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Project Acronym: **VASSAL**

D6.1 First version of the Dissemination and Exploitation (D&E) Plan, including Communication Activities

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Executive Summary

This document provides a dissemination and exploitation plan, including communication activities. It describes target groups, communication and dissemination channels (website, social media, scientific conferences and

journals, etc.), shows project identity (logo, templates for presentations, reports and deliverables). It may serve consortium partners to guide their communication and dissemination activities to be efficient and unified among the whole consortium. This is the first version of the plan. Updated version of the plan will be provided on M23 and final version on M36.

List of Abbreviations

Abbreviation	Description
BUT	Brno University of Technology
TUW	Technical University of Vienna
CEA	The French Alternative Energies and Atomic Energy Commission
PSU	The Pennsylvania State University
HISRO	Honeywell International
EC	European Commission
HE	Horizon Europe
EU	European Union

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1. INTRODUCTION

1.1 THE VASSAL PROJECT

The objective of the VASSAL project is to elevate the research profile, visibility and reputation of Brno University of Technology (BUT) by fostering excellence in research and innovation (R&I) as well as by leveraging the institutional R&I governance and administration competencies while ensuring the integration and sustainability of the project. This will be achieved through intensive collaboration and knowledge sharing with internationally renowned consortium partners Vienna University of Technology (TUW), CEA, Penn State University (PSU) and Honeywell International (HISRO). The VASSAL project will use a series of twinning actions focused on several key areas to elevate the excellence of capacities and research profile of all consortium partners, mainly BUT. VASSAL aims to raise the reputation of participating institutions and deepen their collaboration, while establishing new partnerships with stakeholders and opening funding opportunities.

The VASSAL project is dedicated to seek significant advancements in its scientific domain of software safety and security and deliver cutting-edge technologies by integrating model-based design (MBD) preconditions with formal methods (FMs) for automated analysis and verification. This combined approach ensures software reliability from development through to operations. By assessing the economic implications of deploying these advanced verification tools, VASSAL aims to provide insights into the benefits and challenges for end-users, particularly in critical applications such as automotive and aerospace systems.

VASSAL is coordinated by the Brno University of Technology (BUT), with the participation of a total of four partners from EU countries and the USA.

1.2 PURPOSE OF DELIVERABLE

Communication Activities, Dissemination and Exploitation Plans (C&D&E) define goals, means, and guidelines on communication towards the general public, on dissemination research results, and on exploitation achieved results.

1.3 INTENDED AUDIENCE

The primary audience for the Communication Activities, Dissemination and Exploitation Plans (C&D&E) includes the VASSAL consortium and the European Commission.

1.4 IMPORTANCE OF C&D&E ACTIVITIES

Communication, dissemination, and exploitation activities are a strong contributor to the project success, thus, we deal with them from the beginning of the project. Of course, in the first stages, we need to concentrate mainly on the communication issues, later, we will disseminate the project results while most of the exploitation activities will take place in the final stages of the project and even after its end.

The Communication, Dissemination, and Exploitation (DEC) Plan outlines the actions, tools, and channels that will be employed throughout the VASSAL project. The primary objective of this document is to define a comprehensive strategy for effectively communicating, disseminating, and exploiting the project's results, ensuring engagement with a broad range of stakeholders.

The DEC Plan (First Version) is organized into three key sections:

1. Communication:
   This section focuses on the broader promotion of the VASSAL project and its results. Communication activities will encompass the exchange of information, ideas, outcomes, and impressions, ensuring the project maintains visibility and relevance among diverse audiences.
2. Dissemination:
   Dissemination activities will aim to make project-related information accessible to stakeholders, the general public, and the project's target audience. These efforts will include sharing research findings, project updates, and related data through various channels such as academic publications, public presentations, websites, social media, and other outreach methods.
3. Exploitation:
   Exploitation refers to the practical application of the project's outcomes, outputs, and findings. Within the VASSAL project, exploitation activities will focus on ensuring that the results adhere to FAIR (Findable, Accessible, Interoperable, and Reusable) principles, deliver value to stakeholders, and contribute to achieving the project's overarching objectives.

This DEC plan is a living document; it will be updated with further information throughout the developments of the D&C plan of the project, with second version (M18) and final version (M36).

To make sure that the communication and dissemination is efficient, we will regularly monitor a range of indicators to assess the performance. All the activities will emphasise the project is funded by the European Commission.

2. TARGET AUDIENCES IDENTIFICATION

The first step for any communication is to define target audiences. For the VASSAL project, we have already done it within proposal preparation. The target audiences are the following.

TA 1: *Scientific audience* - academic and scientific community, graduates in the SW engineering and related fields (e.g., cybersecurity, certification and compliance, critical systems), *EU projects*
Reason for activity: new knowledge in fundamental SW technologies and their economics; avoid duplication of efforts - several EU projects develops solutions requiring robust and resilient SW or need to validate its technology; nurture the interest in collaboration;   *Messages*: advances of VASSAL in R&I sub-domains and future R&I agenda; cooperation opportunities; training opportunities offered (training schools, workshops); VASSAL (especially the coordinator) is excellent destination to study and develop scientific career (researchers, post-docs, PhDs)   *Main communication channels***:** Website, newsletter, social media, digital materials, press releases   *Tailored dissemination channels***:** those demonstrating the quality of VASSAL R&I and findings; trusted professional networks with wide reach:

1. Peer-reviewed articles in high-impact journals – at least 12 (6 Gold Open Access, the rest Green Open Access): e.g., ACM Transactions on Software Engineering and Methodology, Advances in Engineering Software, ACM Transactions on Cyber-Physical Systems, Journal of Systems and Software, Journal of the ACM (JACM), International Journal of Information Management (IJIM) etc.
2. Leading conference proceedings/presentations – at least 6+: e.g., ETAPS/TACAS, CAV, PLDI, POPL, etc.
3. International flagship events – 3+ during the project (VASSAL and other renowned speakers)
4. VASSAL final dissemination workshops – 2 during the last 4 months (and 1 mid-term - upon invitation).
5. Upgraded curricula & training opportunities notable for graduates and professionals, open lectures (6+)
6. Dissemination through VASSAL partners' and other networks like EDIHs, Digital Economics Research Network, former projects (e.g., VALU3S, AQUAS, VESSEDIA, SPARTA etc.)
7. Interactions and efforts to engage JRC (especially Digital transition and Cybersecurity) (1+ trip to Brussels)

Exploitation and relevant outputs/results: Knowledge sharing (open lectures/trainings/events incl. materials), Open Science tools, common access point for all (high-level) scientific publications, VASSAL R&I roadmap, technical reports, datasets etc.; new partnerships for future research (in open and collaborative manners)

Sustainability after VASSAL: joint funding applications; research mobility (also to VASSAL partners from newly formed networks) and conference attendance (also from other funds like Erasmus+, DORA) etc.; online materials.

TA 2: *Ecosystem, Business community, IT professionals and other end-users* (businesses, integrators, SMEs, supporting agencies, start-ups, investors etc.), in sectors like transport, infrastructure, energy, healthcare, etc.

Reason for activity: benefits from data- and economics-oriented results; trans-disciplinary opportunities; VASSAL's SW guidelines for resilience and safety (notably professionals), and uptake of technologies etc.

