Cyber-security Excellence Hub in Estonia and South Moravia

D4.2
Project Website

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CyberSecurity Hub	CSH	Czechia
National Cyber and Information Security Agency (associated)	NCISA	Czechia
South Moravian Innovation Centre (associated)	JIC	Czechia
Estonian Information Security Association (associated)	EISA	Estonia

Abbreviations

CHESS – Cyber-security Excellence Hub in Estonia and South Moravia
HPC – High Performance Centre

Executive Summary

This document provides a description of the CHESS project website and its associated social media channels. After introducing the context, the report describes the website, its role, structure, configuration, and metrics for website performance monitoring. Then it overviews the social media channels (Twitter, Facebook, LinkedIn, and YouTube) and mentions some metrics for their performance measurement.

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1 Introduction

CHESS is the Cyber-security Excellence Hub in Estonia and South Moravia. Its main objectives [1] are to

- Develop a cross-border joint cybersecurity research and innovation (R&I) strategy aligned with Czechia's and Estonia's smart specialisation strategies,
- Propose action and investment plans for implementation of the strategy in six challenge areas of cybersecurity (i.e., internet of secure things, security certification, verification of trustworthy software, security preservation in blockchain technology, post-quantum cryptography, and human-centric security),
- Initiate at least 12 small-scale R&I projects consolidating academia business linkages to demonstrate the validity of ideas and provide evidence to obtain additional investments,
- Develop a training strategy for both regions to increase cross-border/sectoral cooperation and increase needed skills around the six challenge areas, and
- Raise visibility, citizen engagement, technology transfer, entrepreneurship training, staff exchange, mutual learning, etc.

This document primarily presents the CHESS project's website and associated social media channels. These means are the primary interface for communicating and disseminating the project's objectives, activities, and results to the target audiences (see, [2]). They are used to present the partnership and main project results, including deliverables, publications, presentations, and theses. These outputs become available for the target audience later for the exploitation activities.

The project uses the CHESS website to communicate information about the published articles and papers, inform about the organised events (including regional and international), and invite the target audience to the training seminars and workshops. The project's website disseminates the CHESS publications, training material, deliverables, and demonstrations. Since the material is available through the website, the target audience can exploit it for its purposes.

Black/white

Blue background

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Figure 1: CHESS project logo

The CHESS project's logo (see Figure 1) is added to the project website and associated social media channels. This helps the targeted audience easily relate to the project material and outcomes.

The rest of this document is structured as follows: Section 2 presents the CHESS website, its structure, configuration, and performance monitoring means. Section 3 is dedicated to the associated social media channels, their short overview and some performance monitoring means. Section 4 summarises and concludes this report.

2 Website

This section presents the website role, its structure, technology, and plugins used in the CHESS project's website. In the end, some performance monitoring metrics are presented.

2.1 Role

The current CHESS website address is at

https://chess-eu.cs.ut.ee

The server was created on 10 January 2023. It became available on 13 January 2023. The first CHESS project-related content was published on 1 February 2023. The website has been regularly updated since. The website is hosted by the University of Tartu, HPC [3], in Estonia. The CHESS website is the primary interface for communicating and disseminating the project's objectives, activities, and results to the target audiences [2]. It will also overview the partnership and main project results, including deliverables, publications, and other outputs, which will become available for the target audience later for the exploitation activities. The project will use the CHESS website to *communicate* information about the published articles and papers, inform about the organised events (including regional and international), and invite the target audience to the training seminars and workshops. The project's website will *disseminate* the CHESS publications, training material, deliverables, and demonstrations. Since the material is available through the website, the target audience can *exploit* it for its purposes. The CHESS website introduces the project structure, challenge areas, training, and awareness activities [2].

The landing page is the first point of contact for visitors to the CHESS website (see Figure 2). It succinctly conveys the project's essence, highlighting the collaboration between Estonia and South Moravia. By detailing the challenge areas, it provides a snapshot of the project's scope and ambitions. For any inquiries, feedback, or collaborations related to the CHESS project, one can reach out through the official email: chess-eu@ut.ee. Integrations, like the social media links, ensure the website is dynamic, engaging, and offers real-time insights into the project's activities. The CHESS website

- welcomes and introduces visitors to the CHESS project.
- provides a snapshot of the project's ambitions, scope, and collaborations.
- serves as a dynamic hub with continuous updates, fostering engagement and community interaction.

Next, CHESS website's structure is overviewed.

Figure 2: Landing page of CHESS website

2.2 Structure

The website structure is illustrated in Figure 3. The main homepage includes the following landing pages: *About*, *Research*, *Training and Awareness*, *News & Events*, *Partnership*, and *Results*.

About landing page (see Figure 4a) includes *About*, *Objectives* and *Structure* pages:

- *About* page is dedicated to giving an introductory overview of the CHESS project. It outlines the importance of the CHESS initiative in the realm of cybersecurity, especially in the context of Estonia and South Moravia, and offers insight into how the project is aligned with international cybersecurity goals. The promotional material available for download provides additional information for visitors who want a quick overview of the project's goals and objectives.

- *Objective* page outlines the key strategic intentions of the CHESS project. It details the specific focus areas that the initiative is centred on and the overarching goals it aims to achieve. This page serves as a roadmap for anyone interested in the primary mission of the CHESS project, from strategic alignment with European digital society goals to specific research areas of interest.

