



DELIVERABLE 4.1

INTERIM REPORT ON ESTABLISHING AND STRENGTHENING COOPERATION

Deliverable number: D4.1

Due date: 30. 12. 2023

Nature: Report

Dissemination level: Confidential

Work package: WP4

Beneficiary: ZAG

DOCUMENT HISTORY

Version	Date	Description	Contributors
draft	09.10.2023	Draft	Ulises Rojas-Alva
v.01	12.10.2023	Version 1	Urška Kropf
v.02	14.11.2023	Version 2	Andrea Lucherini
v.03	05.12.2023	Version 3	Grunde Jomaas
v.04	12.12.2023	Version 4	Urška Kropf
v.05	19.12.2023	Version 5	Grunde Jomaas
v.06	11.01.2024	Version 6	Martin Veit
final	13.01.2024	Final	Grunde Jomaas and Urška Kropf

Disclaimer:

The content reflects the views of the authors only. The European Commission is not liable for any use that may be made of the information contained herein.

This document contains information that is proprietary to the ZAG. Neither this document nor the information contained herein shall be used, duplicated, or communicated by any means to any third party, in whole or in parts, except with the prior written consent of ZAG. This restriction legend shall not be altered or obliterated on or from this document. Neither the European Commission nor ZAG are liable for any use that may be made of the information that it contains.

TABLE OF CONTENTS

1. Introduction.....	7
2. Current status and foreseen situation.....	8
2.1. Key people.....	10
2.2. Peers at universities and research institutes	11
2.3. National authorities in Slovenia and in wider region and professional and civil society organizations.....	12
2.4. Business sector	14
2.5. Social media and the importance of an online presence.....	15
3. Strategies for further enhancing cooperation	16
4. Final remarks and future developments.....	17

ACRONYMS AND ABBREVIATIONS

Acronym / Abbreviation	Description
AB	Advisory Board
ARIS	Javna agencija za znanstvenoraziskovalno in inovacijsko dejavnost Republike Slovenije Slovenian Research and Innovation Agency
CBP	Capacity Building Programme
DAAD	German Academic Exchange Service
ESA	European Space Agency
H2020	Horizon 2020 Programme
ILL	Institute Laue-Langevin
KM	Key Measures
KPI	Key Performance Indicator
MS	Milestone
NFPA	National Fire Protection Association (USA)
MIZŠ	Ministry of Education, Science and Sport (the previous ministry responsible for ZAG)
MVZI	Ministry of Higher Education, Science and Innovation (current ministry responsible for ZAG)
PC	Project Coordinator (Andraž Legat)
PI	Principal Investigator
PM	Project Manager (Urška Kropf)
R&D	Research and Development
SC	Steering Committee
SFPE	Society of Fire Protection Engineers
STFC-UKRI	Science and Technology Facilities Council UK
SZPV	Slovensko združenje za požarno varstvo (Slovenian Fire Protection Association)
UP	University of Primorska
WP	Work Package
ZAG	Zavod za gradbeništvo Slovenije (Slovenian National Building and Civil Engineering Institute)
ZARM	Center of Applied Space Technology and Microgravity (Germany)

EXECUTIVE SUMMARY

During the project period so far, a significant amount of work has gone into establishing and maintaining partnerships across academia and industry, with a focus on reaching out to leading universities and companies within fire safety engineering and sustainability. This cooperation has resulted in numerous publications affiliated with the FRISSBE project and ZAG, along with multiple grants of varying amounts to facilitate growth and research excellence, all while keeping the industry and market impact in mind.

In an effort to establish FRISSBE as a center of research excellence, multiple PhDs have been hired to further the advancement of the intersection between fire safety engineering and sustainability. This has resulted in strong partnerships with universities within Slovenia and abroad.

In the coming years, the FRISSBE team will continue to focus on establishing meaningful and impactful partnerships, while maintaining the current partnerships, to foster innovation and impact. This includes inviting world leading experts from across the world to give talks, workshops and speak at dissemination events, something which has already proven successful in previous efforts, such as a recent SFPE event held in Ljubljana, Slovenia at the end of November, 2023.