Messages: VASSAL outcomes can improve commercial products and services; VASSAL collaborates with relevant initiatives like EDIHs to support to ecosystems; potential avenues for further R&I and cooperation

Main communication channels: website, newsletter, press release, social media, digital materials, PR materials

Tailored dissemination channels: channels demonstrating quality of VASSAL R&I outputs, direct engagement to promote and present VASSAL excellence and ambitions (including R&I roadmap):

1. Channels listed in target audience 1, in particular 2, 3, 4, 5 and 6.
2. Direct interactions during our events like "Zijeme IT" event (November) and non-VASSAL events and conferences (AVM, CAV, ETAPS/TACAS, USENIX Security, Int'l Conf. on Software Engineering, etc.)
3. Interactions with organisations such as European Cyber Security Organization (ECSO) (1+ trip to Brussels and on other events), and EU/US-based companies in targeted sectors like Red Hat, Microsoft, Airbus, Lockheed Martin etc. (2 roadshows)
4. Consulting at regional incubation centers (e.g., South Moravian Innovation Center) and support regional workshops, start-ups and innovation events/competitions if relevant

Exploitation and relevant outputs/results: Open Science (tools, suite etc.) and VASSAL guidelines, IPR - approved exploitable results; consulting (e.g., on SW verification, models assessment/ development etc.); sharing relevant materials; VASSAL R&I roadmap for collaboration; new partnerships for future research and commercialization.

Sustainability after VASSAL: formalization of new partnerships will be exploited more (commercial R&I); online materials; continual engagement in ecosystem - regional meetings are low-cost & easy to maintain

TA 3: *Public authorities and specific NGOs* – policymakers and public authorities (all levels) dealing with national/EU systems, technologies, digital infrastructures, cybersecurity, certification etc.

Reason for activity: advice to regulatory framework and inclusion of new standards to guide safety and security decisions - reliable evidence, new knowledge, recommendations for policy actions and shortcomings

Messages: VASSAL is reliable source of expertise and R&I outcomes that can reinforce the resilience and robustness of European digital society, economy and digital infrastructures against (potential) failures, disruptions, cyber-attacks as well as provide beneficial findings for certification, compliance and policy update/reforms

Main communication channels: website, newsletter, social media, digital materials, press releases, reports

Tailored dissemination channels: channels demonstrating quality of VASSAL outputs, direct interaction through existing/trusted connections:

1. Channels listed in target audience 1, in particular 2, 3, 4, 6 and 7.
2. Direct interactions and open consultations with regional/national certification authorities, policymakers (1+)
3. Direct interactions with European IT Certification Institute (EITCI), Directorate-General for Innovation and Technological Support, Digital Economic Research Network (DERN) (1+ trip to Brussels and on other events)

Exploitation and relevant outputs/results: Open Science (SW suite, tools for verification etc.) and VASSAL guidelines, scientific publications, reports, R&I roadmap, assessments etc.; preparation of briefs based on VASSAL R&I where relevant.

Sustainability after VASSAL: existing and newly established connections with public authorities and policymakers will be exploited continuously; online materials; regional meetings are low-cost & easy to maintain

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Other stakeholders: *General public, schools and NGOs* notably in the SW engineering area

Reason for activity: raise awareness on the importance of SW/HW/systems' reliability; promote perspectives in IT/ science and project events/activities; promote benefits of EU R&I funding, attract students/junior talents

Messages: SW/HW/systems-related challenges (including cybersecurity); help relevant NGOs utilise VASSAL outcomes in their activities and build cooperation to promote awareness; career in SW engineering is perspective

Main communication channels: press release, newsletter, digital materials, website, presentations in mass media

Tailored dissemination channels: channels that explain VASSAL R&I activities in a simple and understandable (engaging) manner; direct interaction through existing/trusted connections with schools, NGOs, associations etc.:

1. Popularisation articles/ interviews on SW engineering and related issues (2+)
2. Popularisation annual events - Open Days, Researchers' Night, "Letni skola (F)IT pro holky" ((F)IT summer school for girls), VUT Junior (informal education), roadshows of BUT ambassadors to high schools
3. Direct interaction with relevant NGOs (e.g., CzechITas – women in IT) during conferences, events
4. Open lectures/workshops (broadcasted) – available on project web/social platforms
5. Collaborative sessions with high-school representatives (IT teachers and principals) to share knowledge

Exploitation and relevant outputs/results: sharing of training/event materials; new partnerships with NGOs

Sustainability after VASSAL: integration of the VASSAL website as a subdomain/section within existing BUT websites to ensure long-term access to materials; partners continue to use their channels to promote visibility; online content will remain available; low-cost activities (meetings) will be easy to maintain; new partnerships; inflow of students; courses for interested; funding opportunities such as Erasmus+ will be sought to support public education.

Table 2.1: Target audiences.

3.   COMMUNICATION STRATEGY AND PLAN

Communication activities target the general public and stakeholders to promote project work and encourage uptake and exploitation. The activities also demonstrate the significance of the work relative to societal values and show the added value for the EU. The communication plan is based on a common consortium strategy towards efficient and measurable communication actions generated by the project. The plan will be implemented throughout the whole project. The main objectives include spreading concrete knowledge about the project and its results as well as general awareness of European leadership in developing automated methods for safe and secure software systems.

VASSAL will implement a comprehensive communication strategy that encompasses outreach activities of community building and engagement via social media management and content marketing, as well as event planning and management. The core objective is to raise awareness about VASSAL and its outcomes among key stakeholders, including the private and public sectors, while engaging citizens and civil society organizations with informative and engaging content. Therefore, VASSAL will leverage a wide range of trusted communication means, relevant channels, tools, and tailored messages. By closely collaborating with stakeholders, we will seek not only to achieve impactful communication but also to ensure that our cybersecurity technologies and other outcomes are aligned with societal needs.

	Objective	Methods
Year 1	Awareness-oriented phase: runs from the start of the project till its completion, to raise awareness of the VASSAL project, its objectives and activities.	Design Project Visual Identity (logo etc.) and set up VASSAL website, distribute (electronic) materials, launch VASSAL social media accounts, promotion in conferences and events (WP6/T6.34), Consolidation of the stakeholders' communities, creating database of contacts (WP5/T5.1), evaluation of D&C activities (WP6/T6.2)
Year 2	Output-oriented phase (2nd & 3rd year): starts once initial outcomes of VASSAL are available, focusing on promoting achievements to ensure stakeholders and beneficiaries understand the project's accomplishments and associated benefits.	Presenting VASSAL outcomes and preliminary findings at main conferences and other scientific events, continuously updating project website, preparing press releases, and maintaining the social media accounts, submitting R&I papers to relevant journals and conferences (target A*/A) (WP6, T6.4); Consolidating of the stakeholders' communities, creating database of contacts and outreach to the VASSAL ecosystem and engaging key stakeholders (WP5, T5.1)
Year 3	Exploitation-oriented phase: starts with preparatory activities to facilitate effective use of project results after completion. Dissemination during this phase aims to enhance exploitation efforts and engage stakeholders through targeted promotion.	Promoting the VASSAL results in relevant events (conferences, fairs); publications at conferences (target A*/A) and in respected scientific journals (WP6/T6.4); Wide dissemination and final demonstrator/workshop (WP6/T6.5) and creation of the sustainability plan (WP5, T5.2);

Table 3.2: Objectives and methods used for communication.

