

Erasmus + Project No598241-EPP-1-2018-1-RS-EPPKA2-CBHE-JP

**Strengthening Educational Capacities by Building Competences and  
Cooperation in the Field of Noise and Vibration Engineering  
SENVIBE**

# **Project Exploitation Plan**

**Deliverable 8.6.**

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### Project Info

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# 1 Introduction

This document sets out a exploitation plan for the project "Strengthening Educational Capacities by Building Competences and Cooperation in the Field of Noise and Vibration Engineering" (acronym SENVIBE), which has received funding from the Erasmus+ Key Action 2 programme, under the Grant Agreement number 2018 – 3226/001 – 001. In order to assure the SENVIBE sustainability after the end of the implementation period, the document outlines activities and mechanisms for effective exploitation of the project results. The deliverable D8.6 – Project Exploitation Plan represents a public document developed in the context of SENVIBE project Work Package (WP) 8 – Dissemination and Exploitation.

## 1.1 Brief Description of SENVIBE Project

The wider aim of SENVIBE project is to improve and build national educational capacities, cooperation and competences in dealing with environmental and occupational noise and vibration (No&Vib) engineering issues in accordance with ongoing EU integration strategies and the needs identified in Serbia.

The specific project objectives are:

- modernization of four existing courses in the field of No&Vib as well as development and implementation of two new courses tailor-made for students of undergraduate programmes of different engineering departments (existing: Environmental Engineering, Occupational Safety Engineering, Mechanical Engineering, Electrical Engineering; new: Civil Engineering and Traffic Engineering);
- creation and implementation of two types of Life-Long Learning (LLL) courses for practitioners in the fields of No&Vib Engineering, Environmental Protection and Occupational Safety;
- development and implementation of a new MSc programme in Vibro-Acoustic Engineering (VAE), which would enable students to strengthen their knowledge and build specific soft skills in three different sub-disciplines: i) Environmental Noise and Vibration, ii) Acoustical Engineering and iii) Vibration Engineering;
- establishment of a No&Vib Hub - a central unit launching and facilitating strategic cooperation among the key stakeholders engaged in No&Vib management: academia, local industry and local and national authorities.

Besides these aims, all the educational activities are also accompanied with the additional aim to introduce new teaching methodologies, including the use of e-tools

and b-learning approaches, aiming either at facilitating more intensive interaction between teachers and students/trainees or enabling them to fit the activities planned into their everyday activities with a possibility for distance learning or repetitive insights into learning material, including experiments. The equipment will be either modernised when it exists, or a new one will be installed if the Higher Education Institution (HEI) does not have it. The current teachers and university staff, including technicians, will be trained on the new courses, methodologies and equipment.

## **1.2 The Purpose of Dissemination and Exploitation**

Activities serving the dissemination and exploitation of results are a way to showcase the work that has been done as part of the Erasmus+ project. Sharing results, lessons learned and outcomes and findings beyond the participating organisations will enable a wider community to benefit from a work that has received EU funding, as well as to promote the organisation's efforts towards the objectives of Erasmus+, which attaches fundamental importance to the link between Programme and policies. Therefore, each of the projects supported by the Programme is a step towards achieving the general objectives defined by the Programme to improve and modernise education, training and youth systems.

Definition of dissemination and exploitation of project results is outlined in Erasmus+ *Annex II - Dissemination and exploitation of results*.

**Dissemination** is a planned process of providing information on the results of programmes and initiatives to key actors. It occurs as and when the result of programmes and initiatives become available. In terms of the Erasmus+ Programme this involves spreading the word about the project successes and outcomes as far as possible. Making others aware of the project will impact on other organisations in the future and will contribute to raising the profile of the organisation carrying out the project. To effectively disseminate results, an appropriate process at the beginning of the project needs to be designed. This should cover why, what, how, when, to whom and where disseminating results will take place, both during and after the funding period.

**Exploitation** is a planned process of transferring the successful results of the programmes and initiatives to appropriate decision-makers in regulated local, regional, national or European systems, on the one hand, and (b) a planned process of convincing individual end-users to adopt and/or apply the results of programmes and initiatives, on the other hand. For Erasmus+ this means maximising the potential of the funded activities, so that the results are used beyond the lifetime of the project. It should be noted that the project is being carried out as part of an international programme

working towards lifelong learning and supporting European policies in the field of education, training, youth and sport. Results should be developed in such a way that they can be tailored to the needs of others; transferred to new areas; sustained after the funding period has finished; or used to influence future policy and practice.

Dissemination and exploitation are therefore distinct but closely related to one another.

## 2 Exploitation Strategy

The aim of Dissemination and Exploitation Strategy is to define the activities which will be carried out during the project lifetime in order to ensure that the project's results and deliverables are available to target groups, stakeholders and general public on a timely manner and in most effective way.

As outlined in Erasmus+ projects guidelines: *"Having a strong plan for dissemination and exploitation from the beginning of a project is a key priority and should form an integral part of the CBHE throughout its lifetime. The objective of dissemination and exploitation is to maximize the impact of project results by optimizing their value, strengthening their impact, transferring them to different contexts, integrating them in a sustainable way and using them actively in systems and practices at local and international levels."* (Erasmus+ Programme Capacity-Building projects in the field of Higher Education (E+CBHE) Guidelines for the Use of the Grant, 2016).