- *Structure* page outlines the organizational and operational framework, detailing how the project is structured and the hierarchy of teams or units.

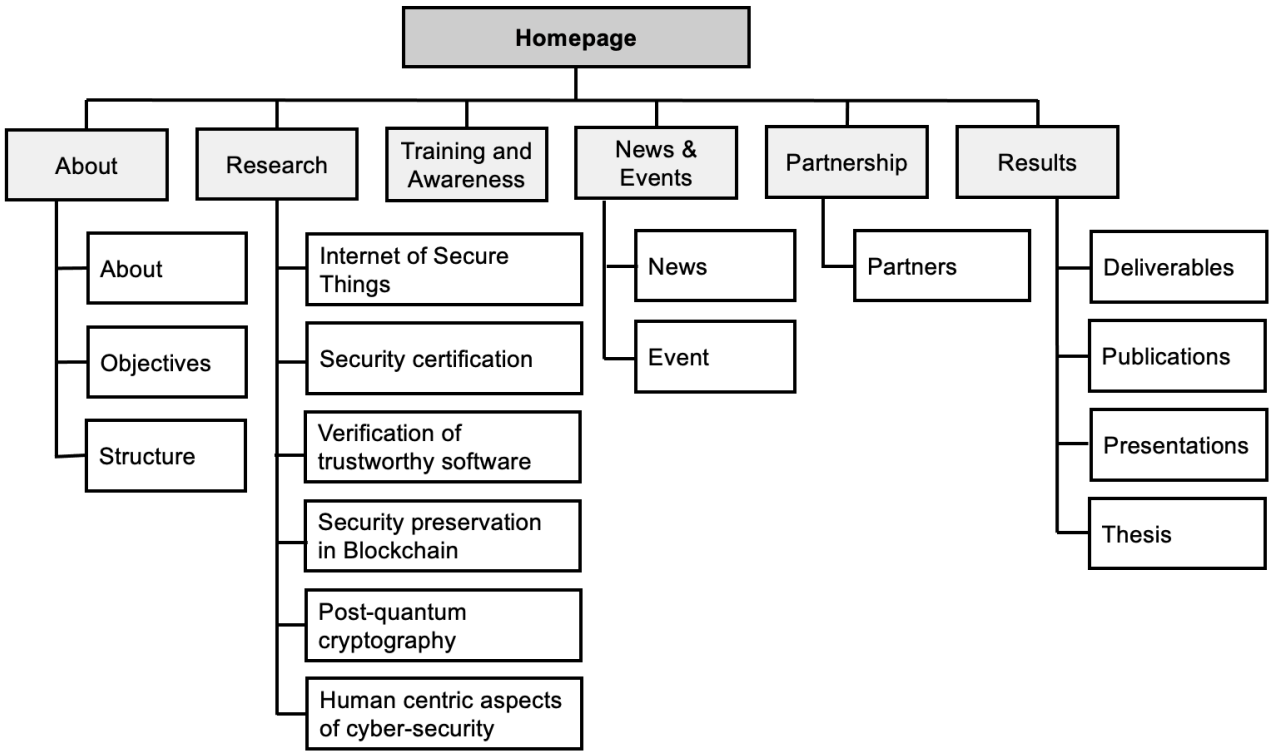

Figure 3: Structure of CHESS website

Research landing page (see Figure 4b) includes the following pages *Internet of Secure Things*, *Security certification*, *Verification of trustworthy software, Security preservation in blockchain, Post-quantum cryptography,* and *Human-centric aspects of cyber-security*:

- *Internet of Secure Things* page discusses the importance and methodologies adopted to secure IoT devices.
- *Security certification* page focuses on the various cybersecurity certification processes and their relevance.
- *Verification of trustworthy software* page sheds light on the measures and protocols to verify software credibility.
- *Security preservation in blockchain* page explores the significance of maintaining security in blockchain technologies.
- *Post-quantum cryptography* page introduces concepts of post-quantum cryptographic methodologies and their importance.
- *Human-centric aspects of cyber-security* page delves into the human element of cybersecurity, emphasizing user awareness and behaviour.

Training and Awareness landing page (see Figure 4c) is integral to ensuring the longevity and effectiveness of cybersecurity initiatives. This page delves into the CHESS project's dedication to bolstering skills, fostering technology transfer, and building an esteemed international reputation. With detailed action points (CA1-CA6), the page clarifies how the project aims to impart knowledge and raise awareness across various cybersecurity domains. Its goals are to (*i*) highlight the project's emphasis on training and skill

development, (*ii*) detail specific training modules and their relevance, and (*iii*) engage potential learners and educators in the project's training initiatives.

News & Events landing page (see Figure 4d) includes *News* and *Events* pages:

- *News* page keeps the community updated about the latest developments, findings, and announcements related to the CHESS project.

Partnership landing page (see Figure 4e) provides details about the organizations, institutions, and individuals collaborating on the CHESS project, emphasizing their contributions and roles.

