



MINIMAL

MINIMAL

Plan for dissemination and exploitation including communication activities

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Plan for dissemination and exploitation including communication activities

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Abstract

In order to support the completion of the MINIMAL goals, the project will deploy a broad range of communication, dissemination and exploitation measures to maximise the impact of project results. This report sets out the dissemination, exploitation and communication plan.

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Nature of the deliverable ¹

R

Dissemination level

PU	Public, fully open. e.g., website	✓
SEN	Sensitive, limited under the conditions of the Grant Agreement	
CL	Classified information under the Commission Decision No2015/444	

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¹ Deliverable types:

R: document, report (excluding periodic and final reports).

DEM: demonstrator, pilot, prototype, plan designs.

DEC: websites, patent filings, press and media actions, videos, etc.

OTHER: software, technical diagrams, etc.

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Abbreviations

AB	Advisory Board
CMYK	Cyan, Magenta, Yellow, and Key colour model
DEL	Deliverable
ECATS	ECATS International Association as a Network of Excellence on Aviation and Environment of more than 100 researchers within the European Framework Research Programme
EU	European Union
EUROCONTROL	European Organisation for the Safety of Air Navigation, international organisation working to achieve safe and seamless air traffic management across Europe
GA	General Assembly
HCCI	Homogeneous Charge Compression Ignition
RGB	Red, Green and Blue colour model
SARC	Swedish Aerospace Research Center
UKRI	UK Research and Innovation
WP	Work-Package

Executive summary

The main objective of the MINIMAL Plan for dissemination and exploitation including communication activities (D5.2) is to ensure that the potential impact of the project and its results will be achieved at consumer, societal and policy levels.

The project strategy and the target groups are defined and described in chapter 2. Several communication tools and practices necessary to communicate key project information and milestones and disseminate results and achievements to a wide range of audiences are outlined in chapter 3. These include:

- A visual identity
- MINIMAL logo
- Templates
- Public website
- Use of social media
- MINIMAL Advisory Board

Chapter 4 describes the main dissemination and communication activities already implemented or planned to be carried out until the project end. Chapter 5 outlines the exploitation and sustainability plan for MINIMAL. Chapter 6 mentions the different networking initiatives implemented and planned with EU funded projects under the same topic. Chapter 7 explains the internal organisation of Consortium regarding the communication and dissemination activities. Finally, chapter 8 concludes this report with a general summary.

1. Introduction

Building a sustainable and climate neutral future for aviation is an inevitable requirement for a society with increasing mobility needs. If we are to stabilise the global temperature below the 1.5°C threshold set by the Paris Agreement, rapid action is to be taken. The EU funded project MINIMAL will contribute to a radical transformation in air transport by providing disruptive ultra-efficient and low-emission technologies that will, in combination with the aviation ecosystem, sustainably reduce the climate impact of aviation.

In order to support the completion of the abovementioned goals, MINIMAL will deploy a broad range of communication, dissemination and exploitation measures to maximise the impact of project results. A regular dissemination of the project results and communication of the project concept will be carried out to raise awareness among the different target groups. The means are designed to assure that the target audiences during the complete project life cycle are addressed and accessible as appropriate to create sustainable impact.

2. Communication and dissemination strategy and target groups

2.1. Open research data

The strategy adopted by the MINIMAL Consortium aims at protecting confidential information of the research work as well as of each partner organisation while at the same time assuring a structured and defined communication of the project's results that can provide core benefits for further investigations within the EU priorities and for the European research community which may also extend to other sectors in addition to civil aviation. Thus, MINIMAL follows the guidelines for Data Management in Horizon Europe and in accordance with these guidelines, it is envisaged to make the MINIMAL data "as open as possible, as closed as necessary". Therefore, also an important number of the project's deliverable reports (44%) are accessible to the public, which constitutes a key asset in the project communication and dissemination.

2.2. Communication and dissemination plan

A particular attention is paid to the visibility of the project and its progressive achievements. The MINIMAL "Plan for dissemination and exploitation including communication activities" (DEC) is based on its heterogenous target groups, its communication roadmap and its planned actions.

This strategical plan enables to answer the key questions:

- What are the intermediate and final communication objectives?
- Which target groups do we want to reach?
- What are the expected impacts from the communication actions?
- How do we implement these actions in our everyday lives?
- What are the most effective means and tools for communication?

