



D8.1

Dissemination Plan and Communication Guideline

Version
V1.1

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List of Acronyms and Abbreviations

Abbreviation	Definition
KPI	Key performance indicator
MFR	Medical first responder
MR	Mixed reality
NGO	Non-governmental organisation

Relation to Objectives

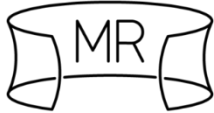
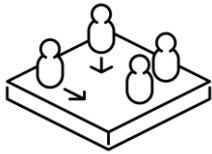

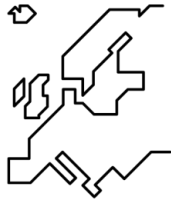
Objective	Description
	<p>Obj. 1: Pioneering MR training approach for enhanced realism</p> <p>This deliverable D8.1 contributes to Obj. 1 since a clear and coherent communication and dissemination of the project results enables the consortium to position the MED1stMR approach as pioneering solution for enhanced training.</p>
	<p>Obj. 2: Effective training scenarios and a training curriculum</p> <p>The present deliverable D8.1 supports the consortium to communicate the outcomes of Obj. 2 to several target audiences with focus on end users and policy makers. This ensures the uptake of the training scenarios and curriculum by practitioners in the field of medical first responder training.</p>
	<p>Obj. 3: Physiological signal and trainee behaviour feedback loop and smart scenario control</p> <p>The present deliverable contributes to Obj. 3 since it supports to communicate and disseminate the innovative solution and novel technologies to the relevant target audiences.</p>
	<p>Obj. 4: Position the pioneering MR training approach across Europe</p> <p>This deliverable D8.1 builds the basis for Obj. 4 as it frames all activities that contribute to stimulate an exchange of knowledge across countries and first responder organizations and position the innovative approach and solution of MED1stMR.</p>

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Executive Summary

The present deliverable D8.1 – Dissemination Plan and Communication Guide aims to define the strategic objectives, identify the most efficient means and set a detailed plan for the implementation of dissemination and communication activities in MED1stMR. The plan sets out the objectives, tools, materials, and channels to be exploited in order to effectively spread MED1stMRs activities, achievements and tangible results to targeted audiences. Moreover, this deliverable presents the logo, the visual identity and the rules for employing it. Writing, references and disclaimer rules are also presented to ensure all communication messages are coherent and appropriate acknowledge the EU funding instruments.

The deliverable is divided into **5 main sections** to cover all of the aforementioned aspects:

- **Measures to maximize the impact** provides an overview of the ambitions and goals of the dissemination and communication activities
- **Content experience strategy** seeks to define the core messages and ways of communication for each identified target audience
- **Visual identity & style guide** was developed to allow for consistency in the visual appearance of the project and enable a high recognition value
- **Communication guide** is a supporting instrument for all partners to ensure that the rules and processes in the project communication are followed
- **Internal evaluation** is implemented to keep track of the set KPIs (key performance indicators) and to reach the goals of WP8

1 Introduction

This Dissemination Plan and Communication Guide is the first deliverable (D8.1) of work package 8. Its purpose is to provide a framework for the dissemination and communication activities in order to maximize the public awareness and the impact of the MED1stMR project. It also serves as a guide for the project partners for planning and conducting external dissemination and communication.

This contributes to the overall success of the project as well as to Objective 4 - Position the pioneering MR training approach across Europe.

Table 1: Introduction to dissemination and communication of project results

Objective 4:	<p>Dissemination and communication of project results, training concepts and showcases of the MED1stMR training throughout Europe as a pioneering approach and to stimulate an exchange of knowledge across countries and first responder organizations. Dissemination and communication are carried out by the MFR partners in the project but mainly by the project partner JOIN as umbrella organisation of national emergency responder charities from 15 different countries and supports in networking, dissemination, awareness rising and exploitation of results across Europe.</p> <p>Results:</p> <ul style="list-style-type: none">• Project idea, results, training concepts and guidelines will be presented on conferences, events and made available to MFR organisations, networks (e.g. EFRIM, IFAFRI), communities and updated with new results and showcases. (D8.2-D8.4, D8.9-12)• Final demonstration tool (D8.13)
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2 Measures to maximise impact

MED1stMR aims to maximise the impact of the project by developing and implementing a comprehensive dissemination, exploitation and communication strategy as outlined in the present document. The planned communication activities are carried out in a target-audience conform manner to make the project and its results available for all relevant audiences during and after the completion of the project. By doing so, it can be ensured that the results of the project are used for further technological, scientific, economic and societal purposes.

Several target audiences of the MED1stMR were identified and it's the project's imperative to match the activities of the proposed measures to achieve the expected impact. MED1stMR identified five main target audiences:

- Practitioners and networks in the field of medical first responder training
- Decision-makers, policy-makers, NGOs and international medical organisations
- Academic community and researchers
- SMEs and industry

- Society and general public

The following sub-chapters outline the different approaches towards dissemination and communication strategies of MED1stMR. By determining objectives, target audiences and strategies for each measure, the intended activities are highly promising to achieve the expected impact.

2.1 Dissemination

The dissemination of MED1stMR aims to enable knowledge-transfer of the findings and results by communicating to the most relevant target audiences to maximize the impact of the research. MED1stMR's dissemination activities are carried out by all partners and led by USE. Consequently, networks and peer groups of all consortium members are leveraged, which leads to a multiplier-effect reaching a wider audience.

Several dissemination tools and channels for MED1stMR have been identified and selected for communicating the results of the project. That includes the project website, social media channels, printed materials, participation in research conferences and workshops, participation in networking activities, publication of scientific articles, press releases, initiating professional MED1stMR communication network and online groups. All of these tools, channels and activities are used to correspond with each target audience. The following table outlines the target-group-specific dissemination strategy of MED1stMR.

Table 2: Target groups MED1stMR; expected impact and activities to achieve the impact

Target Group	Expected Impact	Activities to achieve impact
<p>Practitioners and networks in the field of medical first responder training</p> <p>EU and national organisations focusing on MFRs training; European MFRs training academies, European Networks in the area of emergency management and training, such as eNOTICE, UCOM (Marie Skłodowska-Curie Innovative Training Network), EFRIM (European First Responder Innovation Managers), IFAFRI (International Forum to Advance First Responder</p>	<ul style="list-style-type: none"> • Improved knowledge among EU MFRs on training for real cases, (possible) future scenarios and novel technologies • Exchange of experiences among EU medical training centres about possible future scenarios and the social and societal aspects in the work of MFRs • Toolkits for EU Medical first responders, validated against practitioners' needs and requirements to facilitate their daily operations 	<ul style="list-style-type: none"> • Development of a showcase and reaching out to other end user partners throughout Europe • Advisory Board for sharing results, knowledge and inputs from practitioners outside the consortium • Organisation of a MED1stMR conference for showcasing and (external) evaluation of the training framework • Participation in fairs and exhibitions focused on first responders • Participation and presentation of the