Figure 4: Landing pages of targeted pages

Results landing page (see Figure 4f) includes *Deliverables*, *Publications*, *Presentations*, and *Theses* pages:

- *Deliverables* page lists and explains the tangible outcomes, reports, or products resulting from the project's activities.
- *Publications* page showcases academic papers, articles, and other written works related to the CHESS project.
- *Presentations* page is dedicated to presentations related to the project that are embedded for easy access and viewing, made possible by the "Embed Any Document" plugin.
- *Theses* page highlights academic research and theses developed under or related to the CHESS project.

2.3 Configuration

The CHESS Website is created using WordPress of the following configuration: WordPress Version 6.3.2, PHP Version 8.0.22, and several plugins. The choice to utilize WordPress as the central platform for the CHESS project was primarily influenced by its widespread familiarity and ease of use. WordPress, being one of the most popular content management systems (CMS) globally, means that the project contributors and users likely have previous experience or at least a basic understanding of its functions.

This pre-existing familiarity can significantly reduce the learning curve for contributors, allowing them to focus on content creation and management without the added pressure of mastering a new system. Moreover, the selection of specific plugins further enhances the site's functionality, ensuring that all our project needs, from event management to document embedding, are efficiently met. Plugins are characterised in Table 1. Their short description is given below.

Table 1: Plugin characteristics

Name	Provider	Version
Embed Any Document	Awsm Innovations	2.7.4
Flockler	Flockler	1.0.3
Image optimization service by Optimole	Optimole	3.10.0
Otter – Page Builder Blocks & Extensions for Gutenberg	ThemeIsle	2.4.0
Templates Patterns Collection	ThemeIsle	1.2.4
The Events Calendar	The Events Calendar	6.2.3.2
Matomo Analytics - Ethical Stats	Matomo	4.15.2

Embed Any Document: The primary reason for adding the "Embed Any Document" plugin was to facilitate the seamless display of presentations on a dedicated sub-page named "Presentations." Given the international nature of our team, it's vital that everyone can easily access and view these presentations without needing to download or use additional software. This plugin ensures that documents are embedded directly on the website, allowing for hassle-free viewing.

Flockler: Initially, the Flockler plugin was integrated to showcase posts from our project's social media platforms directly on the website. The intent was to maintain a live feed of our

project's activities and news updates, ensuring that our community remains informed and engaged. However, due to certain limitations imposed by social media platforms that prevent data pulls, this functionality is still in the development phase. We're actively working on a solution to ensure that our website remains as dynamic and updated as initially planned.

Image optimization service by Optimole ensures that the images on the site load quickly without compromising on their quality. This is essential for a good user experience and efficient bandwidth use.

Otter – Page Builder Blocks & Extensions for Gutenberg aids in designing attractive posts, pages, and landing pages. It provides a collection of building blocks for the Gutenberg editor to enhance the website's aesthetics and functionality.

Templates Patterns Collection offers a library of templates and block patterns, simplifying the design process and ensuring a consistent look across the site.

The Events Calendar: An integral part of our site, this plugin helps display and manage events. It's been used to keep everyone informed about upcoming activities and meetings.

Matomo Analytics - Ethical Stats. Powerful Insights: In the current digital landscape, understanding our website's visitors and their behaviour is crucial. However, with increasing concerns over data privacy and GDPR compliance, we opted for Matomo Analytics over more conventional solutions like Google Analytics. This decision was made because of recent concerns regarding Google's GDPR compatibility. Matomo offers powerful insights without compromising on our commitment to user privacy and data protection.

The chosen technologies and plugins ensure that the CHESS website is functional, user-friendly, accessible, and intuitive for the team members, regardless of their technical expertise. The aim has always been to create a platform where everyone, technical or not, feels empowered to contribute, share, and collaborate.

2.4 Monitoring Performance

Website performance is monitored using the *Matomo Analytics - Ethical Stats. Powerful Insights* plugin (Matomo). The performance monitoring plugin was added to the Website starting from June 2023. The Website performance is estimated by the following metrics:

- *Visits* (see Figure 5a)
- *Unique visits* (see Figure 5b)
- *Pageviews* (see Figure 5c)
- *Unique pageviews* (see Figure 5d)
- *Actions per visit* (see Figure 5e)
- *Maximum actions in one visit* (see Figure 5f)
- *Average visit duration* (see Figure 5g)
- *Downloads* (see Figure 5h)