In MINIMAL, the target groups go beyond the project's members and further comprise the scientific community, the media (as a multiplier) as well as the lay public. To coordinate the overall DEC plan, a communication roadmap has been set up and divided into three parts: the communication activities (what), the communication tools (how) and the communication timetable (when). Finally, to implement the theory into practice, several actions have been defined related to the communication tools, activities and timetable of the roadmap. These actions generate tangible results which aim to fulfil the objectives of the communication and dissemination strategy. Figure 1 illustrates a schematic

overview of the overall dissemination, exploitation and communication plan that will be further developed in following the sections.

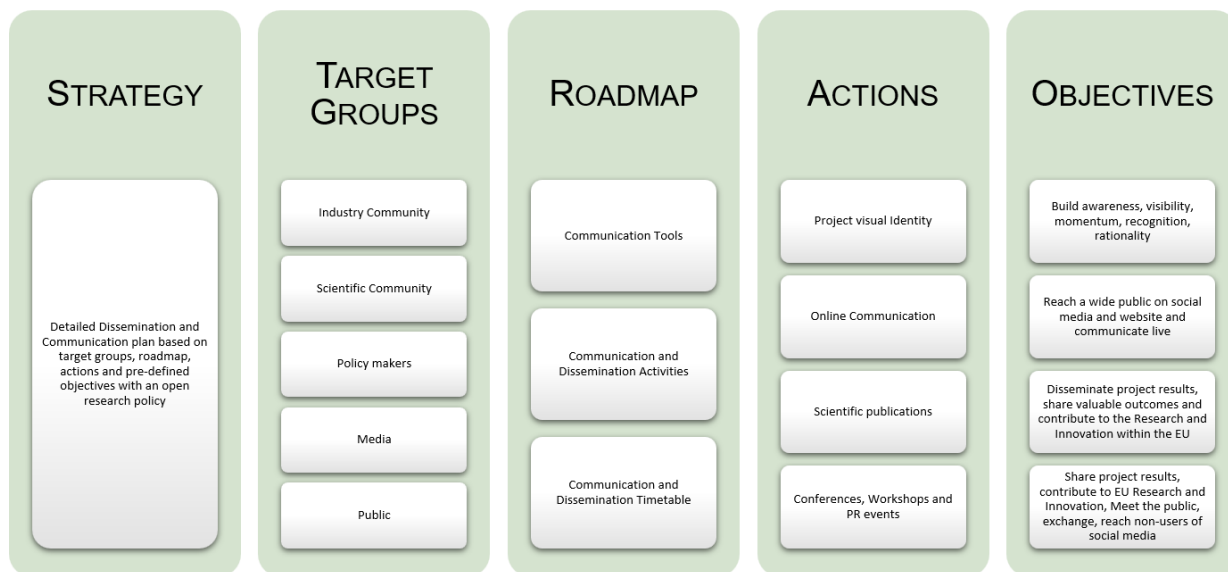


Figure 1: MINIMAL Dissemination and Communication Plan

The dissemination and communication plan are in form of virtuous circle with a strategy that defines the actions, which generate the impact/result fulfilling the objectives of the project. The objectives all together constitute in turn the strategy. Figure 2 gives an overview of the interconnection of the dissemination and communication plan built around the heterogenous target groups.



Figure 2: MINIMAL interconnection of the dissemination and communication plan

As outlined in the EC guidelines, all dissemination and communication material will contain the following information:

- Project logo;
- Project acronym;
- Acknowledgment of the Horizon European and UKRI programme co-funding;
- Main contact details for the project (responsibles, authors, coordinator).
- The address of the MINIMAL public website (minimal-aviation.eu)

2.3. Heterogeneous target groups

The project aims to reach heterogeneous target groups, including key stakeholders, policy makers and the broader general public including the younger generation. All these target groups are important for MINIMAL, as each of them has a separate understanding and interest. As a European research project, it strives to contribute to the general development of the EU technologies and covers a number of research themes which affects every inhabitant either directly or indirectly. Consequently, addressing the communication to multiple target groups will maximise the project's impact, raise awareness within the public and explain the objectives and benefits of the project, especially regarding the potential impact on mitigating climate change and reaching the goals of the Paris Agreement that the European Union is committed to. The dissemination and communication is always adapted to the specific audience and assured through a strategic and effective manner in accordance with the type of information and the audience.