Communication strategy implementation will prioritize ethical considerations and gender equality, ensuring that all collected and produced data complies with GDPR regulations. We will communicate via trusted channels: VASSAL website (all relevant information about the project, consortium events etc; partners' websites will be used as well), social media (Facebook, YouTube, X (Twitter), Instagram), dedicated mailing list/ newsletter (to

disseminate information about the project to all interested parties; newsletter will highlight projects' achievements and overall accomplishments annually), press releases (coordinated among partners to disseminate project events, achieved milestones and important R&I results on national, EU and global scale).

We will regularly (quarterly/annually) monitor communication and dissemination progress against our benchmarks and KPIs, making any necessary adjustments to keep our efforts effective. We will encompass a range of indicators to assess the performance and results like the number of viewers/followers/subscribers, traffic data, number of events/meetings with stakeholders organized or participated, number of attendees of our events, number of press releases/interviews etc. All activities will emphasize the project is funded by the European Commission.

3.1 COMMUNICATION OBJECTIVES

The success of the VASSAL project relies on a robust communication and dissemination strategy that supports our key objectives:
- *Raise Awareness:* Enhance public and stakeholder understanding of the critical importance of software (SW) and systems robustness, resilience, and reliability in today's technological landscape.
- *Promote Collaboration:* Foster strong collaboration among diverse stakeholder groups, including scientific communities, IT developers, cybersecurity experts, the European Commission, industry leaders, and other key players.
- *Build Trust:* Strengthen trust within the relevant communities by ensuring that VASSAL's outcomes, data, and knowledge are FAIR (Findable, Accessible, Interoperable, and Reusable). This commitment to transparency will promote a culture of openness and shared responsibility.
- *Support Policy Development:* Provide science-based insights to inform decision-making at national and European levels. This includes encouraging the widespread adoption and implementation of SW verification and analysis frameworks by software engineers and industries, while ensuring that these frameworks are recognized and utilized by policymakers, certification authorities, and the broader scientific community.

3.2 ACKNOWLEDGMENT

All the communication materials including publications must contain acknowledgement to European Union including the following disclaimer:

Funded by the European Union under Horizon Europe programme, Grant Agreement no 101160022. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Horizon Europe programme. Neither the European Union nor the granting authority can be held responsible for them.

All project materials will prominently display and promote the European emblem along with the appropriate funding statement. The emblem and statement will be used in compliance with the EC's guidelines, ensuring proper placement and visibility. Both horizontal and vertical formats of the emblem can be utilized, with color variations (Black, White, RGB incl. monochrome/NEG/POS options) applied as appropriate to fit the context and ensure optimal presentation. Additionally, language variations such as Czech (CZ), French (FR), or German (DE) might be incorporated where necessary to align with the target audience and communication needs.

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Figure 3.1: The EU emblems and funding statements.

We will follow and use official logos that are available at:
https://ec.europa.eu/regional_policy/information-sources/logo-download-center_en

3.3 PROJECT LOGO

One of the first steps to define the project's visual identity was a proposal of the project logo. It has been selected from three possibilities through a vote by project members.

Figure 3.2: Proposals for the VASSAL project logo.

Finally, the first variant of the logo has been selected:

Verification and Analysis for Safety and Security of Applications in Life

Figure 3.3: The VASSAL project logo.

3.4 PROJECT WEBSITE

The website of the project plays the key role in communication towards the general public and stakeholders. It should contain all relevant information about the project, consortium, events, research direction, and achieved results. We have already created the project website in June 2024 with the following URL:
https://vassal.fit.vut.cz/
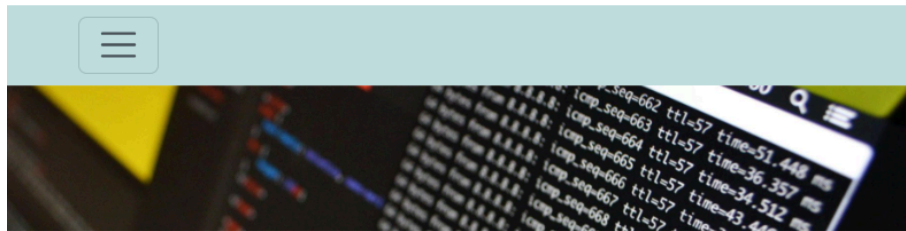
Figure 3.4: A print screen of the VASSAL website.

3.5 SOCIAL MEDIA STRATEGY

3.5.1 OBJECTIVES

To fully leverage the potential of social media, a strategic framework for social media communication will be established. This strategy will define the target groups, the appropriate social media channels to engage them, and the specific objectives of using these platforms within the context of the VASSAL project.

3.5.2 SOCIAL MEDIA CHANNELS - ANALYSIS

An analysis of the VASSAL project's requirements and the unique functionalities of key social media platforms - Facebook, X (Twitter), LinkedIn, and Instagram - has been conducted. Each platform offers distinct advantages and presents opportunities for targeted engagement, making them valuable for different aspects of the project's communication strategy.

The findings of this analysis are summarized in Table 2, highlighting the recommended uses and benefits of each platform. This analysis will serve as the basis for developing a detailed and systematic social media action plan

tailored to the VASSAL project's needs.

Table 2 - Social media analyses and recommendations for use within VASSAL.

Social Media	Functionalities and features (PROS & CONS)	VASSAL's perspective	Target group
LinkedIn	**PROS**: LinkedIn primarily serves a professional user base, making it an ideal platform for reaching industry stakeholders. It supports the development of professional connections and encourages active engagement in group discussions, fostering community interaction. To facilitate collaboration and sharing, a dedicated LinkedIn Group for the VASSAL project has already been established. **CONS**: LinkedIn is more widely embraced in the business sector than in academic circles, which may limit its reach among certain target audiences.	The goal is to foster a substantive and professional discourse centered on the effective dissemination of project-related news and developments. This will involve creating opportunities for engaging discussions that not only share updates about the project but also promote meaningful conversations. By encouraging dialogue, the aim is to deepen understanding among stakeholders and enhance interaction regarding the project's progress, outcomes, and overall impact.	Business-oriented audience, including critical infrastructure, ICT institutions and SW integrators, organizations, groups, networks, and policymakers.
X (Twitter)	**PROS**: X allows for quick communication, with a large user base. It facilitates easy tracking of news via lists and is ideal for real-time event updates. **CONS**: X has limitations in space for content and media sharing, and tweets have a short lifespan, reducing their searchability over time.	Stimulate Interest with Posts/ Tweets: Craft engaging posts and tweets to generate interest and share updates on the project's news and activities. Cultivate a Project Community: Build a community around the project by sharing relevant news with practitioners, policymakers, scientists, and the general public. Live Conference Coverage/Post-Conference Review: Provide live streams of conferences and detailed post-conference reviews to sustain audience engagement and awareness.	A diverse audience consisting of practitioners, policy makers, scientists, and the general public.