This document defines the following: dissemination and exploitation goals and objectives, target groups and stakeholders, dissemination and exploitation tools and a plan for effective exploitation of the project results.

### 2.1 Dissemination and Exploitation Goals and Objectives

Work Package 8 – Dissemination and Exploitation aims to ensure high visibility of project results among target groups and stakeholders in order to extend the impact of SENVIBE project, as well as to raise general awareness and use of project results. The dissemination and exploitation goals are to:

- raise general public awareness on SENVIBE project objectives,
- engage different target groups with information adjusted to their needs,
- maximize the impact of the project on stakeholders,
- influence policy and practice in the field of environmental protection and occupational safety,
- develop new partnerships by launching the cooperation among educational institutions, local industry and local and national authorities.

The dissemination and exploitation objectives of SENVIBE project are the following:

- definition of partners' responsibilities and roles in dissemination activities,
- target groups and stakeholders identification,
- identification and development of dissemination methods, tools and channels,

- setting up a timetable of dissemination activities,
- definition of key performance indicators for the purpose of dissemination achievements' evaluation,
- spreading the project's results among relevant stakeholders on a timely basis and in most effective way,
- achieving the visibility of SENVIBE project, its results and dissemination activities to general public,
- establishing and maintaining mechanisms for effective exploitation of the project results.

In order to achieve defined goals and objectives, following tasks should be executed:

- preparation of the Project Dissemination Strategy with the Key Performance Indicators,
- development and maintenance of SENVIBE website,
- producing and publishing promotional material,
- planning and executing media, enrolment and promotional campaigns,
- organising final SENVIBE project conference with a Round Table,
- preparation of the Exploitation Plan,
- conducting activities related to institutional sustainability.

In order to ensure high visibility and maximal impact of the project results, following activities should be performed at different stages of the project cycle:

- before the project starts:
  - drafting the dissemination and exploitation plan,
  - defining the expected impact,
  - consideration of target groups and stakeholders,
- during the project:
  - updating the dissemination and exploitation plan,
  - SENVIBE project visual identity development,
  - development and maintenance of the project website,
  - launching social media channels,
  - designing and publishing promotional material,
  - proactive dissemination of SENVIBE project's objectives, activities and results via project website and its social media channels,



- organization of dissemination events, enrolment and promotional campaigns,
- contacting relevant media at local or regional level,
- assessing the impact on target groups and stakeholders,
- after European funding ends:
  - continuing further dissemination and exploitation of the project results,
  - developing ideas for future cooperation,
  - evaluating achievements and impact,
  - contacting relevant media.

Dissemination and exploitation of SENVIBE project results will be continued after the funding period. Novel and modernised courses for students of undergraduate programmes, MSc programme in VAE, LLL courses, newly installed equipment, No&Vib Hub and Information and Communication Technology (ICT) platform for e-learning and b-learning purposes will be sustained beyond the project lifetime. Project results and deliverables will be visible on the project website, social media platforms and institutional web portals, and thus accessible to all interested parties. Social media accounts and project website will be administrated and will enable further communication and dissemination after the project ends. In this way, long-term benefits to target groups and stakeholders will be provided and dissemination and exploitation of project results will extend beyond the project duration.

## 2.2 Target Groups and Stakeholders

Targeting the right audience is of key importance for effective dissemination and exploitation of SENVIBE project results and achievement of desired impacts. SENVIBE project intends to engage and benefit students, universities and higher education institutions, institutes and research centres, private/public businesses, employees, non-profit entities, national and local authorities interested or involved into noise and vibration issues, their control, monitoring and management.

SENVIBE project stakeholders' profiles, as well as the expected impact of the project on each stakeholder, are specified below:

- **Students** - The courses for students of undergraduate programmes of different engineering departments will be primarily focused on students of Environmental Engineering, Occupational Safety Engineering, Mechanical Engineering, Electrical Engineering, Civil Engineering and Traffic Engineering. Improvement of four existing courses, implementation of two entirely new courses and

development of MSc programme in VAE will enable students to strengthen their knowledge and improve educational and practical competences in the field. Beside targeting the bachelor students of related fields of education, professionals in the field will gain an opportunity for higher/enhanced level of education and improvement of their competence and position in the market and in society.

- **Teachers and university staff** – The current teachers and university staff, including technicians, at four Serbian higher education institutions will be trained on the new courses, methodologies and equipment. New curricula, course materials and equipment will enable teachers and university staff to improve their competences, educational methods and working conditions. Introduction of new teaching methodologies (such as e-tools and b-learning approaches) aim at more intensive interaction between teachers and students/trainees.
- **Professionals and employees in all relevant sectors** – innovative LLL courses which will be introduced aim at practitioners from SMEs and large enterprises (e.g. Mechanical, Civil, Environmental, Traffic engineers/technicians who are faced with noise and vibration issues, but have not received formal/adequate education about it), as well as for local authorities (among which are also Environmental engineers) whose obligations include continuous noise monitoring. Within them, there might also be candidates who would like to apply for the new VAE MSc programme. Since Serbian legislation related to noise protection requires creation of strategic noise maps, LLL courses will provide Environmental engineers with beneficial skills and knowledge for realization of these obligations.
- **Private/public businesses** – Enterprises, as well as non-governmental organizations, in the field of environmental protection will benefit from the expansion of knowledge related to noise and vibration, environmental protection and occupational safety, and therefore they will be targeted by dissemination activities. Furthermore, No&Vib Hub will offer a framework for cooperation between enterprises, higher education institutions and relevant national and local authorities.
- **Local and national authorities** – Local and national authorities will benefit from several project activities and results such as: increased knowledge in the field, dissemination events, establishment of No&Vib Hub, development of online tools, etc. This target group includes:
  - Provincial Secretariat for Urban Planning and Environmental Protection (the Autonomous Province of Vojvodina, the Republic of Serbia), The