Furthermore, FRISSBE will foster the business partnerships with established partners in the market to enhance the market impact in order to become an established and respected institution for research, experiments and standardized tests.

On every measurable KPI, FRISSBE has proven successful, highlighting the importance of the concept and vision of the FRISSBE project and its place in the research field and industry.

1. INTRODUCTION

This deliverable is the first report on networking activities with all focus groups for the first 36 months of the FRISSBE project, where the last 24 months have been after the ERA Chair holder was hired.

The objectives of WP4 Sustaining ERA Chair related to this deliverable are to establish a lasting cooperation between linked ERA Chair entities (the FRISSBE Ecosystem and beyond), to strengthen cooperation with the universities and peers, national/regional authorities, to establish clear and lasting cooperation with businesses, to strengthen cooperation with professional and civil society organizations and to establish links to other stakeholders (Tasks 4.1 and 4.2).

Collaboration is a key driver for success in novel and impactful research and development and the nature of research necessitates diverse talents, skills, and resources. The Horizon 2020 initiative recognizes the value of collaborative efforts through bringing together the expertise of researchers, the practical insights of industry partners, and the strategic perspective of policymakers to foster innovation.

The aim is to create an ecosystem where knowledge is shared and disseminated between industry and researchers, granting unique insights from both perspectives, along with diverse ideas and insights about the solutions to modern problems within fire safety engineering and sustainability.

Central to this approach is the collaboration with industry partners. The cooperation with industry partners brings financial support, while, more importantly, also bringing market knowledge and a will to addressing societal needs, such that the impact on the market is increased.

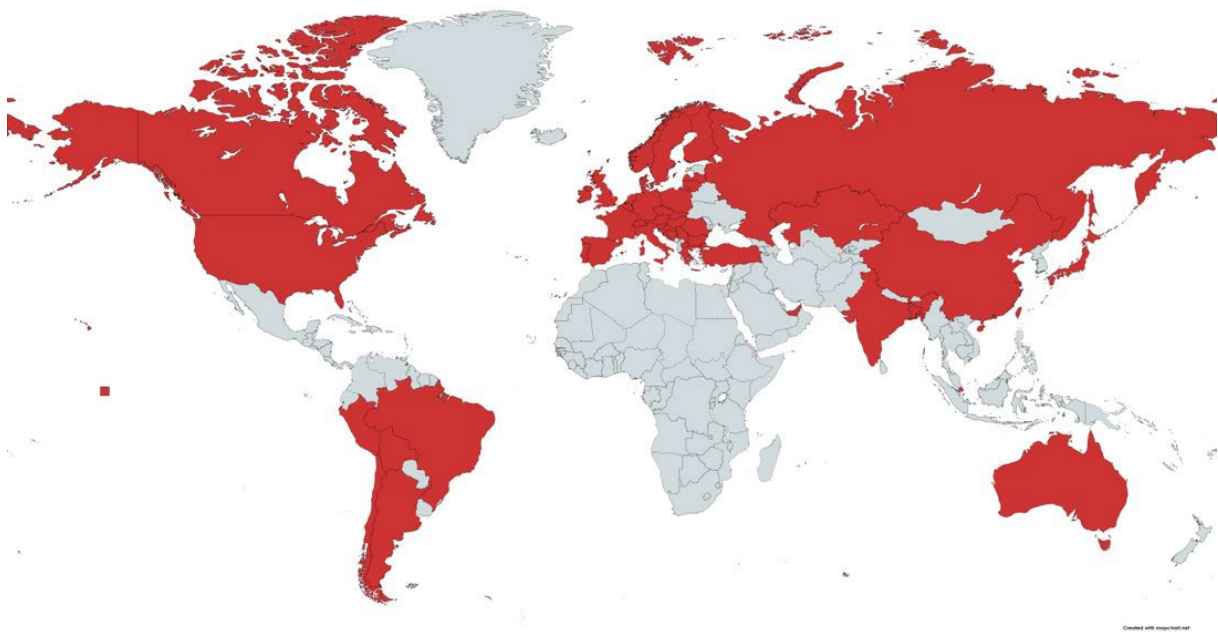
This report outlines the current efforts and strategies for establishing valuable partnerships with industry stakeholders, emphasizing mutual benefit and a shared vision for the future. Aligning research objectives with market demands enhances the practical impact of the research.