<p>Innovation), ERC (European Resuscitation Council) etc.</p>		<p>results in H2020 networks for MFRs practitioners</p> <ul style="list-style-type: none"> Printed materials for end users (e.g. brochures)
<p>Decision-makers, policy-makers and international medical & health organisations Cooperation in Europe; relevant governmental authorities like ministries internal affairs, public or civil security, medical training and others; policy-makers on the national and European level</p>	<ul style="list-style-type: none"> Policy-making toolkit for medical training policy-makers, to support the establishment of new training technologies / approaches following the European security model European common approaches for assessing risks/threats, and identifying possible future scenarios (e.g. climate change), which consider legal and ethical rules of operation, cost-benefit considerations, as well as fundamental rights such as the rights to privacy, to protection of personal data and the free movement of persons Support towards the implementation of the European Security Union by strengthening the perception of citizens of the EU as an area of freedom, justice and security Increasing awareness on innovative, effective training concepts enhanced by novel technologies (e.g. VR/MR) 	<ul style="list-style-type: none"> Printed materials for policy-makers Activities, strategies and toolkit for policy-makers including: An impact report of the results of MED1stMR targeted specially at policy-makers Strategies and decision-making support for policy-makers concerning MFRs training in the context of policy goals <p>MED1stMR demonstration tool to showcase the MR training environment and the novel technologies (e.g. smart wearables, etc.)</p>
<p>Academic community and researchers</p>	<p>Advance the expertise within several academic domains.</p>	<ul style="list-style-type: none"> Presentation at relevant national and

<p>Researchers in the fields of VR/AR/MR training</p>		<p>international scientific conferences</p> <ul style="list-style-type: none"> • Publications in relevant international scientific journals
<p>SMEs and Industry SMEs that can use MED1stMR's technologies & results for further developments and services</p>	<p>Advances through the cross-fertilisation of concepts resulting from the collision of different ways of thinking</p>	<ul style="list-style-type: none"> • Disseminate results of MED1stMR (e.g. VR/MR guidelines) for knowledge transfer between research and business. • Participation in fairs and exhibitions focused on medical industry.
<p>Society and general public Civil Society Organisations; NGOs, Public interest groups; the general public</p>	<ul style="list-style-type: none"> • Inform the public about the achievements of MED1stMR • Raise awareness for the importance of improved training and new technologies for MFRs to be prepared for (possible) future disasters • Enable interaction and feedback on the training by disseminating the project results in special interest LinkedIn groups • Show how EU funded research contributes to the public safety of all citizens 	<ul style="list-style-type: none"> • Project and Partner websites • Attending and presenting MED1stMR at Events for the general public • Social media channels (e.g. a LinkedIn group, a Facebook page, a Twitter account) • Existing social media channels and websites of the partners • Joining existing special interest social media groups (e.g. LinkedIn) to disseminate results • Press releases • Coverage by public media (newspapers, TV, ...)

2.1.1 Scientific Dissemination

The scientific output of MED1stMR (e.g. from studies, field trials and other project activities) will be disseminated to the academic community by presenting it at relevant national and international scientific medical conferences and publishing them in scientific journals.

Table X presents the journals and conferences that were deemed relevant during the proposal-writing stage for the different project topics. These findings might be complemented during the project and all (planned) publications are reported in the publication plan.

Table 3: Scientific Dissemination; relevant journals and conferences

New Results and Insights of MED1stMR - Topics	Dissemination at conferences and journals
VR/MR Training Framework and Curriculum	CHI – Computer Human Interaction; Journal of Usability Studies; ACM Symposium on Virtual Reality Software and Technology; CSCW – Computer-Supported Cooperative Work and Social Computing; VRST - Virtual Reality Software and Technology; IEEE QoMEX - Quality of Multimedia Experience; DIS: Designing Interactive Systems Conference; ACM Transactions on Computer-Human Interaction; Foundations and Trends in Human-Computer Interaction; International Journal of Human-Computer Studies; Journal of Advances in Medical Education & Professionalism; IEEE Transactions on Multimedia; Advances in Medical Education and Practice; Medical Teacher, etc.
Model for Effective Performance in Medical Emergencies during Hazards and Natural Disasters	JEMS Journal of Emergency medical Services; IJFAE International Journal of First Aid Education; Journal of Advances in Medical Education & Professionalism; BMC Medical Education; First Responder - Disaster Recovery Journal; International Journal of Disaster Medicine; Disaster Medicine and Public Health Preparedness; Prehospital and Disaster Medicine; Medical Education;
VR-based mixed reality environment for MFRs individual and team training	Journal of Healthcare Engineering; BMC Medical Education; First Responder - Disaster Recovery Journal; VRST - Virtual Reality Software and Technology; Journal on Virtual Reality (Springer); Computers & Education; International Journal of Disaster Medicine
Smart wearables for vital data measurement of medical first responders	Journal of Healthcare Engineering; Journal of Advances in Medical Education & Professionalism; International Journal of Emerging Technologies in Learning (IJET);Wearable and Implantable Medical Devices; Prehospital and Disaster Medicine
VR learning insights	International Conference of Interactive Collaborative Learning (ICL); CSCW – Computer-Supported Cooperative Work and Social Computing; VRST - VirtualReality Software and Technology; Journal on Virtual Reality (Springer); Computers & Education; Journal of Educational Technology & Society; Journal of Computer Assisted Learning; Journal of Medical Education and Curricular Development etc.
Stress measurement	Anxiety, Stress & Coping; Frontiers in Psychology; PlosOne; Psychoneuroendocrinology; International Journal of Sports Medicine; International Journal of Psychophysiology: European Journal of Applied Physiology; Biological Psychology; European Congress of Sport & Exercise Psychology; Annual Meeting of the

	Society for Psychophysiological Research; Annual Conference of the International Society of Psychoneuroendocrinology; etc.
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2.1.2 Dissemination activities targeted at end users and policy makers

The end users and policy makers of MED1stMR are the key target audience since they are in the focus of the research and development in the project. MED1stMR incorporates the needs and requirements of the end users throughout the whole project, beginning with the requirement phase in year 1. Thereby, it ensures that the outcomes of the project are suited for end users and meet their expectations. MED1stMR puts high value on the transfer of knowledge to the end users, on communication and networking with end user groups Europe-wide and making the outcomes available to them in a suitable form. All deliverables relevant for end users will be designed and worded together with the project partners from the field of medical first response. The dissemination and communication of these deliverables will be guided by the content experience strategy and commensurate for the target group of end-user and practitioners in field responder training. Furthermore, a set of dissemination activities is specifically targeted at end users, such as:

- a showcase and reaching out to other end user partners throughout Europe
- Advisory Board for sharing knowledge and inputs within external medical first responders
- a conference for showcasing and (external) evaluation of the training framework
- Participation in fairs and exhibitions focused on medical first response
- Participation and presentation of the results in H2020 networks for medical issues, such as European Medicines Agency, etc.
- Printed materials (e.g. leaflets, brochures) for policy-makers and end users

2.1.3 Overview of dissemination KPIs

The following table shows the KPIs for the dissemination activities of MED1stMR. It has been decided to set the KPIs ambitious, but still realistic and possible to achieve.

Table 4: KPIs Dissemination

KPI	Year 1	Year 2	Year 3	Total
Scientific Dissemination				
Number of scientific publications in peer reviewed journals	0	2	4	6
Number of scientific publications in peer-reviewed International conferences and workshops	1	4	5	10
Events				
Number of events attended representing the MED1st's project	2	3	4	9
Number of visitors at MED1st's conference	-	-	50	50
Networking				
Exchange with related projects (cumulative)	1	2	5	5

Contacts with policy-makers	-	3	7	10
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2.2. Communication Activities

The development of a suitable communication strategy for the project, it can be assured that MED1stMR's vision, achievements and results are communicated in different channels in an appropriate manner to each identified target audience by all project partners. That includes communicating the project and the societal benefits of EU-funded research to the general public. MED1stMR aims to inform the world about the innovation aspects of the project, its progress, results and the added value for all stakeholders. The strategic aspects of MED1stMR's communication is led by USE as a highly experienced SME in that field. All consortium partners are involved in the operational communication as their networks and peer-groups are highly overlapping with the identified target audiences.