Industry Community

The industry community is entirely involved in the project. An advisory board has been created, including key stakeholders from major industry organisations (Figure 9) that will be regularly informed on the achievements and the outcomes of the project and asked for their advice and expertise. They will also participate in workshops (internal and external) as well as MINIMAL public events. The involvement of the industry community constitutes a valuable asset for the research work as the latter will be shaped by critical feedback regarding the project technologies and results throughout the entire research timeframe and beyond.

Scientific Community

The project raises significant interest within the scientific community. The outcomes of the project will not only benefit the scientific partners of the consortium but also to external researchers beyond the transport sector who are assessing means of reducing the impact of anthropogenic activities on the environment. A wide access to scientific facts and knowledge will help researchers to progress faster and more effectively. MINIMAL will actively network with the scientific community using publications, conferences, workshops and online means.

The key scientific audience addressed are the aviation research, climate impact research and research in the field of air traffic management.

Policy makers

The collaboration between civil society and policy makers is important and in mutual interest; the civil society has needs and interests and is best aware of its realities and challenges, whereas policy makers have the capability to legislate, define priorities and aims, and accordingly grant the necessary budget for the achievement of those aims. The policy makers carry out thorough consultations with the civil society for the establishment of the public policy perspective, including among others strategic priorities to foster European and international cooperation in research and innovation. The civil society, such as Universities, Research centres, Companies but also European citizens follow these priorities and tend to achieve the goals at the micro level. In this perspective and for an efficient and fruitful cooperation, MINIMAL includes in its Advisory Board major international transport organisations, ECATS, EUROCONTROL, and SARC. Moreover, the project accords a high importance to the communication and dissemination activities intended for policy making actors and bodies, that are an undeniable support in making research and in particular innovation possible.

Media

The media is a communication mean addressing the general public. Therefore, the message must always be clear, concise, informative and comprehensive by lay persons. The communication through media channels brings great visibility to the project. The general media audience is significantly wider than the professional audiences of the research project, be it scientific or industrial. Therefore, the media professionals are an important target group for MINIMAL communication.

Public

MINIMAL is communicated publicly in an understandable and clear manner to inform the general public (including the younger generation) about the project and its objectives. The progress made by European Community framework funded projects for the development and innovation within the EU directly affects EU citizens. It is therefore important that citizens are aware of these initiatives supported by EU public funds. Moreover, the reference to EU and UKRI funding has and will be acknowledged and quoted on every communication material of the project for the general public and in line with the EU and UKRI regulations. In press articles published by journalists, the information on the public funding is given to the journalist but cannot be systematically integrated as in project and project beneficiary communications and publications as external communication is beyond control of the project partners. This also supports the great communication efforts of the European Commission on opportunities of the Horizon Europe programme and on its long-term European policy. A special focus is and will be laid on younger generation, including University and high-school students, as they will be the ones travelling in aircraft utilising the innovative technologies developed in MINIMAL. Also, education of young people in the field of engineering is seen as a basis to counteract the well-documented shortage for engineers in many major European countries.

3. Tools and practices for communication

3.1. Visual identity

The visual identity was created at the start of the project with input from the coordination team, including ARTTIC Innovation and Chalmers University, all partner organisations and professional graphic designers. The visual identity was designed by considering common perceptual and cognitive mechanisms that have the capability to interpret connotative meanings and messages through colours, forms and images. In order to convey a clear message, it was important to the MINIMAL partners to adapt a communication strategy with a simple base. Therefore, the consortium has chosen two primary colours for the project; the blue representing the sky and the green which implies the idea of a safe and friendly environment. As depicted in Figure 3, additional support colours have been defined for contexts that need to mark a contrast.

Colors

Palette & shades



Color plays an important role in any visual identity. The colors below are recommendations for various media. Consistent use of the following palette of colors will contribute to the cohesive and harmonious look of the MINIMAL project identity across all relevant media. Check with your designer or printer when using the corporate colors that they will be always be consistent. Feel free to use any shades of these colors.