Ministry of Environmental Protection (the Republic of Serbia), The Ministry of Labour, Employment, Veteran and Social Policy (the Republic of Serbia)

- Local government units in charge of environmental protection and occupational safety.
- **Society at large** – One of the objectives of work package concerned with dissemination and exploitation is raising of public awareness about SENVIBE project and its outcomes. Therefore, traditional media (such as television, radio, newspapers and journals), as well as new media platforms (such as SENVIBE project website and its social media channels), will be used frequently to disseminate SENVIBE project results to wider and diverse audience.

### **2.3 Dissemination and Exploitation Tools**

For extensive and sustained exploitation of the project results, it is essential that the results are visible and available to target groups on a timely manner and in most effective way. Therefore, during the project lifetime, and even after the funding period, the following tools will be used for the purpose of sharing the project results:

- **Project website** – The project website represents one of the main tools for dissemination and promotion of SENVIBE project. Official SENVIBE project website is visible on the Internet and can be accessed at <https://www.senvibe.uns.ac.rs>. The website is used for proactive dissemination of the project's overall aim, specific objectives, activities and results. The website section OPEN MATTERS, which is publicly available, hosts project outputs, reports and reading materials. Section e-SENVIBE is used for dissemination and exploitation of teaching and learning materials for the courses and the Master programme. The website also includes a private area for internal documentation exchange which can only be accessed by the Project Administrator, Project Management Team members and the leader of Dissemination Work Package.
- **Social Media** – Beside the project website, social media platforms represent the most important channels for efficient and effective dissemination of SENVIBE project results not only to the target groups and stakeholders, but also to wider audience. Facebook and Twitter accounts of the SENVIBE project are used for publishing information about dissemination activities, project results, significant events and relevant news. Furthermore, SENVIBE Facebook page is used for providing and spreading the educational contents related to the topics of noise, vibration and technical acoustic. SENVIBE YouTube Channel is used for publishing short videos about the project and its results, as well as the

educational videos on Environmental Noise, Occupational Noise and No&Vib Engineering.

- **Promotional Material** – Several brochures will be designed to promote developed courses and novel Master programme. Printed brochures will be distributed to potential students and practitioners in the fields of No&Vib Engineering, Environmental Protection and Occupational Safety. In order to make promotional materials available to wider and diverse audience, the digital versions of brochures and leaflets (in PDF file format) will be available on the official project website and will be distributed via social media. Furthermore, newsletters about SENViBE project activities and results will be sent every six months to all stakeholders and target group members from the contact list.
- **ICT Platform** – ICT platform will be used for dissemination and exploitation of learning materials for the courses and the MSc programme. It will be used for education at HEIs, LLL courses and the No&Vib Hub, as well as for e-learning and b-learning purposes. A Moodle ICT platform will continue to exist after the end of the project. It will be linked to the project website and also properly promoted to the relevant stakeholders.
- **ERASMUS+ Project Results Platform** – The Erasmus+ Project Results Platform represents the European Commission's database for the Erasmus+ Programme established to offer a comprehensive overview of projects funded under the Programme and to highlight good practice examples and success stories. Basic data coming from the application form (such as project's title and summary, project's partners, the duration and budget) are available to general public. During the project lifetime project results remain un-published. The results become publicly available after they have been approved by the project officer and the project has been finalized.

## **2.4 Exploitation of the Project Results**

The project results may consist of both tangible and intangible results. Tangible results may include practical tools or products (such as teaching and learning materials, e-learning tools, lab equipment), new forms of collaboration and networking, reports, newsletters and brochures, etc. Intangible results include knowledge, skills and personal experiences gained by the project participants.

In order to assure extensive exploitation, the project results should be integrated in a sustainable way and structured such that they can be tailored to third-party needs and requirements and maintained after the funding period. They should be transparent, well documented (with a focus on the benefits) and accessible. Furthermore, (online)

seminars, workshops, conferences, as well as face-to-face transfers of relevant results and discussions with target groups and stakeholders on their implementation, are crucial for sustained exploitation of the project results.

In order to set the basis for extensive and effective use of the project outputs and outcomes, as well as the project sustainability and the achievement of desired impact on stakeholders and target groups, all project partners have elaborated a strategy for exploitation of SENVIBE project results. The following table summarize developed exploitation plan.