The communication of MED1stMR focuses on the following core aspects:

- added value of the novel developed training technologies for medical first responders
- societal impact of MED1stMR and the benefits for European citizens
- project's compliance with regulations on ethical, legal, safety and privacy in the field
- the awareness of the importance of medical first responder training to follow the European Safety Strategy

2.1.4 Social Media & Press

The social media and press activities for the project are summarized below:

- The project website is developed to communicate and disseminate information on the project and its main participants, its progress, activities and results (see D8.2). The website is updated periodically by USE with the support and inputs from all partners.
- Social media channels are set up and used to communicate the project and all major activities, events and accomplishments to a broader audience and enable feedback. The social media channels also used to distribute the content published on the website. These are the links for the MED1stMR social media channels:
 - Twitter: <https://twitter.com/Med1stmr>
 - Facebook: <https://www.facebook.com/MED1stMR>
 - LinkedIn: <https://www.linkedin.com/company/79348257/>
 - Researchgate: <https://www.researchgate.net/project/MED1stMR-Medical-First-Responder-Training-using-a-Mixed-Reality-Approach-featuring-haptic-feedback-for-enhanced-realism>

Existing social media channels and websites of the consortium partners are used to communicate the project to their specific target audiences in their preferred languages.

- Press releases (see Annex) are generated periodically to target the general media and special interest media. USE provides the project's press releases in German and English to the partners.

All partners and advisors may adapt (in compliance with the overall communication strategy), translate and distribute them within their network.

2.1.5 Meetings & Events

The project partner's presence at fairs and exhibitions in the field of medical first response aims to spread the word about the innovative approach of MED1stMR. Furthermore, project partners will attend network events from existing MFR networks to accelerate the publicity of MED1stMR in the domain and enable a dialog with relevant stakeholders. In addition to that, it is planned to initiate discussions, workshops and meetings with policy-makers, training centres and ministries at national and international level to introduce the concept of MED1stMR. National and international events for the public are visited to communicate the idea of the project and objectives to the European citizens. Several events were identified in collaboration with all project partners and compiled to an event list (see Annex X). This document will be further developed and refined through the course of the project.

2.1.6 Communication tools, activities and goals

Tables 4 provides a comprehensive summary of the communication tools, linked to the respective target audiences and goals.

Table 5: Communication tools, activities and goals

Tools	Activities	goals	Audiences
Visual Identity and Style Guide	A Visual Identity and Style Guide were developed and implemented to promote the recognition value of MED1stMR and to represent the idea and the objectives of the project.	Visual Identity Guide (see chapter 5)	All
Content Experience Strategy	A Content Experience Strategy was developed to define the MED1stMR's core messages for several stakeholders and to communicate to the public in an appropriate manner.	Content Experience Strategy (see chapter 4)	All
MED1stMR Website	The website is utilized to inform the target audiences about the project, its progress and innovative results. It ensures, that the gained knowledge is available during and after the project. (see D8.2)	KPIs as presented in Table 5	All
General Project Brochures and Printed Materials	The general printed materials of MED1stMR will be presented on workshops and during participation at national and international events; info days; meetings with community stakeholders; (see D8.3-8.4)	5 sets of various Materials during project	General Public

Printed Materials for Policy-Makers and End Users	Printed materials such as project brochures and posters targeting policy-makers and end users will be produced, as the project advances, and will be distributed across Europe at events, in networking meetings/events and in meetings with policy-makers and end users. (see D8.3-8.5)	5 sets of various materials during project	(Potential) end users and policy-makers
Press Releases	Creating press releases for communication to the public and defined stakeholders to raise awareness for MED1stMR and communicate the project goals. (see D8.14-8.15)	Press releases and at least 10 articles in general media	General Public, Decision-makers, policy-makers
Online Groups	LinkedIn groups related to education and virtual learning environments such as 'Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), 'The Augmented Reality (AR), Virtual Reality (VR) & Virtual Worlds (VWs)'; 'Immersive Technologies (Virtual Reality, Augmented Reality, Gestural Interfaces)'. (see D8.14-8.15)	Periodical updates	End users, general public

2.1.7 Overview of communication KPIs

The KPIs for MED1stMRs communication activities have been elaborated in relation to the scope of the project and in an ambitious and realistic way.

Table 6: KPIs Communication

	Year 1	Year 2	Year 3	Total
Social Media				
Number of MED1stMR posts in social networks	20	30	30	80
Cumulated number of social media community gathered across socialmedia sites (group members, followers, page likes)	100	150	200	200
Cumulated number of social media reactions (likes, comments, shares, retweets)	100	125	150	150
Quality of social media comments: neutral, positive, negative	Neutral or positive social media comments			
Website				
Number of unique visitors on the website	1500	1500	1500	4500

Cumulated number of referring websites (to the MED1stMR website or social media channels)	2	5	10	10
News & Media Coverage				
Number of press releases delivered to media	1	1	1	3
Newsletter distributions	1	1	2	4
Number of references in media (offline and online)	2	4	6	12
Quality of media references (offline and online): neutral, positive, negative	Neutral or positive social media comments			

2.2 Exploitation

Exploitation and innovation management for MED1stMR is essential to maximize the impact of the project and its results by generating commercial value. However, these topics are beyond the scope of this deliverable and are / will be reported in D8.8 – D8.13.

3 Content Experience Strategy

Table X outlines how the project and its content should be communicated for each of the identified target audiences. It links the key messages to each target audience, the communication and the communication activities and channels. Subsequently, all of the communication channels / activities that address more than one target audience needs to provide information (e.g. key message) in a suitable way (style of communication) for all of them.

Target audiences MED1stMR:

- Practitioners and networks in the field of medical first responder training
- Decision-makers, policy-makers, NGOs and international medical organisations
- Academic community and researchers
- SMEs and industry
- Society and general public

Table 7: Key message and communication measures per target audience

Audiences	Key Message	Communication style	Communication activities / channels
Practitioners and networks in the field of medical first responder training	Increasing probabilities for natural disasters due to climate change, human-made accidents, terrorist threats, etc. require the development of innovative technological solutions adapted and implemented to the (cross-sectoral) needs of first responders. For this purpose, this	branch-specific communication; non-scientific	Project website Press releases Social Media Newsletter Printed materials Events Final Conference

	<p>project will develop a new technological solution to better prepare MFRs for a variety of disaster situations.</p> <p>MED1stMR applies an end user centered research and development methodology and build on best practice and experiences from 7 end user organizations from 6 European countries.</p>		
<p>Decision-makers, policy-makers, NGOs and international medical organisations</p>	<p>The training curriculum proposed and scientifically validated by MED1stMR will improve MFRs' skills and performance in highly demanding (stressful) emergency situations, which in turn will help to decrease mortality and morbidity and thus make Europe more safe and secure. In cases of large hazards, emergency staff could support neighbouring countries and cooperation would run smoothly due to having received the same training. Enhanced monitoring capabilities through smart wearable technologies will provide insight regarding training conditions or particular aspects benefiting from improvements and can help MFRs in building their resilience to work under extreme pressure and stressful environments thus increasing their safety on future demanding situations. The innovative training solution will lead to faster deployment and result in direct economic benefits for the first responder organisations in the long-term.</p>	<p>branch-specific communication; non-scientific communication</p>	<p>Project website Scientific Dissemination Press releases Social Media Newsletter Printed materials Toolkit for policy makers Events Final Conference</p>
<p>Academic community and researchers</p>	<p>MED1stMR is a fundamental, multi-disciplinary collaboration (between novel technology and human</p>	<p>Scientific communication / Publications</p>	<p>Project website Press releases</p>