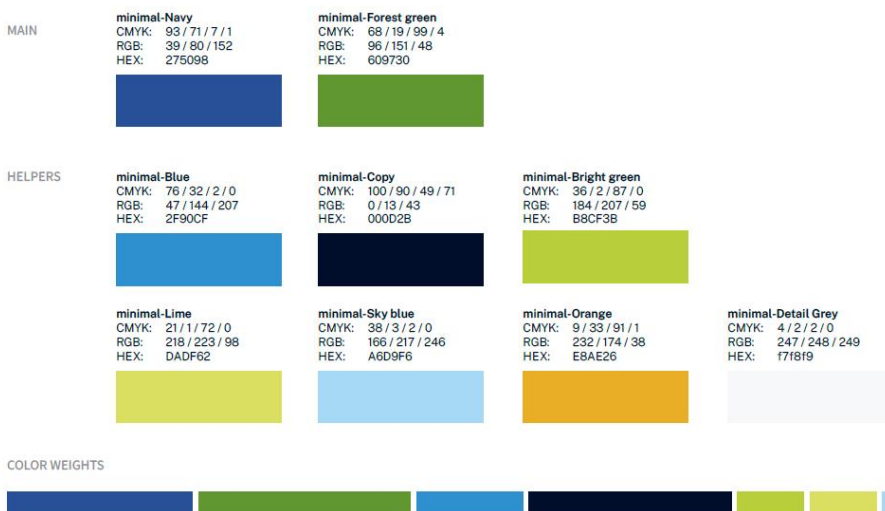


Figure 3: MINIMAL colour palette

3.2. MINIMAL logo

The MINIMAL logo was designed in parallel with the project's visual identity. The success of a project's visual identity highly relates to the logo design which is the "face" of the project and provides a specific message. The layout of the MINIMAL logo is modern, professional, attractive and eye-catching. The logo represents an aircraft engine surrounded by a leaf which implies the objective of the project to sustainably reduce the climate impact of aviation. In addition to the forms, colours play a key role in the logo. The two primary colours of the project have been chosen, blue and green as they are often associated to a healthy environment and life. Through its basic forms and colours, the logo has been kept simple and memorable (Figure 4). It is available as a colour and a monochrome version (black and white and grey scale), in different sizes (extra-large, large and small), in different formats (pdf, jpeg and png) and for web use (RGB) as well as in print version (CMYK).



Figure 4: MINIMAL Logo

3.3. Templates

Several templates have been created for MINIMAL, including guidelines and useful information:

- Deliverable template for contractual reports
- PowerPoint template for project presentations
- PowerPoint template for internal meetings (monthly web conference meetings and General Assembly meetings)
- Reporting templates – Part B and Part A, as well as a template for collecting dissemination activities and foreground and background information for the knowledge portfolio.

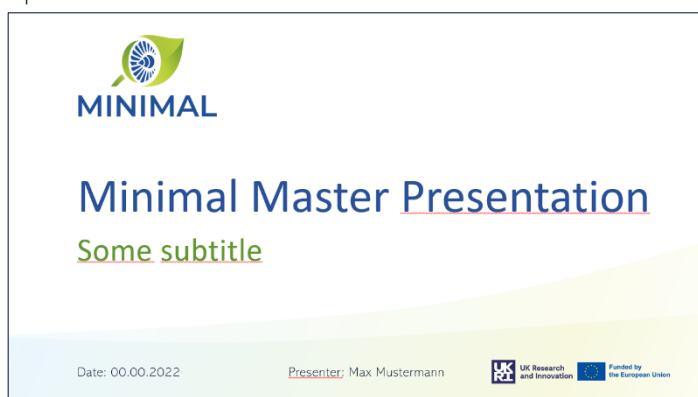


Figure 5: MINIMAL PowerPoint template

3.4. Public website

The public website (Figure 6) was created and went live in M6 (February 2023) to reach all target audiences at www.minimal-aviation.eu. It is monitored by partner ARTTIC Innovation (Project Office). The aim of the website is to allow visitors to find out more about the latest project news and to get a better insight into the research work and results. The website will also allow visitors to stay informed about events that will be organized by the project or at which the project will be presented. Amongst the pages and features, the new website offers an overview of the main objectives of the project, the involved partners, the latest news and links to social media embedded to create a bridge between the website and the ongoing social media activities.