Table 1: Exploitation strategy

Ref.nr / Sub-ref nr	Activity	Deliverables/ Results/Outcomes	Target Groups	Exploitation plan
1.1.	Survey and comparison of Serbian and EU education in No&Vib	Report	Teaching staff Students Trainees Technical staff Librarians Stakeholders	The report covers the survey of all levels of education in Serbia and EU in the No&Vib fields. The report will be used in the process of modernisation of the existing courses, as well as development of new ones in the field of No&Vib for students of different engineering departments. The report will be available on the project website.
1.2.	Define tailor-made learning outcomes for students of six EDs	Report	Teaching staff Students Technical staff	The report contains tailor-made learning outcomes for students of six different engineering departments (Mechanical Engineering, Environmental Engineering, Occupational Safety, Electrical, Civil and Traffic Engineering). This project outcome will be used in WP3 for the development of the related engineering courses in the field of No&Vib. The report will be available on the project website, as well as the official websites of Serbian partnering HEIs, and will also be shared with other HEIs in Serbia during dissemination events.
1.3.	Define and shape the learning outcomes for LLL courses	Report	Teaching staff Trainees	The report defines the learning outcomes for two different LLL courses and will be used in WP4 for the development of these courses. This outcome will be available on the project

			Technical staff Stakeholders	website, but will also be distributed to all project partners as well as to certain national, regional and local authorities. Additionally, various dissemination and promotional activities targeting practitioners in the fields of No&Vib Engineering, Environmental Protection and Occupational Safety will be organised.
1.4.	Review and analysis of the existing MSc VAE programmes in EU	Report	Teaching staff Students Educational authorities and professionals	The report covers the review and analyses of the MSc programmes in Vibro-Acoustics/Sound&Vibration at KTH University, Institute of Sound and Vibration Research, University of Le Mans and Technical University of Denmark. On the basis of this report, learning outcomes for a new MSC programme in VAE in Serbia will be defined. The report will be available on the project website, but will also be distributed to other HEIs in Serbia during dissemination events. This outcome will be of interest not only for the Serbian HEIs to learn about it, but also at the EU level, and the international partners will make it visible at their institutions, and distributed to other EU HEIs through their own channels. The Young Acousticians Network is also expected to be beneficial for this distribution and to boost the visibility of the report.
1.5.	Define learning outcomes for an MSc VAE programme in Serbia	Report	Teaching staff Students Technical staff	The report defines learning outcomes for a new MSc programme in the field of No&Vib. This outcome will be used in WP5 for the development of the new MSc curriculum in VAE. The report will be available on the intranet and up to the institutional level, as it cannot be

			Educational authorities and professionals	made publicly available before the accreditation has been finished due to the existing regulations.
1.6.	No&Vib Hub: matching the EU trends with the needs in Serbia	Report	Teaching staff Students Trainees Technical staff Stakeholders	The report sets the basis for the establishment of No&Vib Hub by matching the EU trends with the needs in Serbia, compiling the list of stakeholders, analysing mutual and individual contributions to the project goals, as well as defining its modus operandi. Therefore, it will be used in WP6 - Establishing the No&Vib Hub. This outcome will be available on the project website, but will also be distributed to all project partners, as well as to certain national, regional and local authorities. Furthermore, various dissemination and promotional activities targeting students, teachers, researchers, stakeholders from the industry, as well as the representatives of local and national authorities, will be carried out.
1.7.	Report on needs analysis and gaps detected	Report	Teaching staff Students Trainees Technical staff Librarians Stakeholders	The report on the needs analysis and gaps detected is of national interest, as it includes the analysis per regions, Serbian HEIs and other institutions in Serbia (for example those performing retraining courses). This analysis sets the basis for the realisation of the whole project and it will be used in WP3, WP4, WP5 and WP6 for redesign of the existing and the development of new undergraduate and LLL courses, as well as in the development of the MSc programme in Vibro-Acoustics and the establishment of No&Vib Hub. This report will be publicly available on the project website and will be distributed widely, including the



				Ministry of Education, Science and Technological Development, the Ministry of Environmental Protection, the Ministry of European Integration, the Occupational Safety and Health Directorate and the Consortium of Serbian HEIs. This distribution will be accompanied with one-to-one meetings, campaigns and dissemination events for its discussion and presentation.
2.1.	Requirements, design and enhancement of an ICT platform	Report, Service/Product	Teaching staff Students Trainees Administrative staff Technical staff Stakeholders engaged in the No&Vib Hub	The main service and product here – the ICT platform will be used both for education at HEIs, for LLL courses and the No&Vib Hub, as well as for e-learning and b-learning purposes. The ICT platform will enable the users to access it from a variety of devices. Besides being a resource library, in case of e-learning and b-learning, it will be used to distribute learning materials to students (especially videos and data from experiments and measurements between the partners), track student achievements, set assessment tasks, receive completed assessment tasks and host moderated discussions, including answering questions. Several reports will be composed here: the first one will include the design and tasks; there will be one in the middle of the development phases, describing the current state and the future work; the final report will be written at the end, when the ICT platform becomes fully operational. All three reports will be archived on the project intranet and analysed by the Project Management Team. Statistics of the number of visits, users and downloads from the ICT