	<p>experience research, medical and psychological research, innovative hardware solutions, and ethics), combined with openness for practitioners and citizens. MED1stMR will strengthen the European research agenda in the domain of virtual and mixed reality which is currently a hot topic in the international scientific community. MED1stMR will deliver (new) findings in various fields of research. Specifically, the influence of contextual and personal factors on MFRs' perception and evaluation of the situation, decision-making and performance in highly demanding emergency situations will be researched in the project. This will result in a model for effective performance in medical emergencies (EPME model) that will be scientifically validated throughout the project. The results will be available to the academic community by publishing and presenting them in order to enable further research.</p>		<p>Scientific Dissemination Social Media Newsletter Printed materials Events Final Conference</p>
<p>SMEs and Industry</p>	<p>MED1stMR brings advances through the cross-fertilization of different approaches contributed by various partners in the project, especially the 7 involved technology driven SMEs. One specific impact will be a different, human factors-based psycho-physiological view on the work of professionals who operate under stress, which will bring considerable economic benefits for other professions of high societal value such as firefighters, crisis teams, disaster management and emergency services,</p>	<p>Industry-specific communication; scientific communication</p>	<p>Project website Press releases Scientific Dissemination Press releases Social Media Newsletter Printed materials Events / Fairs Final Conference</p>

	<p>intervention teams, specialized forces as well bring innovation and economic benefit to several other domains. The outcome will be compiled in several guidelines to enable further development of companies requiring, developing or supplying MR training and learning systems.</p>		
<p>Society and Public</p>	<p>Innovative medical first responder training leads to better preparation in the event of an emergency. The specific consideration of disasters in the creation of MR training scenarios based on the end user’s requirements helps to act more safely in crises and makes European societies more disaster-resilient. The developed scenarios can also be easily adapted to future threats and customized to further special needs. The MR training approach is flexible for training a wide range of scenarios which can then include various first responders’ organizations (thus, upscaling the solution to be used with more first responders). This will lead to an increase in performance and resilience of MFRs thereby making the lives of the people in the European Union safer.</p>	<p>General communication; non-scientific</p>	<p>Project website Press releases Social Media Newsletter Printed materials Events</p>

4 Visual Identity & Style Guide

4.1 Logo & Claim

The Logo of MED1stMR is an important graphic element and has been created by MIND in the beginning of the project as first step to a common visual identity. It represents the project and is used on every internal and external communication material for a high recognition value.

The Logo itself consists of an icon, the logotype and a tagline. The icon has a round shape in which a cross symbol is embedded. The cross symbol is widely recognized as a symbol for health and emergency organisations and stands for helping or taking care of somebody. The round shape creates

a soft and non-aggressive character suitable for the whole project. The round element shows depth, playing with all three dimensions and also implying different layers using transparency. This directly connects to the Mixed Reality focus of the project, which is also multi-dimensional and can be seen as an overlay and addition to our reality.

The logotype and tagline also feature a typeface (Blogger-Sans) with round corners to continue the non-aggressive design language. Within the logotype “MR” is highlighted as well as “Mixed Reality” in the tagline, so people who are not sure what “MR” stands for have a direct visual connection to the relatively new term “Mixed Reality”.

There is also an accompanying slogan “train [skills.resilience.performance] save lives” which explains the projects core values, using the same design features as the logo.

Logo Variations

The logo exists in various versions. There are versions for bright and for dark backgrounds so the logo is always visible and offers a good contrast to the viewer. There are also quadratic versions for social media, as well as versions with reduced or no text for very small applications.

Also greyscale and black and white versions were created for the use of greyscale or black and white print outs or e-ink displays.

Guide to use logo and claim

- Claim and logo should always be the same width, distances to the edge at least half a logo sphere, can be more. The size should be chosen so that it remains readable.
- The different colour variants (colour, b / w, gray, etc.) should never be combined with one another.
- The coloured variants should be used, unless there are technical reasons (e.g. readability, technical restrictions, etc.) that require the use of grayscale, B / W or inverted variants.
- The broad variant is preferable to the square one, the square one should be used where space is regulated, e.g. for social media.
- The logo and claim should be used in high quality and not “distorted”

Logo variations and claim



MED1stMR
Mixed Reality Training

TRAIN

**[SKILLS.
RESILIENCE.
PERFORMANCE]**

SAVE LIVES

**TRAIN****[SKILLS.
RESILIENCE.
PERFORMANCE]****SAVE LIVES****TRAIN****[SKILLS.
RESILIENCE.
PERFORMANCE]****SAVE LIVES****TRAIN****[SKILLS.
RESILIENCE.
PERFORMANCE]****SAVE LIVES**



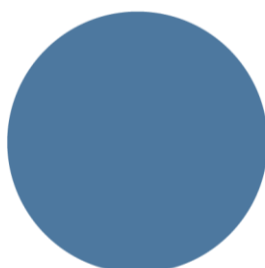
4.2 Colour Scheme

The colour scheme consists of blue and red. Blue stands for the technological side and the red stands for the medical / social side of the project. All other colours in the colour scheme are complementary or analogous colours coming from the two main colours, there is also a mixed colour between blue and red which is created in the transparent parts of the logo. The colours themselves are not heavily saturated as they also fit into the non-aggressive design language.

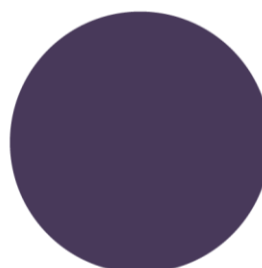
Primary colours



R241 G57 B90
C0 M92 Y54 K0
#f1395a

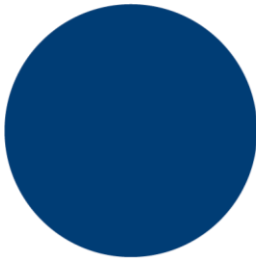


R77 G120 B159
C75 M48 Y21 K2
#4d789f

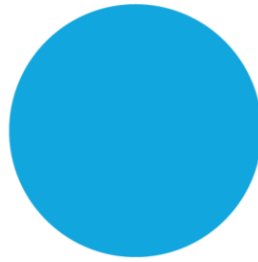


R72 G57 B90
C76 M81 Y39 K30
#48395a

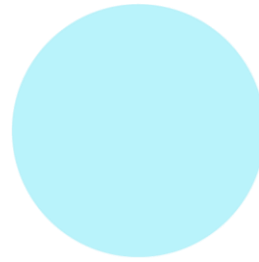
Secondary colours



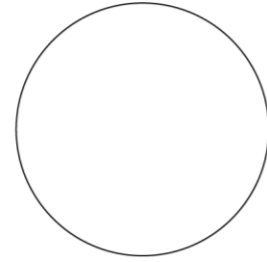
R0 G61 B117
C100 M84 Y28 K14
#003d75



R18 G166 B222
C73 M17 Y0 K0
#12a6de



R185 G243 B251
C24 M0 Y4 K0
#b9f3fb



R255 G255 B255
C0 M0 Y0 K0
#ffffff

4.3 Typography

The following fonts were chosen for the templates, website and printed materials of MED1stMR and shall be used by all partners:

Logo

Blogger Sans Regular

Blogger Sans Bold

Documents/Word

Headlines - Bahnschrift Bold

Sub Headlines - SemiBold

running Text - Calibri Regular

Example

Terms and Definitions

Acronym / Abbreviation

Leverage agile frameworks to provide a robust synopsis for high level overviews.
Iterative approaches to corporate strategy foster collaborative thinking to further
the overall value proposition. Organically grow the holistic world view of disruptive
innovation via workplace diversity and empowerment.