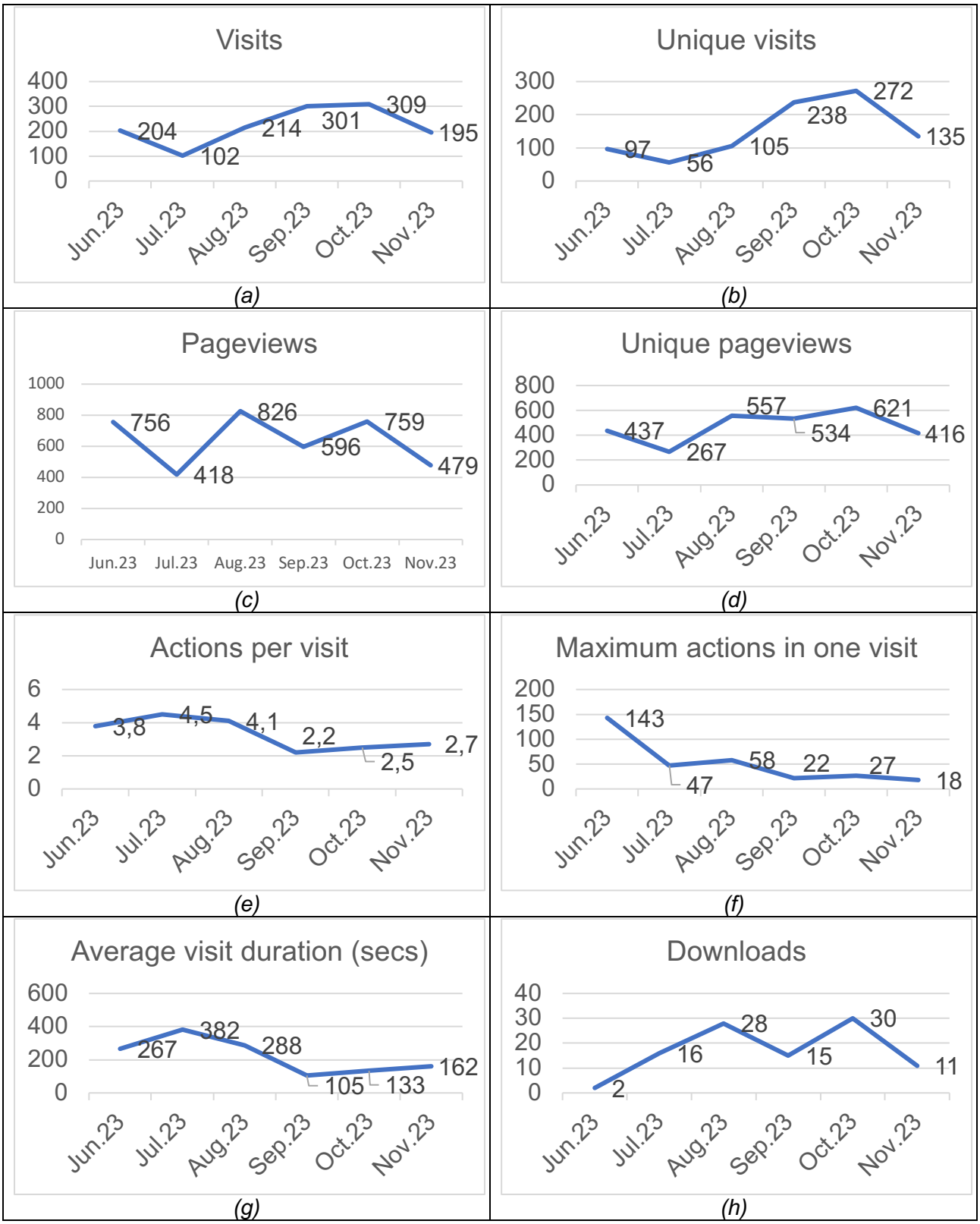

Figure 5: Performance metrics of the CHESS website

3 Social Media

The CHESS project uses social media channels to reach different target audiences, communicate upcoming events (regional and international workshops, public events, training schools), and disseminate the project news and results. Below, we briefly characterise the setup of Twitter, Facebook, LinkedIn, and YouTube social media accounts.

Twitter: Figure 6 presents the profile page of the CHESS Twitter (https://twitter.com/CHESS_EU). Twitter account is created in March 2023, and currently (12 December 2023) it has 34 followers. Figure 7 shows some statistics on the Twitter performance including *Tweet impressions*, *Impressions per day*, *Engagement rate*, and *Likes* for the period of June-November 2023.

Figure 6: CHESS Twitter profile page

Figure 7: Performance metrics of the CHESS Twitter

Facebook: Figure 8 presents the profile page of the CHESS Facebook (https://www.facebook.com/ChessExcellenceHub) account. Facebook account is created in March 2023, and currently (12 December 2023) it received 93 likes and has 123 followers. Figure 9 illustrates some analysis of the CHESS Facebook audience according to their age and gender. Table 2 presents number of followers from different countries.

Figure 8: CHESS Facebook profile page

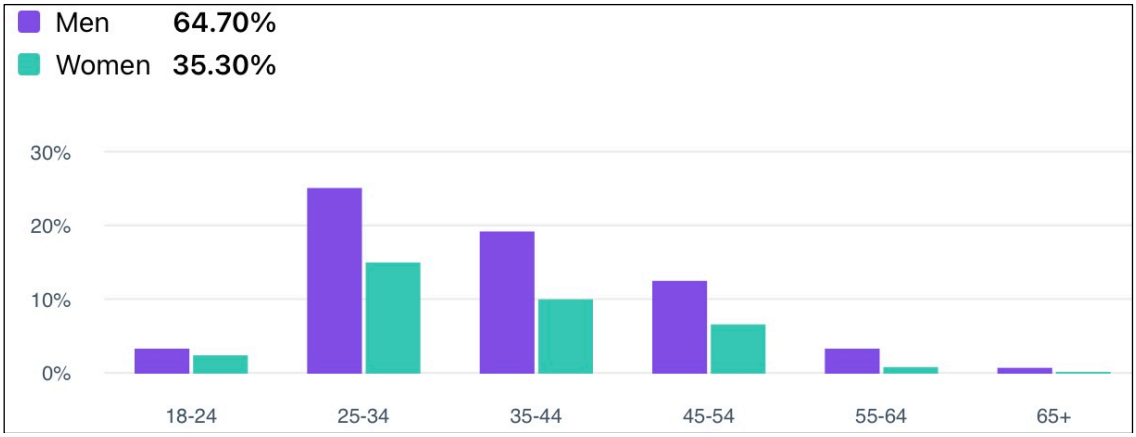

Figure 9: CHESS Facebook profile page

Table 2: Number of CHESS followers according to country

Country	Number of followers		Country	Number of followers
Estonia	70		Pakistan	3
Lithuania	16		Australia, Italy, Malta	2 (each)
Czech Republic	15		Chine, Latvia, Mexico	1 (each)