				platform will serve as an indicator of its usage, and will be available on it.
2.2.	Procure, install and activate the equipment	Service/Product	Teaching staff Students Trainees Administrative staff Technical staff	<p>The equipment will be procured for all Serbian partnering HEIs. University of Novi Sad will also get the reverberation chamber and a vibration lab, as they will introduce the new MSc programme in VAE. The procured equipment will be used for experiments and lab exercises developed for the No&amp;Vib courses. The purpose is to give all students/trainees the opportunity to do measurements and analyses by themselves in order to get a better feeling of different phenomena or control possibilities. All measurements data and the associated files will be available on the ICT platform so that all partners can have access to it to multiply the effects of the use of the equipment purchased. All four Serbian HEIs will get equitably the facilities needed for b-learning methodology. This equipment for web-live streaming and the associated platform will be used for multi-streaming so that all or some of the four Serbian HEIs can be simultaneously engaged in one lecture, enabling students to learn from a wider pool of teachers and to capitalise on the knowledge and experience of the teachers who are not from their own university.</p> <p>In order to raise awareness about the procured equipment, this project result will be widely advertised via the project website, institutional websites of the project partners and social media channels. Additionally, various</p>

				dissemination and promotional activities targeting students, teachers and practitioners in the fields of No&Vib Engineering, Environmental Protection and Occupational Safety, will be carried out.
2.3.	Training of Serbian teachers and technicians	Event, Service/Product	Teaching staff Technical staff The team members from SUPEP, IOH and UPV	Training of Serbian teachers (~25) and technicians (~10) will be realised both abroad and in Serbia. The training will be done four times abroad and will include both a theoretical part and lab exercises. The training in Serbia will include the use of equipment and practicing the understanding, realisation and potential extensions of the experiments developed for courses on No&Vib. The obtained/enhanced knowledge and skills will be transferred to students of six different engineering departments, as well as practitioners in the field of No&Vib, through novel/modernised courses and LLL courses, respectively. In order to strengthen their educational competencies, the members of the team from Provincial Secretariat for Urban Planning and Environmental Protection (SUPEP), Institute for Occupational Health (IOH) and Union of Employers of Vojvodina (UPV) will also be participating in the training activities, and they will transfer ex-post this knowledge further to their colleagues and UPV members.
3.1.	Redesign of existing courses	Report	Teaching staff Students Technical staff	Four existing courses on No&Vib for students of undergraduate programmes of different engineering departments (Mechanical Engineering, Environmental Engineering, Occupational Safety Engineering and

				<p>Electrical Engineering) will be redesigned. University of Novi Sad (UNS) will implement all four courses, University of Niš (UNI) will implement redesigned course in Occupational Safety Engineering, University of Kragujevac (UniKG) in Mechanical Engineering and University of Educons (UESK) in Environmental Engineering. Also, some redesigned courses with two week short modules on No&amp;Vib will be implemented at UNS, UNI and UniKG.</p> <p>The redesign of existing courses will be described in the resulting report. In accordance with this report, the activity 3.3 - Development of learning materials will be carried out. This report will be available on the project website, as well as the official websites of Serbian partnering HEIs, and will also be shared with other HEIs in Serbia during dissemination events. Additionally, various dissemination and promotional activities targeting students and teachers will be carried out.</p>
3.2.	Design of new courses	Report	<p>Teaching staff Students Technical staff</p>	<p>Two new courses on No&amp;Vib for students of undergraduate and specialised programmes of Civil (UNS, UniKG) and Traffic Engineering (UNS) will be developed. The design of new courses will be described in the resulting report. In accordance with this report, the activity 3.3 - Development of learning materials will be carried out. This outcome will be available on the project website, as well as the official websites of Serbian partnering HEIs, and will also be shared with other HEIs in Serbia during dissemination events. Additionally, various dissemination and promotional</p>

				activities targeting students and teachers will be carried out.
3.3.	Development of learning materials	Teaching material Learning material	Teaching staff Students Technical staff Librarians	The learning materials will be developed for all six courses. These courses will have a common part of 60%, and the additional 40% will be tailor-made to the specific engineering disciplines. After the implementation of redesigned and new courses (in 2020/2021 academic year), the developed learning and teaching materials (textbooks, handouts, presentations, design of experiments and exercises) will be available to all students engaged in these courses. Also, some of the measurements will be provided on the ICT platform (as video forms and/or numerical measurement data), so that students from Serbian partnering HEIs can access them remotely and practice data processing and analysis by themselves.
3.4.	Implementation of modernised and new courses	Event	Teaching staff Students Technical staff	All six courses will be implemented during the very end of the second year and the third year of the project (a winter and summer semesters of 2020/2011 academic year). It is expected that ~750 undergraduate students will be engaged in these courses. In order to increase visibility and interest among the students, dissemination activities and promotional campaigns will be carried out. Furthermore, Implementation of modernised and new courses will be advertised via the project website, official websites of partnering institutions and social media channels.