Facebook	**PROS**: Facebook excels at offering a wide range of content formats, including text, images, videos, and links, making it versatile for sharing project updates and resources. Its large user base provides extensive reach, with robust features like event creation, group discussions, and targeted advertising. These capabilities foster community engagement and allow for meaningful interaction with both a general and professional audience. **CONS**: Facebook is not typically seen as a highly professional platform and is primarily used for personal social interactions, which may limit its appeal for more formal business or academic contexts.	Cultivate engagement and spark interest by disseminating up-to-the-minute news and ongoing activities through well-crafted posts. Share relevant multimedia content, either embedded in posts or organized into separate albums, to enhance the project's visibility. Strengthen the sense of community by creating and promoting events that encourage participation. Improve communication by establishing groups for direct messaging and interaction. Additionally, provide valuable insights and analytics to support the development and growth of the project's social media presence.	Targeting a semiprofessional audience with a focus on engaging the general public, hobby SW developers (particularly within Facebook groups), and practitioners.
Instagram	**PROS**: Instagram is a highly visual platform, perfect for sharing images and short videos that can effectively highlight key aspects of a project, such as research results or events. It has a large, engaged user base, especially among younger and creative audiences. Instagram's features like Stories, Reels, and hashtags enable real-time updates, community engagement, and increased discoverability, making it great for creating buzz around the VASSAL project. **CONS**: Instagram's focus on visuals can limit the depth of communication, making it difficult to convey complex, technical content in detail. While its informal and creative nature can drive engagement, it may not be the best platform for professional discourse or in-depth discussions, especially when compared to more text-heavy platforms like LinkedIn.	Cultivate engagement and spark interest on Instagram by sharing visually compelling content, including up-to-date project news, images, and videos. Leverage Instagram Stories and Reels to provide real-time updates and showcase key activities in an interactive and engaging way. Use relevant hashtags to boost visibility and reach a wider audience. Strengthen community involvement by promoting events and encouraging participation through comments and direct messaging. Instagram's insights feature can also offer valuable data to help refine content strategies and grow the project's presence on the platform.	A diverse audience consisting of the general public, practitioners, policy makers, scientists, etc.

The VASSAL social media accounts on LinkedIn, X, Facebook, and Instagram are and will be actively utilized to share project activities, disseminate results, and promote relevant events. Based on initial feedback and engagement trends, we have observed that platforms like X, Facebook, and LinkedIn are particularly effective in reaching the scientific community, which is a key audience for the project, given its strong academic and EU network. Moving forward, the VASSAL project will focus on strengthening its social media presence by implementing a series of

targeted campaigns. These campaigns will aim to foster greater engagement within our network, raise awareness about the project's progress, and enhance interaction with stakeholders across various platforms.

- <u>Project Promotion Campaign:</u> This campaign will offer an overview of the VASSAL project, its scientific structure, and objectives, including key use cases, critical steps in software development, news updates, the current stage of implementation, and details about the institutions involved. It will run throughout the project's duration, with approximately one post per month on X (Twitter), Facebook, Instagram, and LinkedIn.
- <u>Organizations of the Project:</u> This campaign will add a personal touch by introducing the organizations and leading scientists behind VASSAL. It will feature their professional profiles, research interests, main activities, and personal quotes on software engineering. This will run alongside other project-related updates, with roughly one post per month.
- <u>Events/Trainings with Stakeholders:</u> This campaign will highlight the different case-study areas of the project and showcase the purpose and outcomes of workshops and training sessions held for project stakeholders. It will span the entire project lifespan, with dedicated posts about specific activities, estimated at one post every three months across X (Twitter), Facebook, Instagram, and LinkedIn.
- <u>VASSAL Publications</u>: This campaign will highlight all research papers and deliverables produced by the VASSAL project. Scientific findings will be shared with both the general public and the scientific community in an engaging and accessible way. Each research article will be introduced through a series of posts, raising awareness of the publication in the VASSAL repository or elsewhere, followed by additional posts focusing on the most significant findings. This campaign will run for the entire duration of the VASSAL project.

To ensure easy tracking and engagement, each campaign will be associated with the designated hashtag #VASSAL. This will allow our audience to follow and interact with posts related to the specific themes of each campaign. These efforts are aimed at boosting our social media presence and fostering stronger connections with stakeholders and the public

3.5.3 VASSAL SOCIAL MEDIA
To ensure impactful and engaging dissemination of information through social media, the following practices will be applied:

- **Create compelling and concise content:**
    - Key messages in 1-2 sentences to capture the essence of what needs to be communicated.
    - Use a clear and engaging "call to action" to prompt interaction and sharing.
- **Use accessible language:**
    - Avoid technical jargon and acronyms to ensure messages are understandable to a broad audience, including policymakers, journalists, and researchers from other fields.
- **Focus on reader engagement:**
    - Design content that is visually appealing and attention-grabbing to stand out in busy social media feeds.
    - Tailor messages to align with the interests and needs of the target audience.
- **Recognize audience limitations:**
    - Keep messages simple and memorable, recognizing that policymakers and journalists often face information overload.

Dedicated social media channels for the VASSAL project have been created to facilitate the dissemination of these recommendations effectively.

LinkedIn
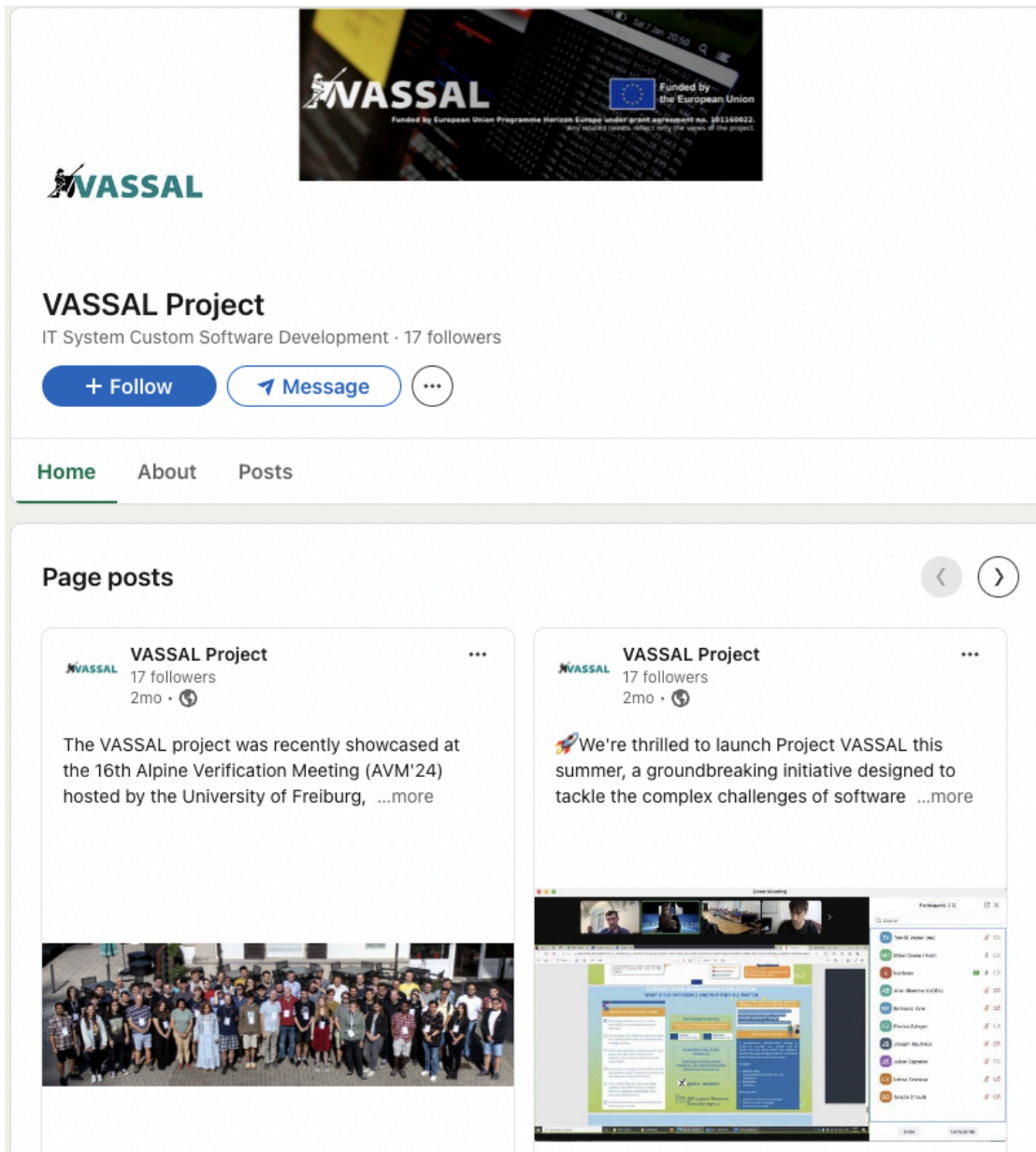
The URL for VASSAL project is: https://www.linkedin.com/showcase/vassal-project/