Figure 10 shows some metrics of the Facebook performance including *Reach*, *Visits*, *Page new likes*, and *Number of posts Likes* for the period of April-November 2023.

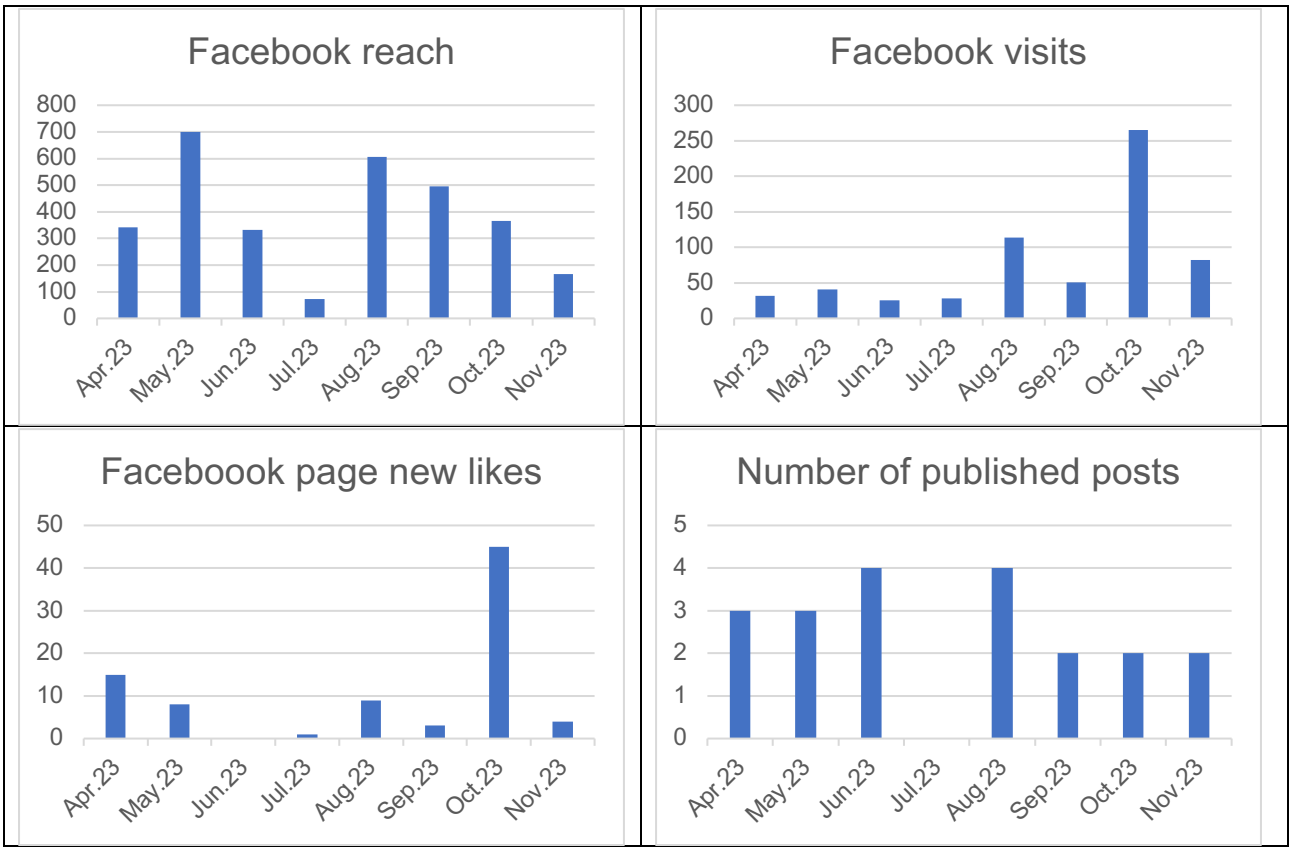

Figure 10: Performance metrics of the CHESS Facebook

LinkedIn: Figure 11 presents the profile page of the CHESS LinkedIn (https://www.linkedin.com/company/chess-cyber-security-excellence-hub/) account. LinkedIn is created in March 2023, and currently (12 December 2023) it has **433** followers. Figure 12 presents the most popular *job functions*; Figure 13 includes the most popular *industries*; and Figure 14 overviews the most popular *locations* of CHESS LinkedIn visitors and followers.

Figure 15 shows some statistics on the LinkedIn performance including *Page views*, *Unique visitors*, *New followers*, and *Reactions* for the period of April-November 2023.