4.1.	Development of LLL courses	Report	Teaching staff Trainees Technical staff	<p>Two types of LLL courses for practitioners in the fields of No&amp;Vib Engineering, Environmental Protection and Occupational Safety will be developed. The main idea is to focus on two groups of topics:</p> <ul style="list-style-type: none"><li>• Health and Safety in Industrial Noise and Environmental Noise,</li><li>• No&amp;Vib Monitoring and Control.</li></ul> <p>The design of LLL courses will be described in the resulting report. In accordance with this report, the activity 4.2 - Development of learning materials and training packages will be carried out. This outcome will be available on the project website, but will also be distributed to all project partners, all signatories of the Strategic Partnership Agreement/Memorandum of Understanding, as well as to certain national, regional and local authorities. Furthermore, various dissemination and promotional activities targeting practitioners in the fields of No&amp;Vib Engineering, Environmental Protection and Occupational Safety will be carried out.</p>
4.2.	Development of learning materials and training packages	Teaching material Training material	Teaching staff Trainees Technical staff Librarians	<p>The learning material for LLL courses will be developed in e-versions and hardcopy versions. Approximately 90 copies will be produced and distributed to course attendees. Additionally, five hardcopy versions will be produced for each project partner. The ICT platform will be used for dissemination of developed learning material.</p>

4.3.	Creation of a SENVIBE Glossary	Learning material Training material	Teaching staff Students Trainees Librarians Stakeholders	The SENVIBE Glossary will be an ancillary vocational register aimed at trainees and the other stakeholders in the field. Besides the terminology, definitions and the explanations of the phenomena, it will contain the main regulations/rules for Serbia in the fields of No&Vib Engineering, Environmental and Occupational No&Vib. The Glossary will be developed in e-version and hardcopy version. E-version of the SENVIBE Glossary will be uploaded to the ICT platform. Additionally, 300 copies will be produced and distributed to project partners, course trainees and the other stakeholders in the field.
4.4.	Implementation of LLL courses	Event	Teaching staff Trainees Technical staff	The implementation of LLL courses will start at the end of the second year of the project and it will continue during the third year. It is planned to run these courses six times in different regions of Serbia (north, central and south Serbia) utilising the equipment procured and also using the data from the ICT platform. The Serbian teachers will be the trainers, while the trainees will be practitioners in the fields of No&Vib Engineering, Environmental Protection and Occupational Safety. It is expected that each course will train 15 trainees, so that the overall number of trainees will be ~90.
5.1.	Development of the MSc curriculum in VAE	Report	Teaching staff Students	The report will describe the structure of the new MSc programme in VAE. In order to raise awareness about the MSc curriculum, this outcome will be publicly available via the project and institutional websites. Additionally, various

				dissemination and promotional activities targeting students and teachers will be carried out.
5.2.	Development of e-learning and b-learning materials	Teaching material Learning material	Teaching staff Students Technical staff Librarians	For all the courses of the MSc programme, the e-learning and b-learning materials will be developed. The ICT platform will be used for this purpose as well. This will enable the students to access the learning material remotely from a variety of devices. These materials will be incorporated into courses related to the topic and will also be used for specialized educational training for students or professionals. The materials will be available as open-source and various dissemination and promotional activities targeting students, teachers, librarians and professionals will be carried out.
5.3.	Accreditation of the MSc VAE programme	Event Service/Product	Teaching staff Students Administrative staff Technical staff	In order to make the MSc VAE programme sustainable, it will be accredited with the related Serbian National Body. For the purpose of extending the impact of accreditation, a larger number of places for students of this programme will be required. Furthermore, the project partners will try to engage the policy makers into the recognition of the programme, skills and knowledge gained and to involve the experts for action planning/strategy development.
5.4.	Enrolment of the MSc students	Event Service/Product	Students Administrative staff	The MSc students will be enrolled (the target is to enrol 25 students and this number will serve as a numerical indicator of achievement). Pro-active promotional campaigns in different media, including social media, will be carried out.



				Gained experience will be used for improvements of the subsequent enrolment procedures.
5.5.	Implementation of the MSc VAE studies	Event Service/Product	Teaching staff Students Administrative staff Technical staff	<p>The implementation of the new MSc VAE programme is planned for the last year of the project at University of Novi Sad with the participation of the teaching staff from University of Niš. For the purpose of achieving successful and sustainable implementation, the following tasks should be performed:</p> <ul style="list-style-type: none"> <li>• ensure that students gain valuable theoretical knowledge which they will take to industry;</li> <li>• increase visibility that can help identify resources for sustainability and enrolment of new students;</li> <li>• setup of the VAE Ambassadors from the pool of students and teachers as promoters of the programme.</li> </ul>
5.6.	Creation of a list of recommended MSc theses using the input of the stakeholders involved in the No&Vib Hub	Report	Teaching staff Students Stakeholders	<p>The students of the new MSC programme in VAE end it up with the MSc thesis in the fields covered. The idea is that the students get real and practical topics to work on from the stakeholders engaged in the No&amp;Vib Hub. The industry should be engaged as much as possible for the creation of this list.</p> <p>The recommended thesis will also be used as a basis for smaller students' projects or group work. A conference/workshop/event, where the students will present their theses and invite the stakeholders to attend it,</p>

				will be organised. This event will be used for collecting more potential topics for students' projects and theses.
6.1.	Define a framework for cooperation between the stakeholders	Report	<p>Teaching staff</p> <p>Students</p> <p>Trainees</p> <p>Administrative staff</p> <p>Technical staff</p> <p>Stakeholders</p>	<p>No&amp;Vib Hub is a central unit established as a virtual platform at the University of Novi Sad for launching and facilitating strategic cooperation among the key stakeholders engaged in No&amp;Vib fields from the following academic and non-academic sectors:</p> <ul style="list-style-type: none"> <li>• education and research sector,</li> <li>• government sector,</li> <li>• business sector,</li> <li>• professional sector and expert services groups,</li> <li>• non-governmental sector.</li> </ul> <p>A framework for cooperation between stakeholders will be established, ending up with a signed document - Strategic Partnership Agreement/Memorandum of Understanding (the target is to have ~15 signees initially, which will serve as a numerical indicator of achievement). The framework for cooperation will cover the list of stakeholders, analyses of mutual and individual contributions to the project goals and work procedure establishment. This framework will set the aims and activities that should strengthen cooperation in the No&amp;Vib areas of common interest. It will establish solid foundations for sustainable development and recovery from the current situation in the No&amp;Vib fields in Serbia. No&amp;Vib Hub virtual platform will be established on the SENVIbE project website and all related information will</p>