Figure 3.5: A print screen of the VASSAL social media channel - LinkedIn.

Facebook

The URL for VASSAL project is: https://www.facebook.com/vassal.project
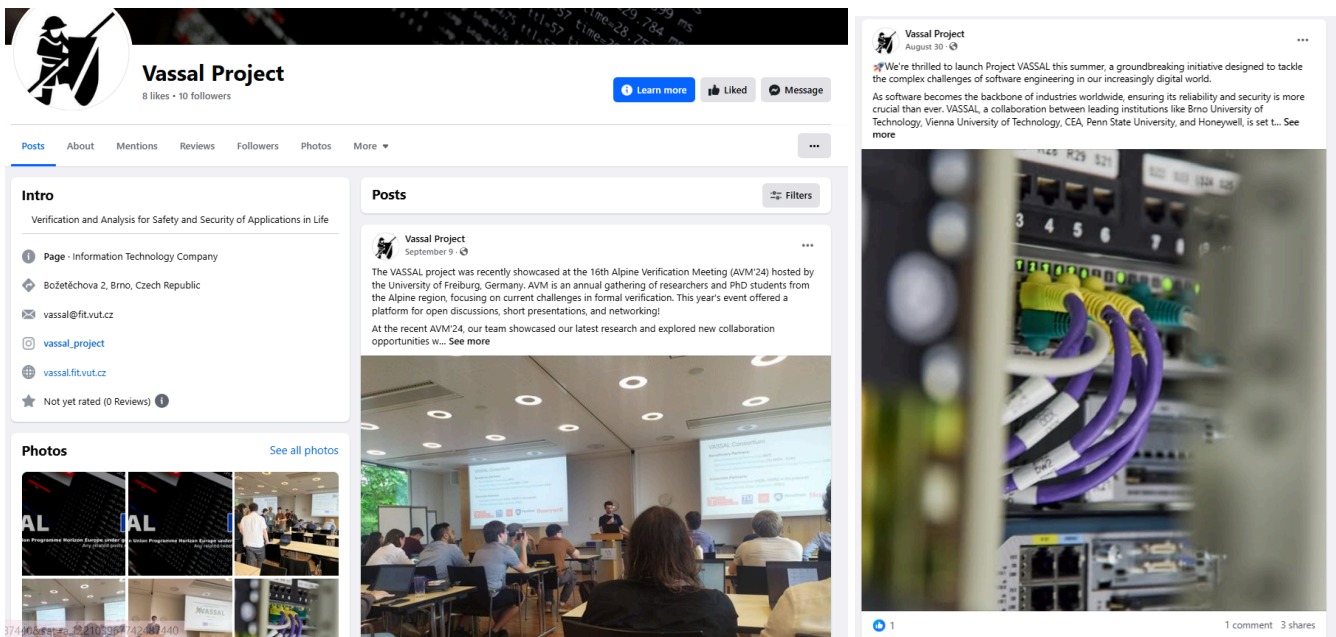
Figure 3.6: A print screen of the VASSAL social media channel - Facebook.

X (Twitter)

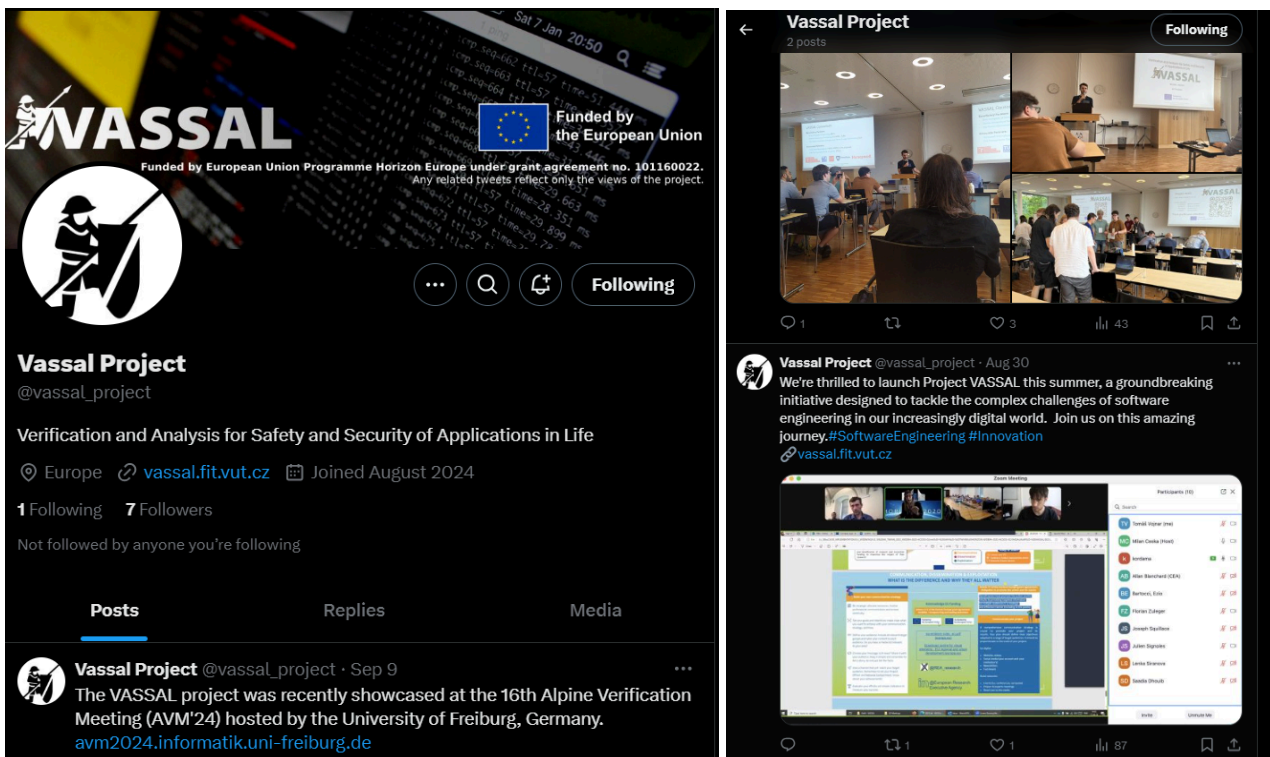The URL for VASSAL project is: https://x.com/vassal_project

Figure 3.7: A print screen of the VASSAL social media channel - X.