Figure 6: MINIMAL Homepage

3.5. Use of social media

In addition, to the website, MINIMAL has created its own social media channels on [Twitter](#) (Figure 7) and [LinkedIn](#) (Figure 8) to promote project content. Latest news, achievements, publications and events from MINIMAL are being shared, linking to the main website for more information. Social media gives the project the opportunity to connect to different groups on a broad level in a very resource-conscious manner. The social media is also a well-suited method to communicate live from meetings, workshops and public events.



Figure 7: MINIMAL Twitter account

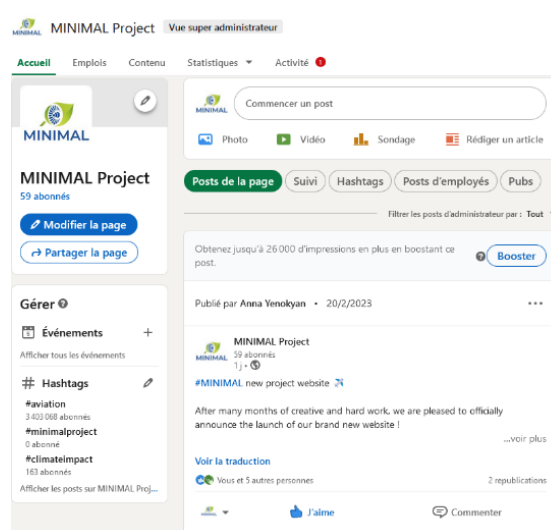


Figure 8: MINIMAL LinkedIn account

3.6. MINIMAL Advisory Board

MINIMAL has started the formation of an Advisory Board (Figure 9). This Community will continuously be extended with new members during the entire project cycle. The Advisory Board members will attend MINIMAL workshops, meetings and other events to give feedback and advice from the industrial perspective.

Advisory Board

The MINIMAL project is composed of **ECATS** and its working groups on green flight and sustainable aviation fuels, **EUROCONTROL** (European Organisation for the Safety of Air Navigation, international organisation working to achieve safe and seamless air traffic management across Europe), **University of Limerick**, the **SARC** (Swedish Aeronautic Research Center) and **AIRBUS**. Other members will join the project as the collaboration develops.

Figure 9: MINIMAL Advisory Board at M6

4. Dissemination and Communication activities

In this section, other communication activities will be presented as well as a selection of specific activities and events that have been identified by the MINIMAL consortium as promising opportunities for the dissemination of results.

4.1. Scientific publications

The project strives to publish most of its results in well renowned conferences and journals. Partners publishing information and more particularly results from the MINIMAL project must ensure that:

- There is no conflict of interest with other project partners, especially for the dissemination of knowledge and results
- There is no inconsistency with the MINIMAL grant agreement, including the communication policy and the publications are drafted as part of the MINIMAL work

- MINIMAL dissemination material will include the following statement (as appropriate) to acknowledge the funding received:

“Project co-funded by the European Union’s Horizon Europe Programme under the grant agreement n°101056863 and by the UK Research and Innovation (UKRI) funding guarantee under the project references n° 10040930, 10053292 and 10039071”.

To reach the widest scientific and non-scientific readership, MINIMAL partners will ensure open access to the project scientific publications using the “green model”, i.e. by self-archiving of scientific publications or making them available via renowned peer-reviewed scientific-technical journals and magazines. The “green model” was preferred to the “gold model” to keep the additional costs for the consortium at a strict minimum while at the same time securing full and open access to all publications of MINIMAL results. The “gold model” will be chosen only in the event that it is not possible to use the green model or if the consortium partners deem specific results important to be available publicly immediately.

4.2. Other dissemination documents, papers and articles

In addition to scientific publications, MINIMAL will also prepare other dissemination documents, such as articles, press releases, presentations and short news about the project activities. The EU and UKRI flags will always be included in all kinds of communication and dissemination material. MINIMAL will use the professional communication departments of the project’s partner organisations who have vast experience and opportunities for a successful dissemination of these materials. The communication department of each partner organisation will utilise its network for the dissemination of relevant communication papers to maximise the impact and the visibility of the project.

Moreover, to exploit the project results in the best way possible and to involve a maximum of external views and ideas, the consortium aims to collaborate with other teams carrying out EU research projects on MINIMAL related topics.