4.4 Templates for MS Office

Template for PPT

MED1stMR

Project presentation



Presenter



Date

TRAIN
SKILLS
RESILIENCE
PERFORMANCE
SAVE LIVES

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Template for Word

D 8.1

Dissemination Plan and Communication Guideline

Version
V.XX

Authors
Valerie Schliengerhaufen (USE)

Project MED1stMR	Deliverable D8.1
Project number 101021775	Deliverable Lead RIA
Type of Action RIA	Related work package WPB
Start date of project 01.06.2021	Dissemination level Confidential
Duration 36 months	Due submission date 30.09.2021
	Actual submission 30.09.2021

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4.5 Key Visuals

Several key visuals were developed to communicate the project, its partners, the methodology and innovation potential in visually appealing way. They are provided to all partners on MS Teams and can be used for presentations (see Annex), online publications, social media postings and for the website.

5 Guide for all Partners

5.1 Documentation and Reporting

For a successful dissemination in MED1stMR, it is essentially that all activities are documented and reported to the WP8 leader USE. USE will collect the information and use it for the mid-term report, further dissemination activities (e.g. posts / reposts on social media) and for the internal communication (e.g. developing an event-plan to organise meetings if more than one partner attends the same event). To make this possible, a set of templates for reporting and publishing purposes have been developed and sent out to all partners.

- **Template for dissemination activities:** To keep track of all activities and to collect pictures and links for further dissemination activities (e.g. Social Media). When taking pictures with other people, it is necessary to obtain their consent to use the picture.
- **Event list:** All partners must provide information about the conferences, trainings, events, special events where they plan to attend. The goal is, to get an overview for the Dissemination planning & reporting, to organize meetings if more than one organization will attend, to network and to bring others to ideas.
- **Publication plan:** All (intended) publications must be sent to USE and / or added to the publication plan.
- **Word & PowerPoint Templates:** Templates for MS Word documents and PowerPoint presentations have been developed and made available for all partners. All partners are asked to use the templates for external communication / dissemination about MED1stMR.
- **PowerPoint SlideDeck:** That contains all relevant (general) information about the project, designed according to the visual identity is provided for all partners (see Annex XX)
- **Key visuals:** Several visuals were designed to transfer the project's messages; they are provided to all partners on MS Teams and should be used for presentations and other communication / dissemination activities

5.2 Communication Channels

All partners are requested to support these channels to increase the coverage within the target audiences and to achieve a multiplier-effect on social media.

5.2.1 Social Media

All partners should follow the MED1stMR social media accounts with their organization's and your private accounts (if they use them for work-related purposes). Also, they should consider following the

other partner's accounts since they might share project-related content. MED1stMR's accounts must be tagged when posting about project activities.

Recommended hashtags: #EUSecurityResearch #medical #firstresponder #training #mixedreality

Links to MED1stMRs social media accounts:

- Twitter: <https://twitter.com/Med1stmr>
- Facebook: <https://www.facebook.com/MED1stMR>
- LinkedIn: <https://www.linkedin.com/company/79348257/>
- Researchgate: <https://www.researchgate.net/project/MED1stMR-Medical-First-Responder-Training-using-a-Mixed-Reality-Approach-featuring-haptic-feedback-for-enhanced-realism>

5.2.2 Project Website

The project should be presented on the institutional websites from all partners with a link to the MED1stMR website.

Link: www.med1stmr.eu

5.2.3 Press and Media

Send the press releases to your national media contacts and translate and adapt them if needed. Also, inform USE about every published article about MED1stMR you find in your national media.

5.2.4 Scientific Dissemination

USE must be informed (med1stmr@usecon.com) about every scientific publication you (plan to) release and every scientific event (conference / workshop) you attend. For the successful implementation of Scientific Dissemination, all partners must follow the principles and processes set in the Grant Agreement:

- **Obligation to disseminate results**
“Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium). [...]”
- **Mandatory Process**
„A beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate. Any other beneficiary may object within — unless agreed otherwise — 30 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.”
- **Open Access**
“Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results. In particular, it must as soon as

possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;”

- **Acknowledgement**

“The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

5.2.5 Deliverables and Mandatory Factsheets

All deliverable leaders are obliged to develop factsheets (1-3 pages) that summarises the information of their submitted deliverables in a brief and understandable manner. These factsheets must be sent to all partners to inform them about the content of the deliverable without having to read the whole document. Factsheets from public deliverables may be published on the project website.

5.3 Legal Requirements

All communication related to the project must follow the legal requirements of the European Commission. To obtain the rules, every communication must display the EU emblem, the H2020 logo and the following text:

“This project has received funding from the European Union’s Horizon 2020 Research and Innovation Programme under grant agreement No. 101021775 The content reflects only the MED1stMRs consortium’s view. Research Executive Agency and European Commission is not liable for any use that may be made of the information contained herein.”



Figure 1: EU emblem and H2020 logo

5.4 Wordings and Slogan

The wording of communication must comply with the strategy in the dissemination plan and should be adjusted for the target audiences. Whenever a partner publishes information about MED1stMR the

content must correspond with the official documents (e.g. proposal, final deliverables and final press releases). Moreover, all partners need to ensure that they only publish project information declared as “public”.

The following slogan was created for MED1stMR communication to emphasize the topic and the aim of the project: **TRAIN - [SKILLS.RESILIENCE.PERFORMANCE] - SAVE LIVES**

6 Internal Evaluation of Dissemination and Communication

MED1stMR has developed an evaluation strategy in order to ensure excellent quality of dissemination and communication activities. All KPIs from the proposal will be tracked on a monthly basis throughout the whole project. By carrying out the evaluation on a regular basis, the effectiveness of the impact and the quality can be tracked and, if necessary changed or redefined.

USE is responsible for collecting data for all of the predefined KPIs of Dissemination and Communication from all partners. An Excel tool (see Table 7) containing all KPIs was developed and will be updated on a monthly basis. Thereby it is less likely to miss the set goals. Any difficulties by fulfilling the KPIs can be detected easily and countermeasures can be taken by all partners.

Annex

Press Release 1 “kick-off”

MED1stMR: TRAIN - [SKILLS.RESILIENCE.PERFORMANCE] - SAVE LIVES

The Horizon 2020 research project MED1stMR transforms current training practices to better prepare medical first responders (MFR) for stressful and highly complex disaster situations. Innovative mixed reality (MR) technology is developed to combine real-world medical simulators with virtual environments.