Instagram

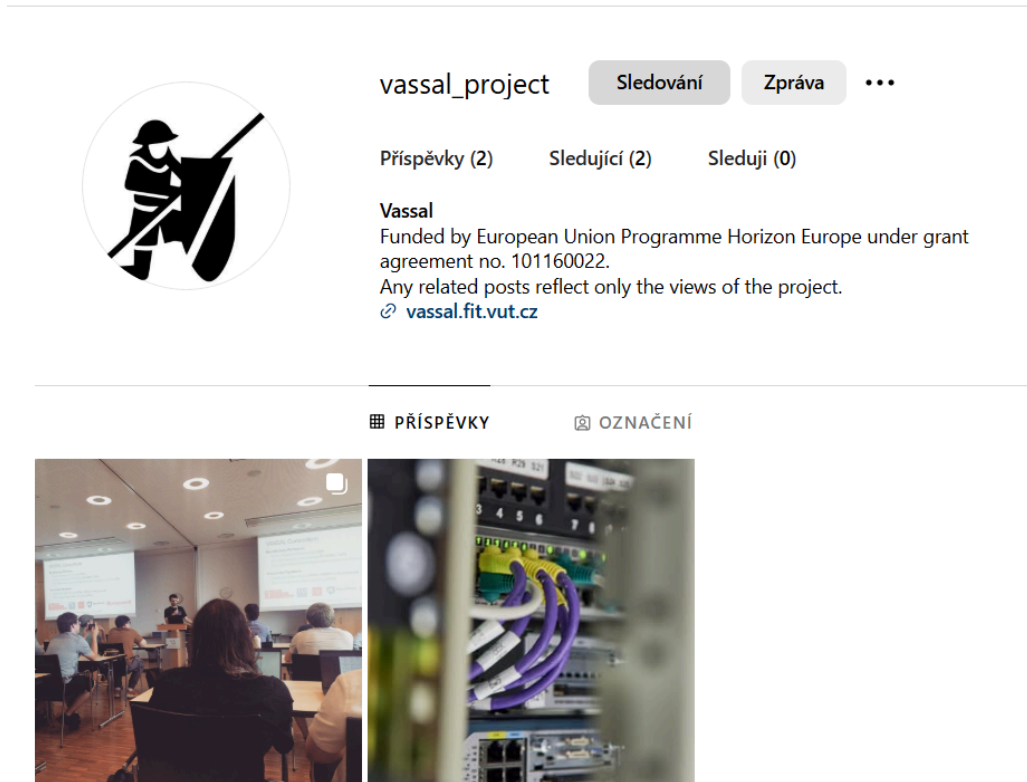The URL for VASSAL project is: https://www.instagram.com/vassal_project/

Figure 3.8: A print screen of the VASSAL social media channel - Instagram.

3.6 PERFORMANCE AND MONITORING

To assess the effectiveness of communication activities, the VASSAL project will systematically measure performance against set Key Performance Indicators (KPIs) for engagement on a tour website and social media. The targeted benchmarks are:

- 180 visitors by November 2025 (M18)
- 450 visitors by May 2027 (M36)
- 1,250 visitors by May 2032 (5 years after the end of project, to show sustainability)

Although the website initially lacked visitor tracking due to a decision to avoid using cookies for privacy reasons, this will be rectified starting December 1. From this date, we will implement tools to accurately measure website traffic while maintaining compliance with GDPR and respecting user privacy. Thiswill ensure we can reliably track progress toward our KPIs and effectively demonstrate the project's impact. While precise visitor data is unavailable, we estimate an average of approximately 10 visitors per day.

3.7 NEWSLETTER

The newsletter will serve as a communication tool to promote the VASSAL project and disseminate its achievements. Starting from Month 12 (M12), newsletters will be issued approximately every twelve months. These newsletters will highlight key milestones, project developments, and accomplishments, keeping stakeholders and the public informed about progress.

To ensure the newsletters reach a wide and relevant audience, we are actively building a database of contacts. This database will include stakeholders identified through dissemination activities, meetings, roadshows, and other project-related engagements. While an automatic subscription feature on the project website is under consideration, it has not yet been implemented. In the meantime, contact information will be collected manually during project events and through direct interactions.

3.8 PRESS RELEASES

We are planning to disseminate project events, achieved milestones, and important research results using press releases on national, EU, and global scales with the help of a BUT spokesperson. As well, the information about press releases will be passed to partners, so they could disseminate the information and inform about the project events through their own communication channels.

So far, we have published the following press releases using partners websites:

- BUT: *[International Vassal project focused on development of safe and reliable software started at FIT BUT]*. September 17, 2024: https://www.fit.vut.cz/fit/news/3776/. (in Czech)

- TUW: *We are thrilled to announce the official launch of VASSAL!* September 17, 2024. https://informatics.tuwien.ac.at/news/2725

4. DISSEMINATION

The primary goal of the dissemination activities is to ensure wide accessibility to VASSAL's open services for both data providers and users. This will be achieved through the establishment and maintenance of dedicated dissemination tools and channels throughout the project's lifespan. These include the VASSAL website, active social media platforms, a comprehensive communication and dissemination toolkit, newsletters, press releases, and participation in events hosted by project partners. All scientific and technical results will be made publicly available through these platforms.

The VASSAL repository, prominently showcased on the project website, will serve as a central tool for stakeholder engagement. Key scientific outcomes and demonstrators will also be presented, ensuring compliance with GDPR requirements. Furthermore, the project will capitalize on the communication and dissemination channels of its consortium members while fostering collaboration with relevant initiatives.

To amplify its outreach, VASSAL will draw upon the extensive networks of its partners, ensuring maximum impact and fostering meaningful engagement with a wide range of audiences.

4.1 DISSEMINATION STRATEGY AND PLAN

Publications will play a crucial role in the dissemination strategy, serving as a key channel for sharing the knowledge and insights generated by the VASSAL project with diverse stakeholders, including researchers, policymakers, industry professionals, and the general public. This section presents our publication strategy, detailing the principles that will guide our publishing activities to ensure the timely and impactful dissemination of the project's valuable findings.

Apart from the general communication described above, the VASSAL consortium will also disseminate the achieved results through a number of channels aimed at academia as well as industry. In particular, the following channels are considered: talks and papers at both scientific as well as industrial conferences, publications in specialised journals (with a stress on open access in the case of both journal as well as conference publications), talks at European platforms, presentations at fairs and other relevant events, organisation of specialised workshops, availability of the developed and improved analysis tools in the form of open source tools on the web (details about

the planned means to be used for this purpose can be found in Deliverable 1.3 - First version of the Data Management Plan), as well as inclusion of the obtained results into lectures for students of the involved academic partners.