By leveraging the strengths of academia and industry, the gap between research findings and real-world implementation is decreased. This requires effective dissemination to both the research field and a grounded and effective dissemination to people from the industry, with a deep understanding of the targeted end-users' needs and challenges.

The FRISSBE Team together with other personnel working on the FRISSBE project was highly active in the first three years of this project, especially having in mind that the ERA Chair holder started during the end of year 1. Numerous cooperations were established while some were strengthened in that time.

2. CURRENT STATUS AND FORESEEN SITUATION

Collaboration is an essential aspect of research, and the FRISSBE team has already benefitted from collaboration with external partners. InnoRenew CoE and University of Primorska were pre-established partners in the FRISSBE ecosystem, and this resulted in immediate benefits for the project, as outlined in the list below. With time, several international collaborations have been established, and several of these have already resulted in tangible outcomes. The FRISSBE team will continue to establish partnerships of different characteristics and expect this to lead to a stronger research basis and increased funding in the years to come. These collaborations have already resulted in several invitations to be part of research grant applications and in industrial cooperation as well as in market activities. The map below shows countries from which the FRISSBE team has had some form of collaboration (e.g., interns, publications, project proposals, long-term visitors, keynote invitations and research stays).



Collaborations, whether on a personal or institutional level, play a pivotal role in advancing knowledge, fostering innovation, and addressing complex challenges. The value derived from these collaborations extends across various dimensions, with personal collaborations enhancing creativity and problem-solving skills, while institutional collaborations amplify resources, expertise, and impact. Additionally, the importance of collaborations spans national and international boundaries, encompassing academic, research institutes, and industrial partners alike. The FRISSBE team has established collaborations on all these levels, and they have different benefits, as outlined in the following.

Personal Collaborations:

1. **Creativity and Diverse Perspectives:** Collaborating with individuals from different backgrounds, disciplines, and experiences can stimulate creativity and offer diverse perspectives. This diversity of thought often leads to innovative solutions and novel approaches to problem-solving.
2. **Skill Exchange:** Collaborating personally allows for the exchange of skills and knowledge. By working closely with others, individuals have the opportunity to learn from each other, acquiring new skills and expanding their expertise.
3. **Professional Development:** Building personal collaborations fosters professional development. It provides opportunities for networking, mentorship, and exposure to different working styles, contributing to personal growth and career advancement.

Institutional Collaborations:

1. **Resource Amplification:** Institutions collaborating can pool resources, infrastructure, and funding. This collaborative effort enables the undertaking of more extensive and ambitious projects that might be beyond the capacity of individual institutions.
2. **Interdisciplinary Research:** Institutional collaborations often involve experts from various fields. This interdisciplinary approach enhances the quality and breadth of research, addressing complex issues from multiple angles and perspectives.
3. **Knowledge Transfer:** Institutions collaborating can facilitate efficient knowledge transfer. The exchange of information, expertise, and best practices accelerates the translation of research findings into practical applications, benefiting both academia and industry.

National Collaborations:

1. **Shared National Goals:** Collaborating at the national level aligns with shared goals and priorities. It enables the collective pooling of resources to address national challenges, fostering advancements that contribute to the well-being and progress of the entire nation.
2. **Policy Impact:** Collaborations with national partners provide an avenue for influencing and shaping policies. Research outcomes can directly inform decision-makers, contributing to evidence-based policymaking and societal development.
3. **Infrastructure and Facility Access:** National collaborations often provide access to shared infrastructure and facilities, reducing redundancy and optimizing the use of available resources.

International Collaborations:

1. **Global Impact:** International collaborations extend the reach and impact of research globally. By working with partners from different countries, research outcomes can address issues that transcend national boundaries, contributing to global knowledge and well-being.
2. **Cultural Exchange:** International collaborations foster cultural exchange and understanding. Exposure to different cultural perspectives enhances collaboration, promotes diversity, and enriches the research process.
3. **Access to Global Talent Pool:** Collaborating internationally allows for access to a broader talent pool. Researchers, scientists, and professionals from different countries bring unique skills and insights, enriching the collaborative environment.