				<p>be shared with partners, stakeholders and appropriate audiences on timely basis and in most effective way.</p> <p>The report on framework for cooperation between the stakeholders will be publicly available on the project website, but will also be distributed to all project partners, all signatories of the Agreement, as well as to certain national, regional and local authorities. Furthermore, various dissemination and promotional activities targeting students, teachers, researchers, stakeholders from the industry, as well as the representatives of local and national authorities, will be carried out.</p>
6.2.	Specification of activities, programmes and services aimed at students and at wider society	Report, Service/Product	<p>Teaching staff</p> <p>Students</p> <p>Trainees</p> <p>Administrative staff</p> <p>Technical staff</p> <p>Stakeholders</p> <p>Society at large</p>	<p>The No&amp;Vib Hub will organize its activities separately for two groups: for academia (students and their teachers/supervisors) and for the society at large. All information will be shared through the virtual platform of No&amp;Vib Hub. Special attention will be given to the creation or organisation of activities that can be realised by using the purchased facilities for web-live streaming as this approach will enable remote users and a wider audience to take part in these activities. Students will gain practical experience. Local authorities and stakeholders from industry will provide practical training schemes for students and study real life cases in business and industry. Wider society will have opportunity to get all necessary information about noise and vibrations issue, and also to get practical and theoretical knowledge in this field.</p>

				<p>The report on specification of activities, programmes and services will be publicly available on the project website, but will also be distributed to all project partners, all signatories of the Agreement, as well as to certain national, regional and local authorities. Furthermore, various dissemination and promotional activities targeting students, teachers, researchers, stakeholders from the industry, as well as the representatives of local and national authorities, will be carried out.</p>
6.3.	Defining the No&Vib Hub space, roles and responsibilities	Report, Service/Product	Teaching staff Students Trainees Administrative staff Technical staff Stakeholders Society at large	<p>The No&amp;Vib space will be defined as well the division of roles and responsibilities at the same period as previous activity. The No&amp;Vib Hub virtual platform will be located at University of Novi Sad, but its activities will be realised in the whole Serbia and will be accompanied with the appropriate dissemination activities or campaigns. Each signatory of the Agreement should designate a representative in No&amp;Vib Hub. Representatives of all signatories of the Agreement of Partnership will attend the meetings of the No&amp;Vib Hub and participate in the sharing of information and experience relevant to achieving the goal of the Agreement.</p> <p>The report on defining the No&amp;Vib Hub space, roles and responsibilities will be publicly available on the project website, but will also be distributed to all project partners, all signatories of the Agreement, as well as to certain national, regional and local authorities.</p>

6.4.	Establishment of the No&Vib Hub	Event, Service/Product	Teaching staff Students Trainees Administrative staff Technical staff Stakeholders Society at large	<p>The No&amp;Vib Hub will be established, and the activities, programmes and services planned in 6.2 will be carried out. It is planned that Hub's activities, services and programmes will also be linked to the ICT platform via a certain moodle. After the SENVIbE project completion, the No&amp;Vib Hub will continue to gather stakeholders directly/indirectly through formal/informal existing /newly created communication channels to achieve its Mission.</p> <p>The Hub's Mission includes developing effective mechanisms of cooperation among all the stakeholders (Education and research sector, Government sector, Business sector, Professional sector and expert services groups and Non-governmental sector) engaged in No&amp;Vib Hub through Students Internship Programme, Industrial scholarship/fellowship program, realisation of joint projects (including practical subjects for MSc theses), monitoring of reform policies, development and implementation of professional training, seminars and workshops for companies and the unemployed, promotions, prompt and wide dissemination activities and exchange of info/knowledge on the related legislation, monitoring results, new issues, etc.</p> <p>All target groups and stakeholders will be actively involved in the realization of this work package. Hub cooperation will continue to grow and attract more stakeholders and decision makers within the No&amp;Vib field in order to build</p>
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				<p>capacity and achieve common interests in addition to further technical and economic relations.</p> <p>The establishment of the No&amp;Vib Hub will be widely advertised via the project website, institutional websites of the project partners and social media channels. Additionally, various dissemination and promotional activities targeting students, teachers, stakeholders from business and industry, as well as the representatives of local and national authorities, will be carried out.</p>
7.1.	Development of quality control mechanisms	Report Service/Product	Administrative staff All partners	<p>The Quality Control Manual defines the procedures and guidelines for securing quality of project management and deliverables. This outcome formalizes the approach that will be followed by the project partners in order to ensure the highest possible quality of the project activities, outputs and outcomes. Furthermore, the Manual defines procedures for internal and external monitoring, and, therefore, it will be used as a guideline by internal and external reviewers. The Manual will be available on the project website, but will also be distributed to all project partners and external reviewers.</p>
7.2.	Internal and external reviews of the processes and outcomes	Teaching material Learning material Training material Report	External and internal reviewers	<p>For the purpose of providing internal and external reviews, monitoring visits to the partners' institutions, the annual meetings of the Steering Committee and subcontracted external evaluation by international experts will be performed. Review reports will be available to the Project Management Team members via the SENViBe Cloud.</p>

