



Project no. 826278

SERUMS

Research & Innovation Action (RIA)
SECURING MEDICAL DATA IN SMART-PATIENT HEALTHCARE SYSTEMS

The Final Press Release D8.5

Due date of deliverable: 30th June 2022

Start date of project: 1st January 2019

Type: Deliverable
WP number: WP8

Responsible Institution: USTAN
Editor and editor's address: Juliana Bowles (jkfb@st-andrews.ac.uk)

Version 1.1

Project co-funded by the European Commission within the Horizon H2020 Programme		
Dissemination Level		
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Release History

Release No.	Date	Author(s)	Release Description/Changes made
V0.1		Emma Morley (USTAN)	Wrote the initial document, collected and added info from all partners
V1.0		Thais Webber (USTAN)	Corrections and improvements
V1.0		Juliana Bowles (USTAN)	Final revision, version, added details, etc

SERUMS Consortium

Partner 1	University of St Andrews
Contact Person	Name: Juliana Bowles Email: jkfb@st-andrews.ac.uk
Partner 2	Zuyderland Medisch Centrum
Contact Person	Name: Larissa Haen-Jansen Email: la.jansen@zuyderland.nl
Partner 3	Accenture B.V.
Contact Person	Name: Bram Elshof, Wanting Huang Email: bram.elshof@accenture.com , wanting.huang@accenture.com
Partner 4	IBM Israel Science & Technology Ltd.
Contact Person	Name: Michael Vinov Email: vinov@il.ibm.com
Partner 5	Sopra-Steria
Contact Person	Name: Andre Vermeulen Email: andreas.vermeulen@soprasteria.com
Partner 6	Université Catholique de Louvain
Contact Person	Name: Axel Legay Email: axel.legay@uclouvain.be
Partner 7	Software Competence Centre Hagenberg
Contact Person	Name: Michael Rossbory Email: michael.rossbory@scch.at
Partner 8	University of Cyprus
Contact Person	Andreas Pitsillides Email: andreas.pitsillides@ucy.ac.cy
Partner 9	Fundació Clínic per a la Recerca Biomèdica
Contact Person	Name: Santiago Iriso Email: siriso@clinic.cat
Partner 10	University of Dundee (UNIVDUN)
Contact Person	Vladimir Janjic Email: VJanjic001@dundee.ac.uk

Table of Contents

Executive Summary.....	4
1 Text for Press Release	4

Executive Summary

This deliverable describes the final press release sent to the Press Office from the University of St Andrews, describing the achievements and overall aims of the Serums project.

1 Text for Press Release

The Press Office from the University of St Andrews was not able to publish our press release late June 2022 due to several weeks of graduation ceremonies being held at St Andrews (including those for students that should have graduated during the pandemic). The workload was hence considerable and the public release of our SERUMS project description is expected in early July 2022. This will then be linked to our website and broadcast to social media (mainly twitter).

Press release

Serums Project – EU Horizon 2020

An increasingly complex, digital world leaves no area of our lives untouched. Healthcare management is no exception. It is becoming a progressively digitalised and multi practitioner driven entity, precipitating a step change in how highly confidential and personal medical data is shared.

In the modern world, medical data comes from a variety of sources: personal medical devices, opticians, GPs and other healthcare practitioners. There are many potential benefits to society from combining such data locally, nationally and internationally. Data sharing is a complex issue requiring data to be securely transferred through various means, including public networks, whose security cannot be implicitly trusted.

The EU funded Serums Project explored new ways of integrating technology to address these issues. Led by Juliana Bowles at the University of St Andrews, Serums is part of the Horizon 2020 programme, combining the expertise of ten institutions across seven countries. Serums envisioned a future of healthcare delivery around individual patient's needs, opening research avenues for improving personal care, enhancing treatment quality and ensuring patient trust in the security and privacy of their medical data.

Serums was established with medical professionals and computer scientists using artificially synthesised medical data to create a data lake of health information to test the functioning and security of the new system. Synthetic data replicates realistic medical data without using real medical records. The data and the system can be tested to ensure the future security and privacy of real patient records.

Patients access medical records by creating a unique 'picture password', based on a photograph that has meaning to them, for example their local hospital entrance or waiting room. This encrypted picture password gives greater memorability with two factor authentication such as a text or phone call.

Patients choose which hospital departments or other medical organisations have access to their records, regardless of country location. Authorised professionals access information in the data lake based on the level of permission the patient grants them, with different departments given different levels of access to a patient's data.

Different data formats are added to the data lake and can be accessed regardless of means of data including xrays, doctor's notes from different countries, in various languages and data from personal health devices.

In the future, systems like the one developed within Serums will make use of real medical data rather than synthetic data. The data lake simulates compliance with GDPR, so when the system is populated by real data, it is designed to be fully private and secure.

The system has been tested by members of the public across Europe. In order to overcome the challenges of studies carried out during the pandemic, Serums used an online approach to allow the public to evaluate the system. Participants answered a questionnaire about their opinions on the Serums system, including perceived usability, picture password memorability and security. The system has had very encouraging feedback and has been well received by the public. More information on the project can be found on the project's website (<https://www.serums-h2020.org>) which includes a recent short animation giving a concise synopsis of the project.