<sup>f</sup>Clinical Center of Montenegro, Montenegro

<sup>g</sup>Chamber of Economy Montenegro, Montenegro

<sup>h</sup>Ministry of Health, Montenegro

**Abstract.** This poster presents a Montenegrin Digital Academic Innovation Hub aimed to support education, innovations, and academia-business cooperation in medical informatics (as one of four priority areas) at national level in Montenegro. The Hub topology and its organisation in the form of two main nodes, with services established within key pillars: Digital Education; Digital Business Support; Innovations and cooperation with industry; and Employment support.

**Keywords.** Digital innovation hub, academia-business cooperation, medical informatics

## 1. Introduction

Digital research centres and academia (HEIs) have leading roles in the digitization of industries, strengthening cooperation with national economies, providing expert knowledge to industries, and fostering synergies with investors, and customers globally [1]. The newly established Montenegrin Digital Academic Innovation Hub (MNE\_DAIH) promotes research, innovation, and education, as well as turn research results and innovative ideas into marketable products by bringing together faculty and students across disciplines and enhancing development of industry 4.0 in Montenegro.

---

<sup>1</sup> Corresponding Author: Ivana Ognjanović, University of Donja Gorica Montenegro, Podgorica, Montenegro; E-mail: ivana.ognjanovic.edu@gmail.com; ivana.ognjanovic@udg.edu.me

## 2. Methods

MNE\_DAIH is a crucial structural reform at Montenegrin HEIs that enhances academic and business collaboration and support industry 4.0 development. The rationale is rooted in four principles: (i) constitutive roots are two HEIs with significant portfolio in medical informatics; (ii) expected national coverage: full openness to HEIs and cooperation with business, public bodies and relevant stakeholders of the industry 4.0 at national level; (iii) capitalization of available resources and existing experience; (iv) integration of best practices by fostering synergies.

## 3. Results

MNE\_DAIH is focused on digitization in priority areas of health and agriculture, while long-term goals include extension on other areas in Montenegro (and being in line with Smart Specialization Strategy S3[3]). The Hub services are established in the form of the following four key pillars: *Digital Education*- organization of different types of educational opportunities for students of HEIs; *Digital Business Support*- support the innovative ideas of students; *Innovations and cooperation with businesses*-cooperation between business and HEIs; *Employment support*-support to establishing an employment relationship. All modules are consisted of fully digitized sub-modules [2].

## 4. Discussion and Conclusions

Newly established Montenegrin Digital Academic Innovation Hub serves as a catalyst of knowledge and skills at Montenegrin HEIs. It connects national innovation ecosystem with the industry and business. Its functioning is fully digitized [1] by respecting well-known principles of software business family development [4]. The evaluation results are expected to be used for comprehensive assessment of achieved impacts on medical informatics at a national level as a priority.

## Acknowledgments

Supported by European Commission Erasmus+ Project Digital Entrepreneurial Nest and Industry 4.0 in Montenegro (DigN€st): 619099-EPP-1-2020-1-ME-EPPKA2-CBHE-JP.

## References

- [1] Laković L, Kara PA, Ognjanović I, Bokor L. et al. Evaluation of the Montenegrin Academic Digital Innovation Hub. In: 2023 27th International Conference on Information Technology (IT); 2023. p.1-4.
- [2] DAIH-DigNest [Internet]. DAIH-DigNest; [cited 2023 May 2]. Available from: <http://daih.me/>.
- [3] Smart Specialisation Platform [Internet]. Montenegro - Smart Specialisation Platform; [cited 2023 May 2]. Available from: <https://s3platform.jrc.ec.europa.eu/montenegro>.
- [4] Groner G, Bošković M, Parreiras FS, Gašević D. Modelling and validation of business process families. *Information Systems*. 2013;38(5):709-726, doi:10.1016/j.is.2012.11.010.