4.3. Workshops and conferences

To support the overall dissemination objectives, MINIMAL will organise regular stakeholder workshops, a workshop with projects funded under HORIZON-CL5-2021-D5-01-05 and -06 in order to foster potential synergies between the initiatives, and a public workshop at an industry event to present relevant results, technologies, and suitable artifacts from testing. The public workshop may be held at a renowned international air show (example Paris Air Show 2025) in order to attract maximum public interest. MINIMAL will also attend other major workshops and conferences, or other events at the European or international level.

5. Exploitation and sustainability plan for MINIMAL

The above-mentioned workshops with stakeholders and experts from the industry will moreover and especially serve to create impact and enable exploitation of the MINIMAL results. To reach the expected impact, the radical MINIMAL technologies will need to be further matured and find their way into product development to enter into service from 2045 onwards. Therefore, MINIMAL has foreseen dedicated workshops at the industry research centers involving product development engineering staff and management. The interaction will be very valuable in both directions as it will make the MINIMAL technologies widely known inside the industry engineering departments and thus foster the internal take-up. On the other hand, direct feedback from industry and product development engineers on certification and market requirements can be adopted by MINIMAL directly. Close interaction

between research and industry will support the development of very precise roadmaps for technology maturation. An overview of Key Exploitable Results (KER) is listed in Figure 10.

	Key exploitable result at the end of MINIMAL project	TRL reached	Related Del
KER1	Opposed free-piston HCCI combustion core	TRL 3	D2.1
KER2	LH ₂ enhanced intercooling technology	TRL 3	D3.3, D3.4
KER3	NOx mitigation (exhaust gas recirculation, steam injection, variable compression ratio, intercooling)	TRL 3	D2.4
KER4	Climate response functions for industry use during engine design	TRL 2	D1.4
KER5	Climate optimized engine concepts	TRL 2	D4.7
KER6	Emission optimized flight missions	TRL 2	D1.5

Figure 10: Key Exploitable Results (KER) at end of MINIMAL project

6. Network with EU funded projects

To promote and accelerate innovation, the European Commission strongly recommends the EU funded projects within the Horizon Europe Programme to initiate joint activities and create potential synergies between projects funded under the same call. Thus, joint coordination, dissemination and collaboration between the projects funded under HORIZON-CL5-2021-D5-01-05 and -06 is being carried out. Under the coordination of the MINIMAL Coordinator, 5 projects, MINIMAL, HESTIA, OVERLEAF, MATISSE and BeCoM, named "ClimAvTech", are meeting regularly to discuss possible common activities, including dissemination and communication activities. One of the first joint communication / dissemination activities will be at the Paris Air Show in June 2023. All 5 projects will be represented physically by a key researcher from each project and will provide presentations and/or participate in a panel session at the European Commission's stand. The MINIMAL Coordinator has volunteered to lead these joint activities for the first 1.5 year. It will then be taken over by another project Coordinator. The group ClimAvTech will throughout the projects' duration intensive the collaboration and sharing of results from the projects. A dedicated page on each project website is moreover planned to publicly share these initiatives.

Next to the above mentioned projects in Cluster 5, MINIMAL will reach out to relevant ongoing projects in the aviation sector, climate impact research sector and in the field of ATM, such as FlyATM4E, ACACIA and ClimOP.

7. Organisation for Communication and Dissemination

MINIMAL General Assembly

The General Assembly (GA) is responsible for approving any communication/dissemination material/publication explicitly communicating MINIMAL results/foreground.

Work Package and Task Leaders

The Work Package Leaders are responsible for submitting the communication plan to the GA. The communication activities and costs will be supported and shared by the partners involved in the work package.

Coordinator

The coordinator, Chalmers University, is responsible for the management of all requests for publication and possible objections. For the overall project management and communication, the coordinator is supported by the MINIMAL Project Office at ARTTIC Innovation.

Project Office

The MINIMAL Project office includes a consultant - project manager and a senior consultant – project manager from the partner organisation ARTTIC Innovation. The project manager is responsible for the day-to-day management of the project and remains the main contact for the project partners. The senior consultant provides advice and support whenever needed.

8. Conclusion

This report provides an overview of the MINIMAL dissemination and communication strategy and emphasises a range of measures regarding the objectives, actions, activities, target groups and the overall implementation. This strategy will be carried out in the course of the project timeframe with the aim to generate a strong impact during and after the project term and to give rise to further investigations.