Vienna, Austria (June 2021). A multidisciplinary, international consortium, coordinated by the AIT – Austrian Institute of Technology, Center for Technology Experience received a 7,8 million Horizon 2020 grant for the implementation of the MED1stMR project. The project will train medical first responders in MR environments to improve their situational awareness, resilience, and effective performance in medical emergencies in highly complex and unpredictable situations.

New project transforms European medical first responder training

Medical first responders (MFRs) are confronted with an increasing number of mass-casualty incidents with a large number of injured persons caused by human-made threats (e.g., terrorist attacks) or by natural disasters (e.g. landslides, floods). In such situations, medical first responders need to perform diagnosis, basic life support or other first aid to help stabilize victims and keep them alive or calm to wait for the arrival of further support. The proper evaluation of the situation itself, checking and monitoring the vital status of a large number of victims, and choosing the most appropriate strategy to further proceed with treatments are particular challenges.

Therefore, a pioneering mixed reality training system will be developed to address these needs and provide a more realistic training that combines scenario-based training and medical training in one common training scenario and system at the same time. The MED1stMR training solution will increase confidence in action, enable faster reaction and improve coping strategies of medical first responders. Technical solutions beyond state of the art, framed by scientific research will have an important impact on the future of medical trainings.

Innovative mixed-reality technology for higher resilience

The project will develop a new generation of MR training providing enhanced haptic feedback through the integration of high-fidelity patient simulation manikins and medical equipment into the virtual environment. This allows trainees to immerse in virtual scenarios and tactilely feel and visually perceive body, limbs and movements while examining and treating them. Thereby, MED1stMR offers a much deeper sensory experience bringing MR training even closer to reality. To enhance the effectiveness of MR training a physiological signal and trainee behaviour feedback loop will be integrated for smart scenario control. In this respect, wearable technologies with body sensors will be developed allowing to monitor states and behaviour of MFR themselves during training. Together with

a scientific model for effective performance in medical emergencies (EPME), this data will enable adapting training to the trainee's needs, manually or by artificial intelligence driven smart scenarios.

Helmut Schrom-Feiertag (AIT), coordinator of MED1stMR highlights the relevance of the project: *“Proper evaluation of situations, checking and monitoring the vital states, and choosing the most appropriate strategy for proceeding with treatments are challenges in current practice of medical trainings. The current training abilities for such scenarios are limited. We aim to fill this gap with the MR solution developed in MED1stMR. We bring together the haptics of manikins featuring realistic simulation of injuries with virtual disaster situations.”*

A team of 19 European, well selected project partners from top-class research institutions, medical first responder organisations, business and technology companies is looking forward to a 3-years effective and fruitful collaboration in MED1stMR. The project successfully started with the virtual kick-off event in June 2021 where all partners presented their tasks and plans for the first months of the project.

Further information about the project:

European Commission – Research Website:

<https://cordis.europa.eu/project/id/101021775>

Communication & Press Contact:

USECON - The Usability Consultants GmbH

Codoscenter, Wollzeile 11, Etage 2

1010 Vienna, Austria

Mail: medfirst@usecon.com

Project Coordinator

Helmut Schrom-Feiertag

AIT – Austrian Institute of Technology, Center for Technology Experience

Giefinggasse 4

1210 Vienna

Tel: +43 50550-6659

Mail: helmut.schrom-feiertag@ait.ac.at

Short Facts MED1stMR

MED1stMR: TRAIN - [SKILLS.RESILIENCE.PERFORMANCE] - SAVE LIVES

The project MED1stMR aims to better prepare medical first responders for stressful and highly complex disaster situations by developing an advanced mixed-reality (MR) medical training solution

with haptic feedback for enhanced realism. The goal is to train medical first responders (MFR) to improve situational awareness, resilience, and effective performance.

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Total cost: 7,8 million Euro; **duration:** 36 months

Project Coordinator

Helmut Schrom-Feiertag

AIT – Austrian Institute of Technology, Center for Technology Experience

Giefinggasse 4

1210 Vienna

Tel: +43 50550-6659

Mail: helmut.schrom-feiertag@ait.ac.at

Project partners

- AIT – Austrian Institute of Technology GmbH – Center for Technology Experience
- Ruprechts-Karls-Universität Heidelberg
- Umeå University
- Universität Bern
- Montanuniversität Leoben – Department Zentrum am Berg
- Refense AG
- Plux – Wireless Biosignals S.A.
- D2D Holding BV
- IDENER SCIENTIFIC COMPUTING
- Usecon - The Usability Consultants GmbH
- Mindconsole GmbH
- Simcampus Zentrum GmbH
- Hellenic Rescue Team
- Johanniter Österreich
- Servicio Madrilenno De Salud
- Universitätsklinikum Heidelberg
- Region Jämtland Härjedalen
- Johanniter International
- Campus Vesta

Event plan (status M4)

Event	topic	Date	location	Positioning MED1stMR	note	organisation
InSIM 2021 InPASS - Institut für Patientensicherheit und Teamtraining GmbH: InSiM 2021	Interdisciplinary symposium on simulation in medicine	30.9.2021 – 2.10.2021	online	Poster presentation – first information on the project	Raphael Wespi – speaker on behalf of ME1stMR	UBERN
HRT annual training course for civilians and new volunteers		Oct 2021	Thessaloniki	HRT can present first information on the project	+150 people	HRT
3. Schweizer Telenotfallmedizin und DigitalHealth Kongress (www.telenotfallmedizin.ch):		30.3.2022	online/Bern			UBERN
SGNOR Kongress		13.5.2022	Fribourg/CH		Presentation / intro requested by Tom Sauter	UBERN
https://erc.edu/		Spring 22			ERC provides the standard for resuscitation	HRT

					guidelines and training in Europe and beyond and is our official partner in First Aid training Call for papers	
https://www.sesam-web.org/SESAM-leadership/		Spring 22	tbd			UBERN
SHOTPROS – final conference	VR training police	Sept 2022	Belgium @campus Vesta	VR or MR training in other branches	Another Horizon2020 project	USE/AIT
https://with-simulation.ch/spsim/	Swiss small simulation congress of the SASH (Swiss Association for Simulation in Healthcare) with the topic VR	31.8.-2.9.2022	Zentrum am Berg		UBERN in Scientific Committee	UBERN
https://dgsim.de/aktuelles/news/		2022	tbd		Organisator Marcus Rall	UBERN

Simulationskongresse - Deutschland INSIM					
EUSEM congress 2022 European society for emergency medicine https://eusem.org/		Oct 2022			UBERN
Austrian Tunnelday 2022 in Salzburg, congress center in		Oct 2022	Austria, Salzburg – congress center		ZAB
Safety Conference / Seminar		2023	Montanuniversität Leoben and/or Department ZaB - Zentrum am Berg		ZAB

PPT Slide Deck

MED1stMR

Project overview


MED1stMR
Mixed Reality Training


TRAIN
[SKILLS
RESILIENCE
PERFORMANCE]
SAVE LIVES


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CONTENT

- The project in a nutshell
- Consortium
- Background
- Solution
- Objectives
- Methodology & end user involvement
- Next Steps
- Stay in touch







Some Definitions

- MFR = medical first responder
- VR = virtual reality
- MR = mixed reality
- AI = artificial intelligence
- AEUCR methodology = Agile End User Centred Research Methodology
- EPME = (scientific) model of effective performance in medical emergencies
- End User = the customers of a MFR training system. At MED1stMR we distinguish different targetgroups, mainly: trainee, trainer and decider/policy maker – the project delivers results for all of them



the project in a nutshell

"Technical solutions beyond state of the art, framed by scientific research will have an important impact on the future or medical trainings." Helmut, AIT