Academic, Research Institutes, and Industrial Collaborations:

1. **Holistic Innovation:** Collaborations that span academia, research institutes, and industry ensure a holistic approach to innovation. Research findings can be seamlessly translated into practical applications, driving technological advancements and economic growth.
2. **Technology Transfer:** Partnerships with industrial collaborators facilitate the transfer of technology from the laboratory to the market. This accelerates the commercialization of innovations, fostering economic development and competitiveness.
3. **Real-world Impact:** Involving industrial partners ensures that research outcomes are aligned with real-world needs. This practical orientation enhances the relevance and impact of research, addressing societal challenges and contributing to sustainable development.

In summary, collaborations at personal and institutional levels, both nationally and internationally, and involving diverse partners, create a dynamic and robust ecosystem for research and innovation. The synergies derived from these collaborations amplify the potential for transformative outcomes, driving progress and contributing to the betterment of society on a global scale. In the following sections, the different people and organizations that the FRISSBE team collaborates with are introduced.

2.1. Key people

The FRISSBE team has established collaborations with key people in the fire research community. This includes leading researchers within the fire safety engineering field, such as Jose Torero (University College London (UCL), UK) and Bart Merci (Ghent

University, Belgium). Both Jose and Bart participate in yearly strategy meetings for the FRISSBE project to ensure an impactful and meaningful direction of the FRISSBE project, such that important and urgent problems within fire safety engineering and sustainability can be addressed. Furthermore, they are an integral part of educating the fire safety community, as they continuously participate in workshops and give talks within the framework of the FRISSBE project.

The participation of industry leaders such as Jose Torero and Bart Merci has resulted in a strengthened cooperation with Ghent University, as Martin Veit, currently employed within the FRISSBE project, is enrolled as a PhD student at Ghent University with Bart Merci as the main supervisor and the ERA Chair holder, Grunde Jomaas, and FRISSBE senior researcher Andrea Lucherini as co-supervisors.

Furthermore, a strong relationship has been established with University College London, as Grunde Jomaas will act as an industry expert for a PhD student of Jose Torero starting in April 2024. The student has published with members of the FRISSBE team (Ulises Rojas Alva (senior researcher) and Grunde Jomaas) based on work he did as an MEng student at the University of Edinburgh.

Finally, the strength of contacts already established within the FRISSBE project was highlighted at the SFPE Symposium at the end of November 2023, where experts from more than 10 countries accepted a role as invited speaker. The symposium had more than 100 participants from all over the world, both from industry, academia, and researcher organizations.

2.2. Peers at universities and research institutes

Partnerships with multiple universities and research institutions has also been established, and they are outlined through the following list.

1. **InnoRenew CoE** (Slovenia) – part of the pre-established FRISSBE ecosystem, which has already resulted in publications and granted research proposals.
2. **University of Primorska** (Slovenia) – part of the pre-established FRISSBE ecosystem, resulting in PhD enrolment for Ines Cilenti and Nik Rus, as well as professorship for Grunde Jomaas and assistant professorship for Andrea Lucherini.
3. **ÉMI Kht.** (Hungary) – Memorandum of Understanding (MoU) for general collaboration in the field of civil engineering, with a focus on fire safety.
4. **IMFSE** (International Master of Science in Fire Safety Engineering) – affiliated partner (<https://imfse.be/about-us>) (Belgium, UK, Sweden, and Spain) resulting in internships and thesis hosting of students from the world-leading educational programme in fire safety engineering. One intern was hosted in 2022 (Gizelle Danine Jamero) and four interns in 2023 (Ashwant Singh, Farith

Hinojosa Coca, Maria Binte Mannan and Matheus Pontes Lima). The FRISSBE team has received 17 expressions of interest for summer internships for 2024.