The conferences and journals that we consider as suitable for publication of project results have been already discussed in the Deliverable D3.1 Research Plan. Here, we highlight them for particular research areas (RA).

4.1.1 RA1: LOGICS AND AUTOMATA

Within RA1, we plan 4–6 publications at top conferences or in renowned journals in the area.

For instance, we are considering the following conferences:
- TACAS - International Conference on Tools and Algorithms for the Construction and Analysis of Systems
- FoSSaCS - International Conference on Foundations of Software Science and Computation Structures
- CAV - International Conference on Computer Aided Verification
- POPL - Symposium on Principles of Programming Languages
- LICS - Symposium on Logic in Computer Science etc.

About publishing in journals, we're considering Constraints or Journal of Systems and Software.

The majority of the papers will be accompanied by an implementation of the proposed methods either in new tools or as improvements to existing tools.

4.1.2 RA2: MODEL-BASED DESIGN, ANALYSIS, SYNTHESIS

Within RA2, we plan 4–6 publications at top conferences in the area or in renowned journals (e.g., Journal of Artificial Intelligence Research or Journal of Systems and Software).

For instance, we're considering these conferences:
- TACAS - International Conference on Tools and Algorithms for the Construction and Analysis of Systems
- CAV - International Conference on Computer Aided Verification
- POPL - Symposium on Principles of Programming Languages
- ICLP - International Conference on Logic Programming
- AAMAS - International Conference on Autonomous Agents and Multiagent Systems
- UAI - Association for Uncertainty in Artificial Intelligence

All of the papers will be accompanied by an implementation of the proposed methods either in new tools or as improvements to existing tools.

4.1.3 RA3: VERIFICATION AND ANALYSIS OF SOURCE CODE

Within RA3, we plan 4–6 publications at top conferences in the area or in renowned journals (e.g., ACM Transactions on Software Engineering and Methodology or Journal of Systems and Software).

For instance, we're considering these conferences:
- TACAS - International Conference on Tools and Algorithms for the Construction and Analysis of Systems
- CAV - International Conference on Computer Aided Verification
- POPL - Symposium on Principles of Programming Languages
- PLDI - Programming Language Design and Implementation
- OOPSLA - The Object-Oriented Programming, Systems, Languages, and Applications 2024
- ECOOP - European Conference on Object-Oriented Programming
- CGO - International Symposium on Code Generation and Optimization
- ICST - International Conference on Software Testing, Verification and Validation
- ISSTA - International Symposium on Software Testing and Analysis

- ICSME - The International Conference on Software Maintenance and Evolution
- OSDI - USENIX Symposium on Operating Systems Design and Implementation

All of the papers will be accompanied by an implementation of the proposed methods either in new tools, new plugins of existing verification frameworks, or as improvements to existing tools or plugins.

4.1.4 RA4: ECONOMIC IMPLICATIONS

Within RA4, we plan to produce 1–2 publications either at suitable conferences or in a suitable international journal, in both cases, with a thorough peer-review process. However, it may turn out that it is more suitable to publish at least some of the results achieved by this research area not alone but together with results obtained from other research areas.

4.2 PUBLICATION STRATEGY OBJECTIVES

Our publication strategy is driven by following objectives:
- Dissemination: Share the research findings, outcomes, and insights of the project with a diverse and widespread audience.
- Impact: Shape policy development, guide future research, and promote practical applications in software verification and analysis.
- Visibility: Enhance the VASSAL project's profile and position it as a reliable and authoritative source of information.
- Engagement: Foster collaboration and co-creation among a broad range of stakeholders, promoting the use and adoption of project outcomes to advance robust and reliable software solutions.

4.3 DISSEMINATION CATEGORIES

The VASSAL Consortium will produce diverse publication types tailored to various audiences and objectives:

- Scientific papers: Detailed research articles targeting the academic and scientific community.
- Reports: Comprehensive project reports outlining findings, progress, and achievements as well as importance and benefits when the SW verification and analysis tools are deployed.
- Guidelines and tools: Practical resources designed for software engineers, developers, and industry professionals.
- Training and workshops materials: Resources to support skill development and knowledge transfer, primarily targeting the scientific community and SW engineers and developers.
- Infographics and Visual Content: Engaging and accessible visual materials to share project updates and results with the general public.

4.4 DISSEMINATION PROCESS

The dissemination process should be dynamic and multifaceted to ensure the effective sharing of VASSAL's outcomes. It begins with research and data collection, where key findings are carefully gathered and analyzed. This is followed by authorship and review, ensuring content is accurate, reliable, and of high quality.

Next comes design and layout, where visual elements are embedded to make complex information clear and engaging for diverse audiences. Once finalized, publications are shared widely during the distribution and promotion phase, leveraging the project website, social media, partner networks, and other strategic channels.

We will seek to conclude the process with feedback and iteration, where input from relevant stakeholders and (potential) users may shape future materials, ensuring content remains relevant and impactful. Dissemination efforts are amplified through partner communication channels, professional networks, traditional media, online platforms, and targeted groups, such as relevant platforms for SW engineering, and target communities on LinkedIn or other social platforms. By combining rigor, creativity, and continuous refinement, this process ensures VASSAL's results reach and resonate with a wide audience.

4.5 DISSEMINATION TOOLS AND CHANNELS

To effectively reach its target audiences, VASSAL employs a range of communication tools and channels:

- **Website**: The VASSAL project website (https://vassal.fit.vut.cz/) serves as a central hub for updates, resources, and data access. It provides comprehensive information about the project's objectives, activities, and outcomes, acting as a key public dissemination tool. The site also features a dedicated news section to announce events and share project milestones.
- **Social Media**: Platforms such as Instagram, Facebook, X (formerly Twitter), and LinkedIn are actively used to share news, achievements, and event updates, fostering community engagement. To expand its reach, VASSAL is considering utilizing Reddit, given its popularity among technical communities.
- **Newsletters**: Issued at least once a year, highlighting project results, scientific advancements, and upcoming events, keeping stakeholders informed and engaged.
- **Press Releases**: Used to announce major milestones and events, press releases are shared through social media, newsletters, and the website to ensure widespread visibility.
- **Webinars and Workshops**: Online and in-person events are organized to share knowledge and engage stakeholders. These sessions will focus on technical skills in software engineering, tailored to stakeholder needs, and demonstrate the application of project tools and services.
- **Publications**: Scientific papers, reports, and policy briefs are developed to share findings with both the academic community and practitioners. These materials are complemented by promotional outputs such as press releases and accessible deliverables, ensuring broad dissemination of project insights.

By leveraging these tools, VASSAL aims to empower stakeholders with the knowledge and tools needed for safer, more secure software development while fostering an informed and collaborative community of professionals.