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Facts & figures

- **Budget:** 7,8 million Euro (100% funded)
- **Project duration:** 36 months (June 2021 – May 2024)
- **Consortium:** 19 Partners – 9 European countries
- **Funded:** by the EU Horizon 2020 programme
- **Grant Agreement Number:** 101021775



“Training medical skills is about vision and haptics for tangible interaction, and if a simulation has only one of those two, it will provide only 50% of the experience” – Grant Agreement Med1stMR



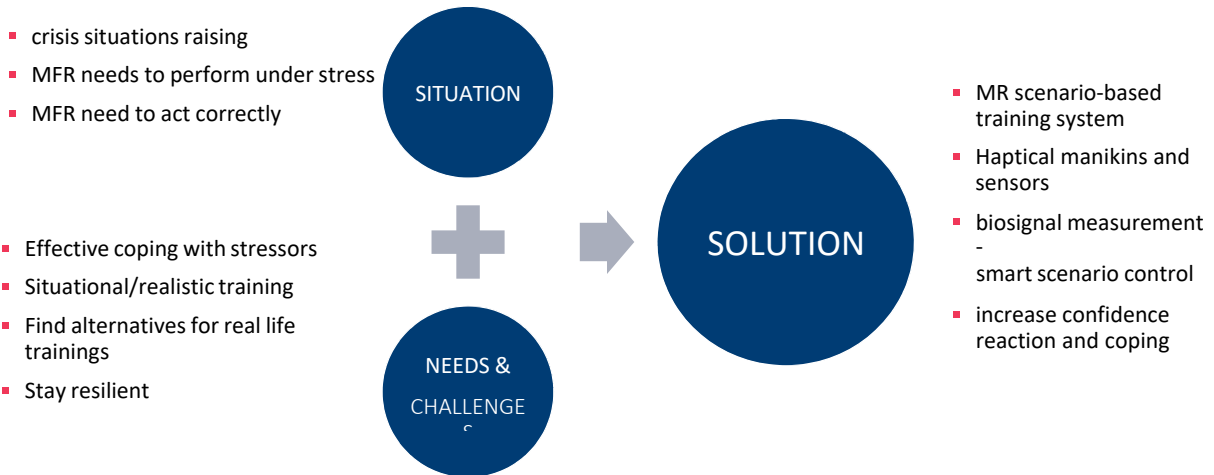
MED1stMR

TRAIN - [SKILLS.RESILIENCE.PERFORMANCE] - SAVE LIVES

- Horizon 2020 research project transforms training practices to better prepare medical firstresponders (MFR) for **stressful** and highly complex **disaster situations**.
- Innovative **mixed reality** (MR) technology to **combine** medical **simulators with virtual environments and smart scenario control options**
- MFR training framework to **improve** situational awareness, **resilience** and effective **performance**
- Multidisciplinary **consortium** of **19 partners** from 9 European countries



Situation, Needs & Solution



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HORIZON 2020

9/28/2021

7

Consortium



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HORIZON 2020

9/28/2021

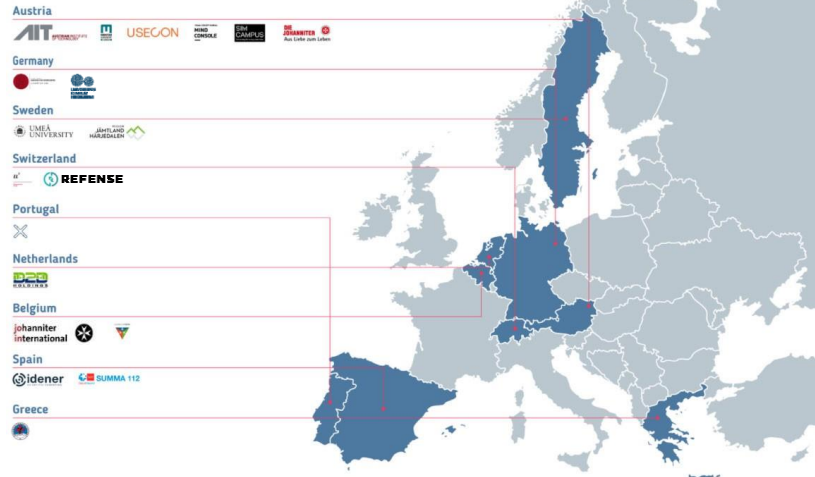
8



HORIZON 2020

Consortium

- 19 partners
- 6 European countries
- 9 end user partners
- 3 external advisors

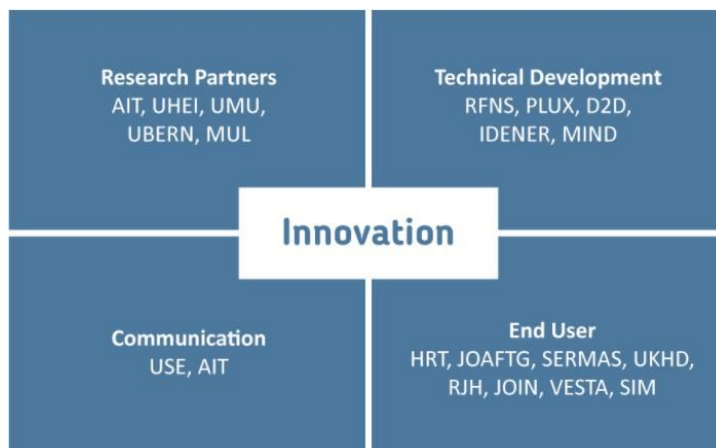


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Consortium - Roles



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Project Coordination

AIT - Austrian Institute of Technology, Center for Technology Experience



AUSTRIAN INSTITUTE
OF TECHNOLOGY

Austria's largest Research and Technology Organisation, 7 centers, 1400 employees

- The Center for Technology Experience has a major research focus to understand and ascertain high quality experiences to ensure that acceptance of future technological innovations will be accomplished



Helmut Schrom-Feiertag

- Successfully developed and managed national and international research and industrial projects in the last 15 years (also Horizon2020)
- Currently focusing on: human behaviour, human factors research and VR - user experience and behaviour research in the context of future technologies and interaction design

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HORIZON 2020

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Background



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HORIZON 2020

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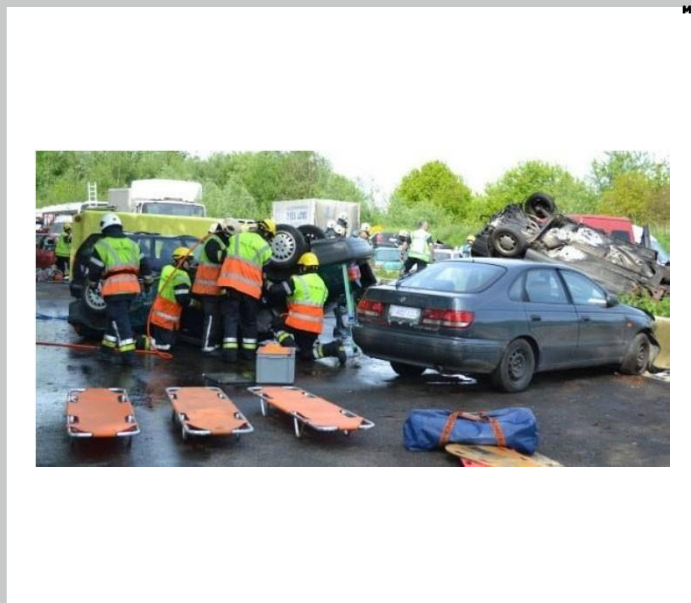