5. **Pontificia Universidad Católica de Chile** (Chile) – collaboration on mass timber project (MoU in signing process), including co-financing.
6. **RISE FR** (Norway) – MoU (in signing phase) with a focus on collaboration related to research topics such as mass timber, PV fire safety and battery fire safety. Furthermore, Nina Reitan, their CEO, serves as a member of the FRISSBE Advisory Board, which has meetings twice per year and she is an active participant.
7. **Ghent University** (Belgium) – PhD enrolment for Martin Veit and deep collaboration with Prof. Bart Merci.
8. **Czech Technical University in Prague** (Czech Republic) – hosting intern (Daniela Šejnová Pitelková), which resulted in publications and in grant applications.
9. **University of Angers** (France) – hosting one intern in 2023 (Simon Bodin) and with one agreed for 2024.
10. **University of Ljubljana**, Faculty of Civil and Geodetic Engineering (Slovenia) – collaboration in projects ([Skilled to be Fire Expert](#)) and research proposals.
11. **UCL Department of Civil, Environmental & Geomatic Engineering** (United Kingdom) – Jose Torero is a member of the FRISSBE Advisory Board with meetings twice per year where he is an active participant. Publications with Andrea Lucherini.
12. **University of Liverpool** (United Kingdom) – Martina Manes (lecturer) is an active collaboration partner. Andrea Lucherini and Ulises Rojas Alva have given invited lectures there.
13. **Center of Applied Space Technology and Microgravity (ZARM)** – Ulises Rojas Alva has visited a few times to carry out experiments, and this has resulted in a recent journal paper submission.

2.3. National authorities in Slovenia and in wider region and professional and civil society organizations

The Society of Fire Protection Engineers (SFPE) has been a prominent professional organization since its establishment in 1950 and its incorporation as a nonprofit organization in 1971. As a leading global society, it represents professionals working in the field of fire protection and fire safety engineering. With over 5,000 members and more than 120 chapters worldwide, including more than 20 student chapters, SFPE has been rapidly growing.

Together with SFPE, FRISSBE co-hosted the SFPE Engineering Solutions Symposium for Fire Safety and Sustainable Building Design on the 29th and 30th of November 2023, in Ljubljana, Slovenia. All the key organisations in the field of fire safety were

represented at the recent SFPE Symposium that FRISSBE hosted in November, which can be seen as a testimony to the collaborative reach of FRISSBE:

- **National Fire Protection Association (NFPA)**
- **Society of Fire Protection Engineers (SFPE)**
- **International Association of Fire Fighters (IAFF)**
- **International Association for Fire Safety Science (IAFFS)**
- **Slovenian Fire Protection Association (SZPV)**

SZPV is another central collaborator for FRISSBE, and recently that was strengthened considerably, as FRISSBE team member Aleš Jug became the president of SZPV. The FRISSBE team and SZPV have already arranged several workshops together, and have plans for an increased number of educational events from 2024 onwards. In addition, the FRISSBE team will arrange the Fire and Safety Conference and Expo together with SZPV in October 2024. The event has one day in Slovene language and one in English, and it is foreseen that there will be a large number of exhibitors and attendees. As this event takes place every two years, it is expected that the FRISSBE team will be a co-organizer in 2026, as well.

Through the network offered by IAFSS and IMFSE, the FRISSBE team has managed to secure the role as host of the European Symposium of Fire Safety Science in Slovenia in 2025. The 2024 version is in Barcelona, and Grunde Jomaas is part of the organizing committee, and Andrea Lucherini and Grunde Jomaas are part of the scientific committee (<https://esfss2024.com/committees/>).

The above has described how the FRISSBE team has used their network to ensure high-quality, well-attended international conferences for 2023, 2024 and 2025. It is foreseen that the a FRISSBE dissemination event will take place towards the end of 2026, and this event aims to have a different format than a typical research conference, as the target audience should be people and organizations that have interest in learning about the details of how the FRISSBE project was operated.

The FRISSBE team is also involved in space research, and Grunde Jomaas is the coordinator of the topical team entitled Exploration Space Safety (ExFireS), where Ulises Rojas Alva is the operational lead. This team is funded by the **European Space Agency (ESA)**, and has recently been an active scientific member of In-orbit experiments operated by **NASA**. These experiments will certainly result in publications.

Through the [FRISSBE advisory board](#), the FRISSBE team has established contact with **MIZŠ - MVZI**, as Tanja Vertelj is an active participant in the meetings. The same goes

for the **Ministry of Defence**, as Aleksander Špec participates in all advisory board meetings.

Recently, Andraž Legat, who is the FRISSBE Project Coordinator (PC), became a member of The **Fire Fund Disposal Committee**, established by the Decision on the appointment of members and functioning of the Fire Fund Disposal Committee. It is envisioned that this can increase the probability of funding through this channel, as the FRISSBE team will obtain deeper know-how of the way the fund operates.

Throughout 2023, the FRISSBE team established a good collaboration with the **Slovenian Business and Research Association (SBRA)**, and particularly with the leader, Draško Veselinovič. This resulted in a FRISSBE/ZAG event in Brussels in May 2023, which had a letter to EU politicians as the outcome. Draško Veselinovič also participated in the SFPE Symposium in November 2023, and he played an integral role in securing minister for economy, tourism and sport, Matjaž Han, as the welcome speaker at the event.

2.4. Business sector

For FRISSBE, collaborating with industry is pivotal for amplifying our research impact and advancing our mission. Industry partnerships bring substantial benefits, including access to state-of-the-art technologies, industry-specific datasets, and practical insights, all of which is essential for a practical research field as fire safety science. Through these collaborations, FRISSBE researchers gain real-world context, thus enhancing the relevance of our work. Industry engagement also opens avenues for technology transfer, enabling the application of our findings in diverse sectors. Moreover, collaborative projects attract funding opportunities, ensuring sustained growth for the FRISSBE team, and reinforcing our position as a research organization at the forefront of innovative solutions with tangible industry applications.

The team has established work with local (LZ Design), national (Pipistrel) and international (Knauf, Rockwool, Over Easy Solar and Stora Enso) companies. The work has been carried out under Joint Development Agreements (JDA), and the team has already published a few professional articles based on the work. Further publications are expected to be added in 2024, and these should be journal articles. It is also worthwhile to mention that some of the work is aligned with the PhD research of Nik Rus, who thus has benefitted tremendously from the collaboration, as the experiments carried out were significantly beyond the budget of the FRISSBE project.

The collaborations have also resulted in funding of summer interns in 2023 and of the laboratory tour with live experiment that was part of the SFPE Symposium. In

addition, the industrial collaboration has also resulted in research funding through a grant from ARIS (Slovenian Research and Innovation Agency).

Finally, industry is also represented in the FRISSBE advisory board through Klemen Klemenak (Stora Enso) who has been a very active and valuable member since 2023, as well as Bogdan Božac (Chamber of Commerce and Industry of Slovenia (CCIS)), who was a member until the end of 2022.

2.5. Social media and the importance of an online presence.

In the beginning of the project period, an official website for the FRISSBE project (www.frissbe.eu) was established, along with an official page on several social media sites, such as LinkedIn and Twitter. This has proven to be a key driver to show the progress and work done within the FRISSBE project.

LinkedIn stands as a pivotal force in modern professional networking, offering more than just a digital resume. Serving as a dynamic hub for career development, it enhances visibility and opportunities. A well-crafted profile showcases achievements, fosters engagement, and contributes to personal branding, establishing credibility within one's industry. This platform's unrivaled networking potential connects professionals globally, facilitating collaboration and career growth. In an era where recruiters turn to online platforms, a compelling LinkedIn presence becomes crucial for career advancement. Its role as a tool for shaping professional narratives and seizing opportunities makes it indispensable in navigating today's professional landscape.

On LinkedIn alone, the official FRISSBE page has more than 3500 followers and more than 115 000 impressions within the last 365 days, all without utilizing sponsored content to promote the page. Further to that, the ERA Chair holder has about 13 000 followers on LinkedIn, and since June 2023, he has had about 10 million impressions on his posts. The online presence of the FRISSBE project and the ERA Chair holder has been instrumental in becoming visible in the professional scene, which has created valuable partnerships and business opportunities, for example the joint PV experiments with Over Easy Solar.

In the future, this work will be continued, with important milestones or work done being shown to the research field and industry through the social media accounts established.

3. STRATEGIES FOR FURTHER ENHANCING COOPERATION

Collaboration between EU Horizon 2020 projects and the industrial and research community is crucial for the success and impact of innovative initiatives. Building strong connections can lead to valuable knowledge exchange, technological advancements, and the acceleration of research outcomes. To foster effective cooperation, various strategies can be employed, including conferences, project proposals, and dissemination events.

Conferences provide an excellent opportunity for project members, researchers, and industrial stakeholders to come together, share insights, and establish connections. As part of the vision of the FRISSBE project, a collaboration between FRISSBE and SFPE resulted in the “Engineering Solutions Symposium for Fire Safety and Sustainable Building Design”.

Creating a platform for open dialogue fosters a collaborative spirit and facilitates the exchange of ideas. Besides conferences, dissemination events can be used as supplement to actual conferences, where industry and research partners can come together and communicate recent advances or previous important research that highlights the importance of sustainability and fire safety in the built environment.

Furthermore, forming partnerships through joint project proposals is a proactive strategy to enhance cooperation. FRISSBE has been and will continue to participate in joint project proposals to foster collaboration with industry and research partners to address common goals and challenges. Establishing clear objectives, defining roles, and leveraging the complementary expertise of each partner strengthens the proposal and complements the vision for the FRISSBE projects well. Successful collaborations not only enhance the chances of securing funding but also contribute to the development of impactful solutions with real-world applications.

Going forward, continued effort will go into enhancing cooperation between business partners, establishing long-term connections with cooperations wishing to do experiments which can lead to FRISSBE being more visible in the business space, along with the possible dissemination of the experiments and experience obtained in the form of journal papers, that highlights the impact of FRISSBE and ZAG to the public.

4. FINAL REMARKS AND FUTURE DEVELOPMENTS

Current efforts of the FRISSBE project have focused on establishing professional partnerships throughout industry, research partners from various industry institutions and universities from all over the world. This has been largely beneficial and have already yielded tangible results, such as publications with other leading experts in the field from all over the world, with more than 20 publications published by the participants of the FRISSBE project in cooperation with established partnerships. Going forward, publications will continue to be a focus, and with more partnerships being continually established, the number of publications within the FRISSBE project participants is expected to grow steadily.

As part of the vision of the FRISSBE project to gather competent and highly skilled researcher, multiple PhD students have been hired. The PhD students consists of Nik Rus, Ines Cilenti and Martin Veit, with the former two being enrolled at University of Primorska and the latter being enrolled at Ghent University, meaning multiple close partnerships with universities both in Slovenia and Belgium. The PhD enrolments are expected to yield multiple publications during the duration of their respective PhDs, along with increasing the expertise of fire safety in Slovenia by presenting their work at conferences and dissemination events in and out of Slovenia. This will help the FRISSBE project becoming more visible and impactful, as more work is being published and presented under the affiliation of the FRISSBE project.

Due to the cooperation with IMFSE, the FRISSBE project receives interns on a yearly basis, which has already resulted in four interns in 2023, with more interns expected in the summer of 2024. This fosters the collaboration between FRISSBE and IMFSE, along with increasing visibility of the FRISSBE project. Furthermore, this partnership can result in publications of the work done doing the internships.

As part of gathering competent and highly skilled researchers, on-going capacity building of the existing personal is focused on increasing the competences in current areas of expertise, along with acquiring new competences. This has been done in the form of courses, mentorship, participation in summer schools, seminars, webinars and being a visiting researcher at other universities. World leading experts are also invited from across the globe, with people working in fire safety science, performance-based design and sustainability being invited to give talks, being a visiting researcher at ZAG, etc. This will continuously be promoted in the future, to ensure a growth of competences and meaningful partnerships.

The FRISSBE project continuously receives new grants, both internal and external, to fund projects that supplements the vision of the FRISSBE project, and which results in collaborations with current and new partnerships, along with being disseminated at conferences or in journal papers. This includes four internal projects in 2023, along with three ARIS grants, one European grant and five other grants.

Besides the impact of the published work, the grants help establish FRISSBE as a recognized international research center focused on excellence, which will in the end help FRISSBE become a self-sustaining research center after the end of the project period.

As shown, the FRISSBE has successfully established several valuable partnerships which strengthens the FRISSBE project, its visibility, and its impact. While current efforts have been a success, it is expected that more partnerships and collaborations will be established in the future due to the on-going efforts and continued support from the industry and research community.