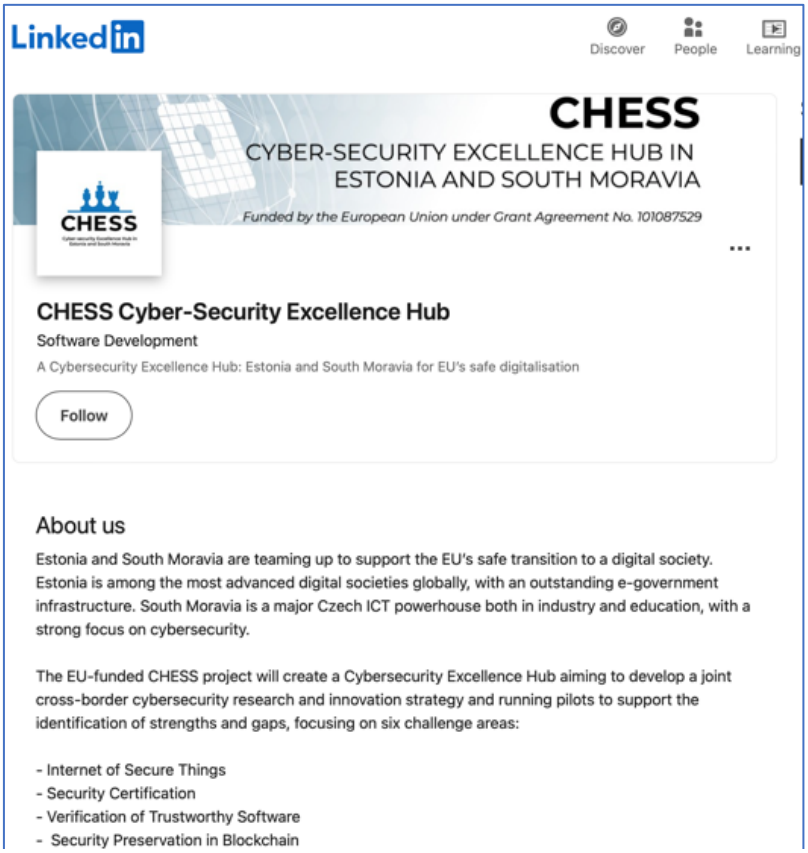

Figure 11: CHESS LinkedIn profile page

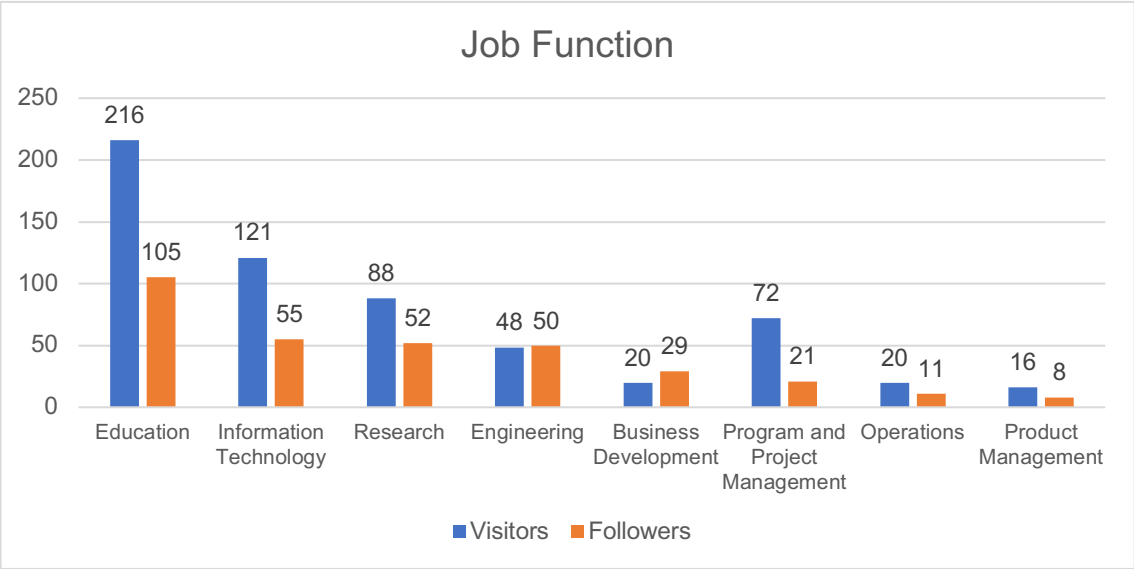

Figure 12: Most popular job functions of CHESS LinkedIn visitors and followers

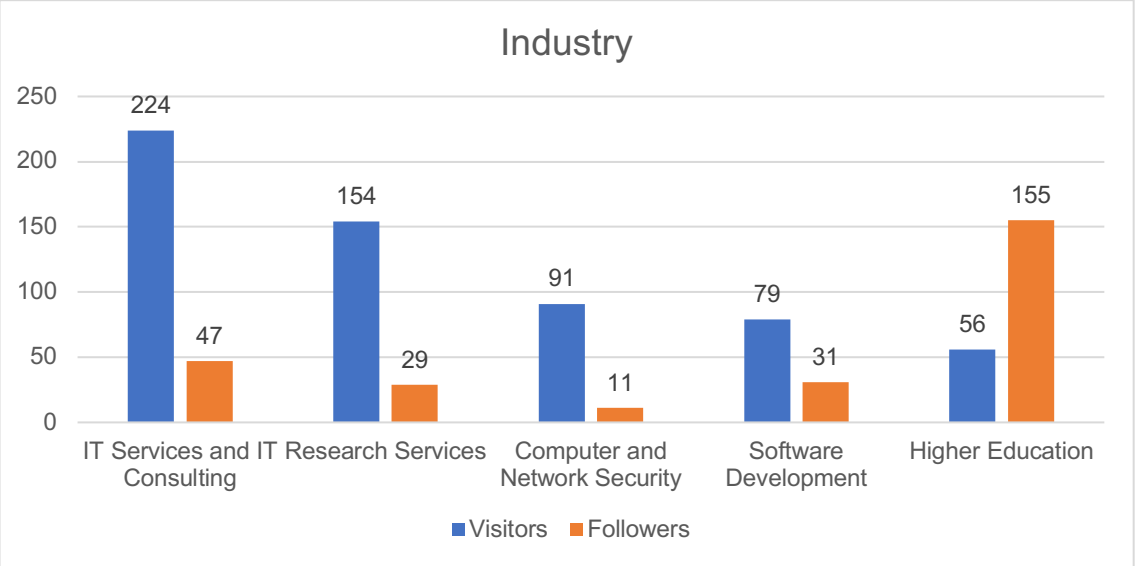

Figure 13: Most popular industries of CHESS LinkedIn visitors and followers

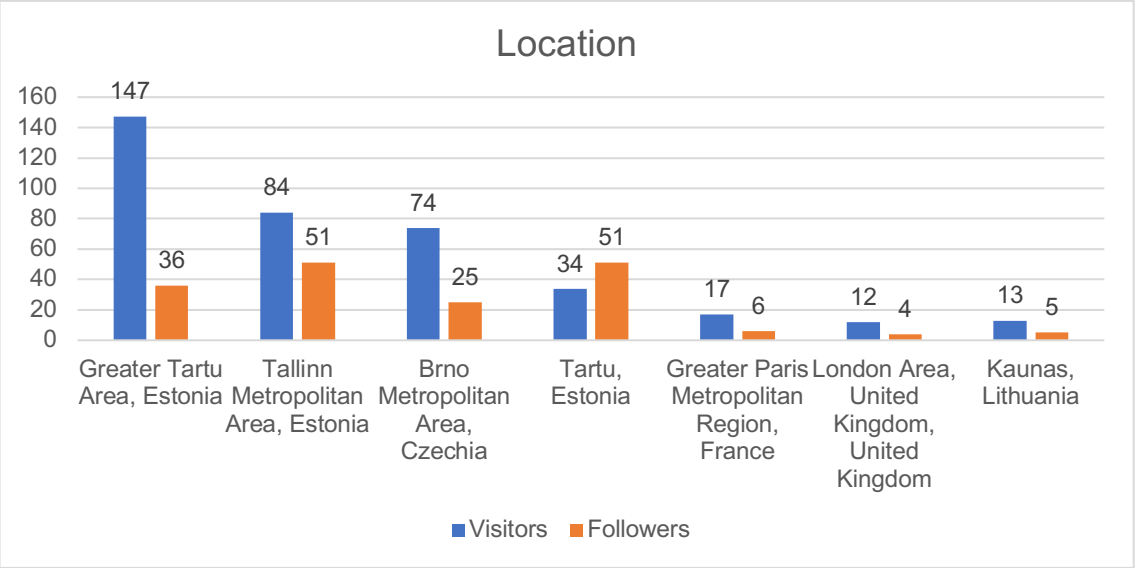

Figure 14: Most popular locations of CHESS LinkedIn visitors and followers

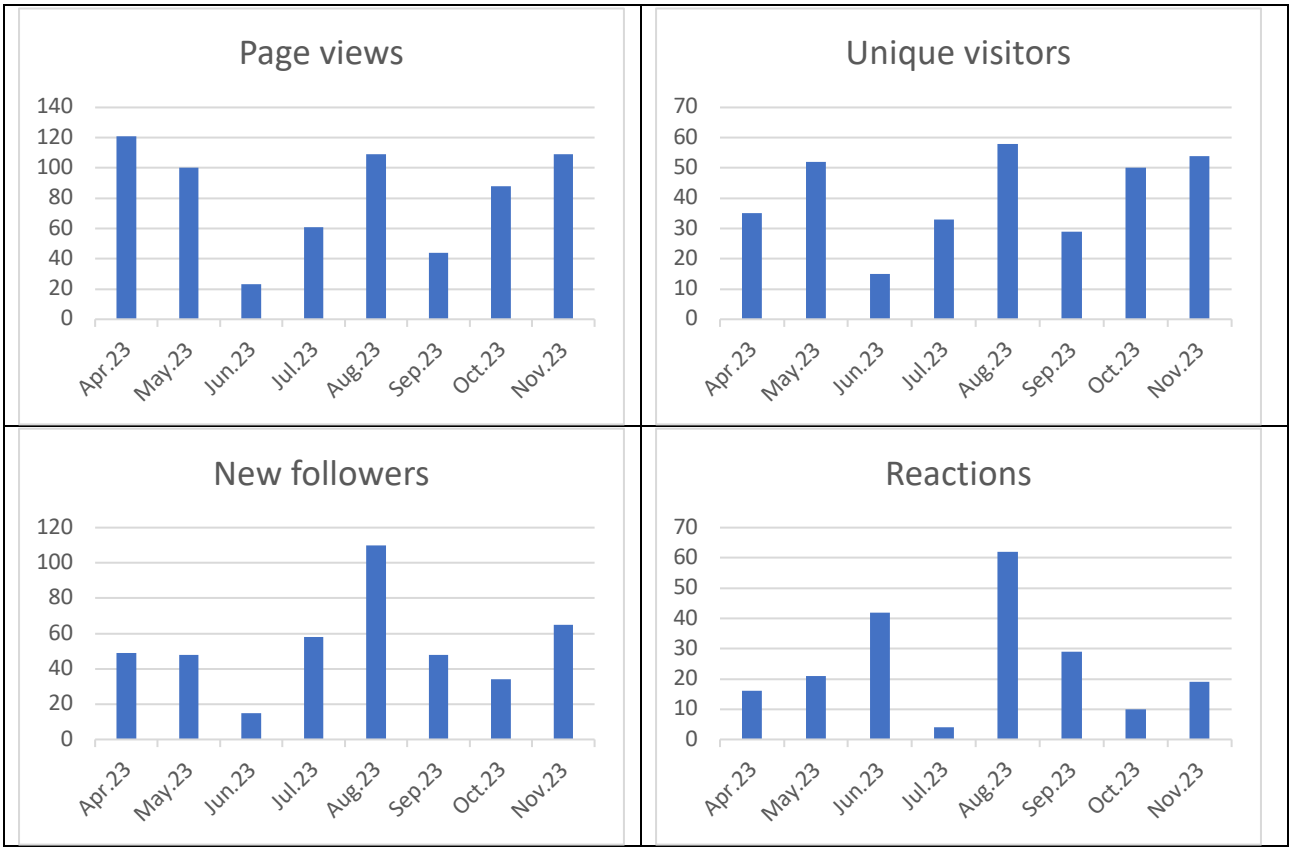

Figure 15: Performance metrics of the CHESS LinkedIn

YouTube channel is created in March 2023 (see Figure 16), however so far it is not actively used. The URL of the CHESS YouTube channel is https://www.youtube.com/channel/UCjuwIAQobUL7kQWBgb36y7Q

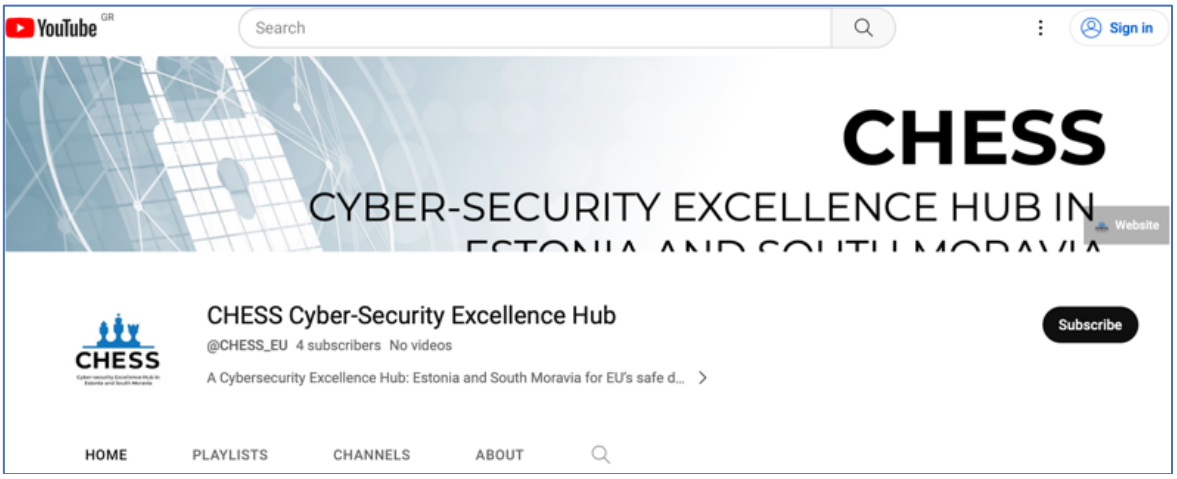

Figure 16: CHESS YouTube landing page

4 Concluding Remarks

This deliverable presents the CHESS project website. The website is the primary interface for communication, exploitation and dissemination of the CHESS project results. After introducing the website role, it presents its structure, configuration, and metrics for monitoring website performance. The report also overviews the social media channels associated to the CHESS project.

Deliverable D4.3 on *Materials from workshops and dissemination events* will be prepared at the end of the project by M48.

References

[1] CHESS Project Proposal, 2022

[2] CHESS: Dissemination, Exploitation and Communication Plan, June 2023. Available at: https://chess-eu.cs.ut.ee/wp-content/uploads/2023/07/D4.1-M6-Dissemination-Exploitation-Communication-Plan.pdf

[3] HPC: https://hpc.ut.ee