HORIZON 2020

Situation & background

- Increase in crisis situations
- MFRs perform life support under stress
- MFRs are facing challenges: situation assessment, vital status, choosing appropriate strategy
- Stress is raised \square performance is influenced

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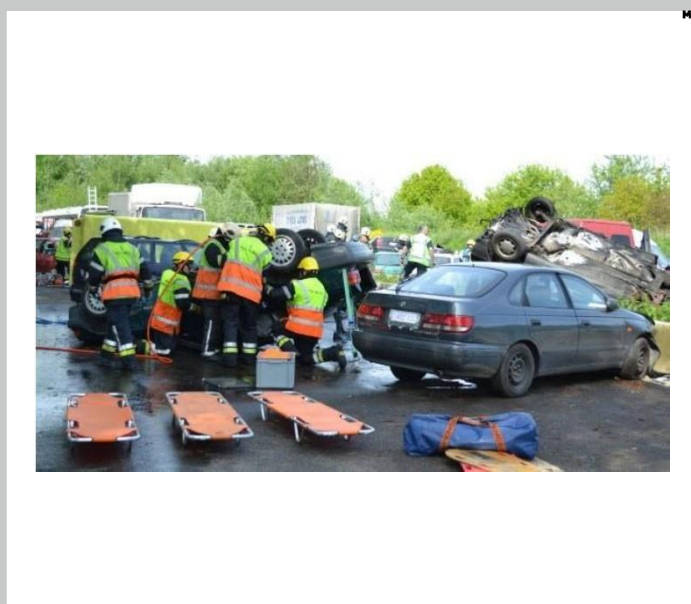


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Needs & challenges

- MFRs preparation for stressful and highly complex situations
- MFR resilience needs to be supported
- Decision training
- Situational awareness training
- Scenario based and realistic training
- Real life trainings are resource intensive
- VR training needs to be more realistic \rightarrow haptic/immersion is important

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Solution

- Mixed Reality training solution
 - virtual & haptical & sensorical
 - VR environment +
 - haptic interaction/manikins +
 - biosignal measurement =
 - MED1stMR solution
 - Wearables for stress load measurement during training
 - smart scenario control to adapt training
 - Review solution to analyse training
- Guidelines & training framework

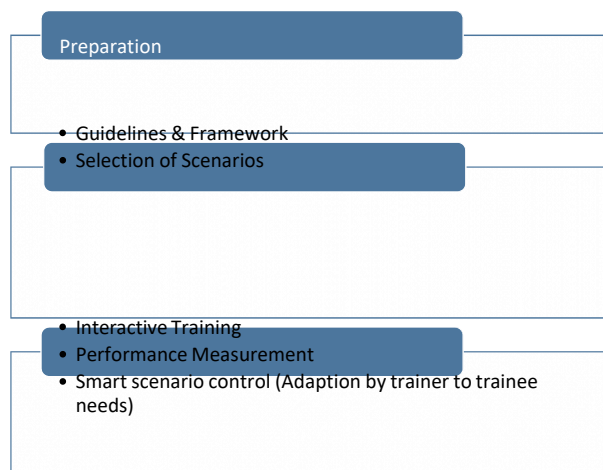
SEE, HEAR, FEEL, TOUCH, INTERACT, LEARN



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Phases of MFR training





Advantages of MFR training

TRAINEE



Active learning



cope with stress

TRAINER



1-click repeatable



Steer scenario
and stress load



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POLICY MAKER / DECIDER




HORIZON 2020

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HORIZON 2020



Solution

"If you ever experienced such a life-threatening situation yourself, you want to develop solutions"

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Aimed solution

- MR & MANEKINS & WEARABLES**
 - advanced MR medical training system featuring haptic feedback by the integration of VR enabled manikins
- SMART SCENARIO CONTROL**
 - wearable technology for monitoring trainees' physiological data
 - real-time scenario control through the trainer & through the system (AI based)
- TRAINING FRAMEWORK & SCENARIOS**
 - to better train and master high-risk situations and improve their effective performance

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Innovative Training Approach

MR Training **Scenario Control** **Debriefing**

Manikins
Trainees
MR AREA Wearable Trainer

Real-time Scenario Dashboard
Manual Control
AI Smart Control

Debriefing

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Details technical solution

- **VR system**
based on the REFENSE multiuser VR trainings platform (virtual humans & role player)
VR visualisation by mindconsole
- **VR manikin extension**
(haptic patient simulation) by D2D Holding BV
- Medical-X manikin
- **Smart wearable technology**
extension for the MFR by PLUX, Wireless Biosignals S.A.
- **Data integration**
on a common layer by IDENER



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- ➔
- Recorded training (video, audio, different views) enhanced with physiological data will provide highly accurate debriefing sessions
 - Tangible interaction with patient simulation manikin making it possible to feel and perceive physical reactions - controlled by a dynamic casualty simulation that provides realistic patient condition
 - Casualty simulation responds to the actions of the trainee to enhance interactivity and realism
 - Monitoring of physiological data (plan: heart rate, heart rate variability, oxygen saturation, respiration rate, movements log)
 - Physiological data used for real-time scenario control (manually or automatically)
 - Data security = important (sensible data)

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Details on Scientific model - EPME



- effective performance in medical emergencies (EPME)
- Identification of contextual human factors that influence perception and reaction under stress
- perceiving, deciding, and acting are co-occurring in mutual dependence
- design representative training programs and assessment possibilities
- transferred into a training framework and a proposed curriculum
- Evaluation and validation in close cooperation with users and technical partners

"How can MFR perform best and at the same time protect their resilience and well-being?" - Cora van der Wal, University of Maastricht

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Objectives



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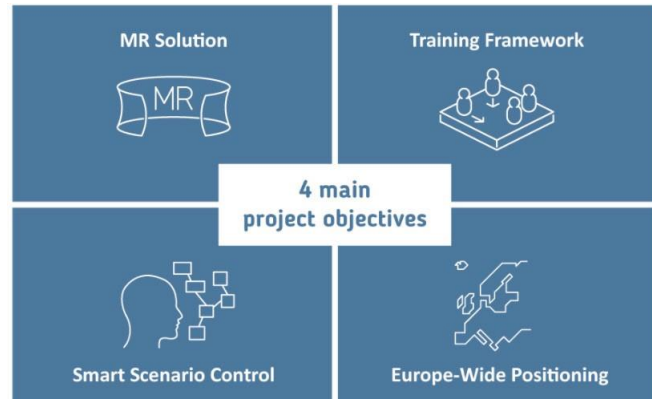
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4 main project objectives

1. MR Solution
2. Training Framework
3. Smart Scenario Control
4. Europe Wide Positioning



"4 major objectives for 19 European partners to achieve - MED1stMR will be a challenging but at the same time pioneering"

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MR Solution

Developing a pioneering MR training approach for enhanced realism

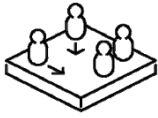
- MR scenario training and medical training combined with real time full-body tracking
- Repository of training scenarios for medical training
- