



19TH eHEALTH NETWORK 3 JUNE 2021, BRUSSELS, BELGIUM

COVER NOTE

7. **Horizon2020 projects presentation**

1. **Issue at stake**

Developing an EU health data space that enables the sharing and access of health data, within and across borders, and which is trusted by citizens and users alike, calls for innovation in infrastructures and digital technologies.

DG CNECT ensures that Horizon 2020 support projects that aim to provide ‘proof of concept’ for cybersecurity solutions/technologies that the EU will need for the digital transformation of the health and care sector.

It is essential that interesting projects are brought to the attention of the relevant policy makers, who can review them for their potential to be scaled up.

2. **Summary**

This session showcases the following four Horizon 2020 projects by asking the coordinators to give the ‘elevator pitch’ of their project:

CUREX – Secure and Private Health Data Exchange – H2020 contract n° 826404

CUREX is a research and innovation action funded under the Horizon 2020 framework introducing a novel, flexible and situational awareness-oriented platform designed specifically to reinforce the security of healthcare organisations. CUREX aims to protect the health data handled by hospitals from the risks that are propagated all the way from the security gaps in their IT infrastructure. To achieve this goal, cybersecurity and privacy risk assessments are being performed, while also optimal recommendations for cyber risk mitigations are offered in the form of a decision support tool. The platform encompasses a suite of tools establishing trust between healthcare organisations to address the necessity of data exchange in a fully GDPR-compliant manner. Moreover, taking into account the human-factor, CUREX also improves the cyber hygiene culture among personnel through identifying employee group-specific gaps and needs with regards to raising cybersecurity and data privacy awareness. The project capitalises on existing distributed ledger and health technological artefacts whose aim is to provide accountability and auditability functionalities that will increase trust among hospitals and care centres.

Speaker: Prof. **Christos Xenakis** received his BSc degree in computer science in 1993 and his MSc degree in telecommunication and computer networks in 1996, both from the Department of Informatics and Telecommunications, University of Athens, Greece. In 2004 he received his PhD from the University of Athens

(Department of Informatics and Telecommunications). From 1998 - 2001 he was with a Greek telecoms system development firm, where he was involved in the design and development of advanced telecommunications subsystems. From 1996 - 2007 he was a member of the Communication Networks Laboratory of the University of Athens. Since 2007 he is a faculty member of the Department of Digital Systems of the University of Piraeus, Greece, where currently is a Professor, a member of the Systems Security Laboratory and the director of the Postgraduate Degree Programme, on "Digital Systems Security". He has participated in numerous projects realized in the context of EU Programs (ACTS, ESPRIT, IST, AAL, DGHOME, Marie Curie, Horizon2020) as well as National Programs (Greek). He is the project manager the CUREX, SECONDO, INCOGNITO and SealedGRID projects, funded by Horizon2020, while he was the project manager of the ReCRED project funded by Horizon 2020 and the technical manager of the UINFC2 project funded by DGHOME/ISEC. He is also a steering committee member of the European Cyber Security Challenge (ECSC) and the leader of the Hellenic Cyber Security Team. He is a member of the editorial board of three Thomson Reuters indexed journals: a) Computers & Security Journal of the Elsevier publishing, b) Computer Communications Journal of the Elsevier publishing, and c) IET Information Security of the Institute of Engineering and Technology. His research interests are in the field of systems, networks, and application security. He has authored more than 100 papers in peer-reviewed journals and international conferences.

PANACEA – People-centric cybersecurity in healthcare – H2020 contract n° 826293

PANACEA is a holistic approach to cybersecurity in healthcare, drawing on end-user partner requirements and expertise within the consortium, such as risk management, security-by-design, identification management and secure behaviour. The project is developing and delivering a Toolkit as a comprehensive set of the tools and processes and integrated solution to protect healthcare organisations from cyber-attacks and vulnerabilities in their IT systems. Designed with a deep understanding of the dynamics in the healthcare sector, the toolkit comes complete with “instructions” on how to adopt each tool, individually or as an integrated set. The toolkit features novel approaches to tackling cyber risks caused by hospital staff, nudging them towards more secure behaviour and highlighting the very close relationship between the professional priorities of patient wellbeing and securing their data at the same time. The toolkit also features voice-less educational videos, tailored for healthcare personnel and customised to the actual context of the individual Healthcare Organisation.

Speaker: Dr Med. **Sabina Magalini**, Senior Surgeon of the Emergency and Trauma Surgery Unit at the Fondazione Policlinico Universitario Gemelli IRCCS (FPG) and Assistant Professor of Surgery at the Rome Catholic University School of Medicine (UCSC). Sabina Magalini is also an associate researcher of the Italian National Council of Research (CNR-IASI); Fellow of the American College of Surgeons (FACS), of the American Association for the Surgery of Trauma (AAST) and of the European Society for Trauma and Emergency Surgery (ESTES). Her main interests focus on hospital surge plans, medical response to major incidents, emergency and trauma care system, decision support systems for major emergencies, training guidelines and standards in the framework of EU Programme projects (SICMA, EDEN, PULSE, REACHING OUT, ENCIRCLE,

NO-FEAR, PANACEA, INCLUDING. EU-HYBNET). To all of these she actively participated as Investigator, except PANACEA for which she is Coordinator.

PROTEGO – Data-Protection Toolkit Reducing Risks in Hospitals and Care Centers – H2020 contract n° 826284

Health care is an essential service that uses a great deal of sensitive personal data which has a high black market value being a lucrative target for data theft and ransomware attacks. The EU NIS Directive (EU 2016/1148) and GDPR (EU 2016/679) will harmonize and improve information security in Europe. Both require relevant ICT infrastructure operators to perform risk assessments, introduce appropriate security measures to manage identified risks, and report security breaches. The **ProTego** project develops a toolkit and guidelines to help health care systems users address cybersecurity risks in this new environment.

Speaker: Luis Carrascal is a project manager and cybersecurity consultant with over 30 years of experience in ICT.

SPHINX – A Universal Cyber Security Toolkit for Health-Care Industry – H2020 contract n° 826183

SPHINX brings a universal cyber security toolkit for the health and care domain that enhances the cyber protection of the healthcare IT ecosystem and ensures the patients' data privacy and integrity. The SPHINX toolkit offers an embedded, smart and robust security awareness layer, able to identify modern and advance cyber threats, enhanced with a personalised data security management tool. Part of the toolkit is a *cybersecurity vulnerability assessment and certification toolkit* for certain healthcare providers, manufacturers, and supporting service providers. The certification toolkit is being built in line with the requirements/controls being put forward from the current EU legislation and international standards.

Speaker: Dr Christos Ntanos is a senior research associate (BEng Electronic and Computer Engineer, MSc, MBA, PhD) of the Decision Support Systems Laboratory of the National Technical university of Athens. He has a fifteen-year experience in implementing and managing ICT and cross-cutting research and implementation projects, and is the scientific manager of the SPHINX project. Dr Ntanos is a certified ISO 27001 Lead Auditor, an information security consultant and Information Security Management Systems' implementer for public institutions in Greece, and is the current DPO and CISO of NTUA's DSS Lab.

3. Format of procedure in the meeting

For information