



Privacy preserving federated machine learning and blockchaining for reduced cyber risks in a world of distributed healthcare

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Deliverable D9.5 “Project leaflet for patients”

Workpackage WP09 “Dissemination, training, and exploitation”

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Document information

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Deliverable	9.5 "Project leaflet for patients"			
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Acronyms and definitions

AI	artificial intelligence
concentris	concentris research management GmbH
GND	Gnome Design SRL
MUG	Medizinische Universität Graz
RI	Research Institute AG & Co. KG
SBA	SBA Research Gemeinnützige GmbH
SDU	Syddansk Universitet
TUM	Technische Universität München
UM	Universiteit Maastricht
UMR	Philipps Universität Marburg

1 Objectives of the deliverables based on the Description of Action

The project leaflet for patients serves the following WP09 objectives and tasks:

- Objective 1: To make FeatureCloud known to the scientific community and the public → Task 1: Logo, website and corporate identity of FeatureCloud (concentris, TUM, GND)
- Objective 2: Disseminate the results to the scientific community in the academic and healthcare sectors and foster interaction and exchange with the scientific community and the public → Task 3: Dissemination for patients and the public (TUM, UMR, MUG, SDU, SBA, UM, concentris, RI, GND)

2 Executive Summary / Abstract

To inform patients and the general public about the goals and objectives of FeatureCloud, a DIN A5 PDF leaflet has been designed for web-download by concentris in collaboration with TUM. The leaflet is openly available for download from the project website.

3 Introduction (challenge)

The challenge for this deliverable was to design a brief, but informative project leaflet that summarizes in visual and textual form the goals and objectives of FeatureCloud with patients as the key target group.

4 Methodology

To inform patients about FeatureClouds goals and objectives, we decided to use a simple DIN A5 format with content and visuals on both the front and back side and to prepare the leaflet as a downloadable PDF (web version). The leaflet has been made freely available for download from the FeatureCloud website (<https://featurecloud.eu/for-the-public/downloads/>).

For now (before the final FeatureCloud platform is available as a real-world product), it was deemed sufficient that the leaflet is only available in digital form (web version) as a downloadable PDF. At a later stage (when the final FeatureCloud platform is available as a real-world product) the leaflet will be adapted to explain the platform and methodology in more detail, including a brief guide on how to use it (from the patient’s perspective). Such an adapted version (V3.0) of the leaflet will also be prepared as a printable PDF, so that the printouts can be distributed to interested individuals and patients in clinics and hospitals that will use the FeatureCloud platform.

5 Results

Patients and interested individuals within the general public can download the leaflet [here](#). In addition to being openly available for download from the project’s website, the PDF is also available on the intranet for all project partners (<https://intranet.concentris.de/login>).



Front side of DIN A5 leaflet (web version):

REVOLUTIONISING CLOUD COMMUNICATION

Privacy preserving federated machine learning and block chaining for reduced cyber risks in a world of distributed healthcare

OUR VISION

We envision a future in which doctors can easily and safely store, access and manage primary medical patient data without risking a privacy breach, and in which patients have full control and can change their mind at any time on what information they want to share or keep private. At the same time, researchers should have better, ideally global access to truly anonymous medical and biomedical data in order to study and understand diseases and accelerate the development of novel treatments. Legally and technically, we only see one secure solution for these two seemingly conflicting objectives: (1) all potentially insecure data communication is kept in decentralized form within local, firewall-protected hospital IT systems (highest-possible security, no single point of attack), (2) local, decentralized artificial intelligence (AI) software is active behind these firewalls, and (3) only federated machine learning features that cannot be tracked back to sensitive patient data are transferred to a centralized, yet transient cloud. FeatureCloud is a novel artificial intelligence (AI) platform, based on a ground-breaking new cloud infrastructure to integrate local AI globally without the need for any transfer of primary medical data – totally anonymous by default.

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FeatureCloud on Twitter: @Feature_Cloud

Scan me to visit website: featurecloud.eu

Back side of DIN A5 leaflet (web version):

FULL CONTROL FOR PATIENTS & MAXIMUM SECURITY FOR THEIR DATA

The final product of FeatureCloud will be characterized by three key strengths: (1) no sensitive data will be sent through any communication channels, (2) data won't be stored in one central point of attack, and (3) patients will maintain full control over their data, being able to give or withdraw their consent at any time.

State-of-the-art security measures
Privacy by Policy
Privacy Enhancing Technologies

Innovation axes
Privacy by Design
Privacy by Architecture

Full project title: FeatureCloud

Start date: 01 January 2019

Duration: 5 years

Participants: 9 institutions from 5 European countries

Horizon 2020 funding: 4.5 million € (4,646,000 €)

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Special effort has been made to summarize the project's key facts, overall aim, and scientific approach in a compact, easy-to-understand graphic.

The focus (in comparison to the leaflet for clinical staff and scientists) lies on the security features of the planned platform.

It is crucial to win the patients trust. Their personal data will be private by design and patients will always have full control over their data.

Also included on the leaflet are the FeatureCloud Twitter handle and an easy-to-scan QR Code to quickly access the project's website:

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6 Open issues

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At a later stage (when the final FeatureCloud platform is available as a real-world product) the leaflet will be adapted to explain the platform and methodology in more detail, including a brief guide on how to use it (from the patient’s perspective). Such an adapted version (V3.0) of the leaflet will also be prepared as a printable PDF, so that the printouts can be distributed to interested individuals and patients in clinics and hospitals that will use the FeatureCloud platform.

7 Conclusion

While the focus of the other leaflet (for clinical staff and scientists) is on the underlying scientific approach, the focus of this leaflet (for patients whose trust in the new technology needs to be won) was intentionally placed on the “privacy by design” feature, the secure handling of any patient data, and the complete control that each individual patient will have at any time over his or her medical data that is processed to feed the planned FeatureCloud AI & FeatureCloud platform.

A more detailed printable leaflet will be prepared at a later stage when the FeatureCloud platform goes into action in the real-world setting.

8 References

https://featurecloud.eu/wp-content/uploads/2019/12/20191209_FeatureCloud_Flyer_A5_Patients_Web.pdf