				These reviews will be used for making the necessary improvements of the project processes and objectives.
7.3.	Students', trainees' and stakeholders' evaluation of the realised activities	Report Service/Product	Teaching staff Students Trainees Stakeholders involved in No&Vib Hub	Students and LLL trainees will be asked to review the courses and the MSc programme they attend (teaching methodology, teachers, material available, lab exercises), while stakeholders will be asked to review the activities and achievements of the No&Vib Hub. The Serbian teachers will also fill in questionnaires when being trained in the preparation phase. Review reports will be available to the Project Management Team members via the SENVIBE Cloud. The feedbacks will be used for making the necessary improvements of the project activities and results.
8.1.	Preparation of the Project Dissemination Strategy with KPIs	Event, Report, Service/Product	Teaching staff, Students, Trainees, Administrative staff, Technical staff, Librarians, Stakeholders, Society at large	The dissemination strategy defines dissemination objectives, target groups and stakeholders, each partner's roles in dissemination activities, dissemination methods and tools, timetable of dissemination activities and Key Performance Indicators (KPIs). It sets basis for effective and efficient dissemination and exploitation of the project results. During the project lifetime, all project partners will carry out dissemination activities in accordance with developed dissemination strategy in order to ensure that the project's results and deliverables are available to target groups, stakeholders and general public on a timely manner and in the most effective way. The SENVIBE project partners will use a set of Key Performance Indicators to measure and evaluate dissemination achievements and



				<p>generate recommendations for future improvements. During the project lifetime, KPIs will be constantly monitored.</p> <p>The Project Dissemination strategy will be available on the project website, but will also be distributed to all project partners.</p>
8.2.	Development and maintenance of the SENVIBE website	Service/Product	Teaching staff, Students, Trainees, Librarians, All partners, Stakeholders, Society at large	<p>The project website represents one of the main channels and tools for dissemination and promotion of the SENVIBE project to wider and diverse audience. The website will be used for proactive dissemination of the project's overall aim, specific objectives, activities and results. Besides project relevant information, it will provide information about upcoming events, relevant news, as well as downloadable material (including presentations from the meetings, training materials, newsletters, etc.). The website also includes a private area for internal documentation exchange which can only be accessed by the Project Administrator, Project Management Team members and the leader of Dissemination Work Package (SENVIBE Cloud). The project website will be linked to and from partners' institutional websites and will be widely advertised via social media. The SENVIBE website will be updated on a regular basis during the project lifetime and will be maintained for at least one year after the completion of the project.</p>



8.3.	Producing and publishing promotional material	Service/Product	Teaching staff, Students, Trainees, Librarians, Stakeholders, Society at large	Promotional material (logo, brochures, leaflets, posters, roll-ups, notepads, folders, pens, cups, stands, newsletters) will be used for wide dissemination purposes by all project partners. Several leaflets will be designed to promote developed courses, novel MSc programme and teaching and training activities and will be printed and distributed to potential students and practitioners in the fields of No&Vib Engineering, Environmental Protection and Occupational Safety. Other printed materials significant for project promotion, such as posters, roll-ups, notepads, folders, pens, etc., will be used during SENVIBE project events (partners meetings, study visits, consortium meetings, final conference with a round table, etc.) and different advertising campaigns. In order to make promotional materials available to wider and diverse audience, the digital versions of brochures and leaflets (in a PDF file format) will be available on the official project website and will be distributed via social media.
8.5.	Final SENVIBE project conference with a Round Table	Report	All partners, Stakeholders, Society at large	SENVIBE project conference will be a two-day concluding event, summarising the SENVIBE project results and outcomes. In addition, a Round Table discussion will be organised addressing sustainability and further possibilities for extensions of the activities and cooperation between the partners and other stakeholders invited. The conclusions from this Round Table will be included into the final report, announced on the project website, distributed

				via the No&Vib Hub to the stakeholders, as well as disseminated widely through different media channels.
8.6.	Preparation of the Exploitation Plan	Report, Service/Product	All partners, Stakeholders, Society at large	The exploitation plan describes the actions to follow for the sustainability and valorisation of the results obtained. In order to ensure that SENVIBE project is visible and that all project results are shared with appropriate audiences on a timely basis and in the most effective way, the project exploitation plan will be used by all project partners as a guideline for efficient and effective exploitation of the project results. The Exploitation Plan will be available on the project website, but will also be distributed to all project partners.
8.7.	Institutional sustainability	Event, Report, Service/Product	Teaching staff, Trainees, Administrative staff	A sustainability plan will be made by bringing forefront key sustainability features: funding stability, organizational capacities and strategic planning. Activities related to institutional sustainability will be conducted in accordance with the developed plan. The sustainability plan will be available on the project website, but will also be distributed to all project partners.

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