4.6 TIME SCHEDULE

As the research is not the mass production, time estimations about achieving the research results is always uncertain. In addition to the nature of scientific research, where we strive to submit our papers and articles to high quality conferences and journals with higher dissemination impact (measured by the number of citations by other researchers), we increase the risk that a paper is rejected or an article requires a major revision that slows down the publication process. Despite this, we aim at the following milestones:

Table 4.1: Time schedule of the expected research results

	Scientific peer reviewed publications in high-impact journals / conference proceedings (co-)authored by teams from VASSAL
M18 (11/2025)	4
M36 (05/2027)	12
5 years after the project end (05/2032)	36

5. EXPLOITATION STRATEGY AND PLAN

The successful impact of the project VASSAL extends beyond its scientific findings. Exploitation within the VASSAL project is a strategic effort to actively disseminate, apply, and maximize the value of its outcomes in the design and development of robust, reliable software. The exploitation plan acts as a roadmap for fostering engagement, collaboration, and knowledge-sharing among stakeholders.

Through participation in conferences, workshops, and webinars, VASSAL not only shares its scientific achievements but also creates an inclusive platform for collaboration across diverse sectors and disciplines. This approach ensures the project's results are not only disseminated but also adopted for practical applications.

The project is committed to ensuring its impact endures well beyond its 36-month duration. By promoting the tangible use of its outcomes, VASSAL seeks to deliver benefits with commercial, industrial, and societal significance, contributing to a future of safer, more reliable software systems.

We plan that results of the project will be exploited in courses related to software engineering and cybersecurity at participating universities to bring the latest knowledge to our students. The project can also provide attractive topics for new Ph.D. students.

As we are going to provide tools developed or improved within the VASSAL project as open source. We do not plan to commercialise the project results directly (e.g., applications for patents, selling licences for the tools usage, setting up spin-offs). However, we hope that the achieved results will allow extending current cooperation and establish new cooperation with universities as well as industrial partners. Such cooperation includes proposing new research and innovation projects, agreements on industrial doctorates, and contractual research.

The lessons learned especially about organisation of project support thanks to this project and about this type of projects will be shared with other departments and faculties at BUT. As FIT BUT is a member of the FELAPO – annual meeting of the leadership of Czech and Slovak faculties of electrical engineering and similar fields – and GRIFO – annual meeting the leadership of Czech and Slovak computer science faculties – we can share our

knowledge and experiences gained from this project with them as well.

Exploitation plans will be elaborated in more detail in the following versions of this deliverable on M23 and on M36.

5.1 OPEN ACCESS AND LICENSING/ IPR

At the core of the VASSAL project is a strong commitment to the principles of open access. We strive to ensure that our publications are freely accessible to the public whenever possible, fostering transparency and collaboration. This open access approach reflects our dedication to making our research widely available and to advancing innovation across fields.

In parallel, we are fully committed to upholding GDPR guidelines and ensuring the protection of data linked to our repository. Throughout the exploitation phase, data and licensing will be carefully managed, with the goal of making research available to a broad range of stakeholders while protecting intellectual property rights when necessary. This balanced approach aims to maximize the dissemination of knowledge while safeguarding data ownership.

Our open access strategy is designed to have a lasting impact beyond the project's lifespan. By promoting the free exchange of information, we aim to contribute to the greater good of society, enabling access to research for diverse audiences—including researchers, policymakers, industry professionals, tutors, and the general public.

This approach ensures that valuable information is not confined to exclusive circles but is made available to foster innovation, collective progress, and the responsible use of knowledge. VASSAL's commitment to open access is rooted in a belief in the democratization of knowledge, transparency, and academic integrity, all while adhering to ethical standards and ensuring the accuracy and reliability of our research.

5.2 STAKEHOLDER ENGAGEMENT

The VASSAL project's exploitation strategy focuses on leveraging its results to deliver tangible benefits across commercial, industrial, and societal sectors, with an emphasis on effective stakeholder engagement. The project will actively build and expand its stakeholder network, drawing from its interactive community of key institutions and initiatives across Europe. By connecting with the software (SW) engineering community, VASSAL aims to become a significant resource for SW development, supporting the objectives of other projects and initiatives.

The primary goal is to raise awareness, build support, and enhance impact by creating a platform for sharing project outcomes through scientific papers, best practice documents, and webinars. Additionally, the stakeholder network will serve as a key source of information, tracking the latest advancements in SW development and its application, particularly in critical systems. This information will be crucial for adjusting project activities to stay aligned with evolving trends and challenges in the field.

Through its collaborative approach, the VASSAL project aims to maximize its impact by fostering strategic partnerships, disseminating results widely, and addressing emerging opportunities within SW engineering. To facilitate these efforts, an Integration and Networking Plan (D5.1) and Sustainability Plan and R&I Roadmap (D5.3) will guide the process, ensuring the project's long-term success and relevance. The exploitation strategy will be rolled out throughout the project, starting with stakeholder mapping (M13) and continuing until M36, by which

time the network will be firmly established and operational.

5.2.1 WORKSHOPS AND WEBINARS

Promoting scientific literacy is one of importance to the VASSAL project. Through WP6, VASSAL will organize and participate in workshops, webinars, and other events to engage stakeholders and enhance understanding of software verification and safety.

In addition to these events, VASSAL will also host visits from project partners and collaborators, during which open lectures or presentations will be delivered. These engagements provide valuable opportunities for knowledge exchange, fostering deeper connections between the project team and external stakeholders. Relevant materials generated from these events – including recordings, presentations, and other relevant content – will be made publicly available on the project's website. To encourage widespread access and reuse, all materials will be licensed under Creative Commons, reflecting VASSAL's commitment to maximizing accessibility and sharing knowledge broadly.

5.2.2 CLUSTERING WITH OTHER INITIATIVES AND PROJECTS

VASSAL will actively collaborate with other projects and initiatives, as outlined in the D5.1 Integration and Networking Plan. By partnering with similar projects, VASSAL aims to enhance knowledge sharing and expand the project's impact as well as to reinforce sustainability. The collaborations will be built on shared interests and mutual goals, with tailored dissemination strategies for different stakeholder groups.

VASSAL will also organize its own events, including the final demonstration workshop, and participate in external events to maximize outreach and foster engagement. As part of this ongoing effort, the stakeholder mapping exercise in WP5 will help identify and engage the relevant actors.

6. REPORTING TO THE EU COMMISSION

Reporting is a key component in monitoring the communication and dissemination progress within the VASSAL project. These reports are essential for documenting the project's activities and are included in both progress and technical reports, as well as the final project implementation report.

The D1.6 Progress report will be submitted at prior the middle of the project duration (M17) while the D6.2 Mid-Term/Updated version of the Dissemination and Exploitation (D&E) Plan will be submitted after the conclusion of first part of research and innovation activities performed in WP3 (M23), and the final report will be delivered at the end of the project (M36). These reports will outline the development of communication and dissemination activities, summarizing actions taken and objectives met during each reporting period.

7. CONCLUSION

This deliverable provides a dissemination and exploitation plan for the VASSAL project. Specifically, the document outlines means of communication, dissemination and exploitation that will be employed in VASSAL to promote its outcomes and results, to provide engagement of the project with a broad range of stakeholders and the target audience, and to increase the reach and impact of the project by offering robust and reliable software. The presented

dissemination and communication tools are intended to remain active for at least five years after the project's completion, ensuring continued visibility and impact of VASSAL's results.

Recall that this document will be updated with further information throughout the developments of the D&C plan of the project, with second version (M18) and final version (M36).

ANNEXES

ANNEX 1
Deliverable Template.docx

ANNEX 2
Presentation_Template_VASSAL.pptx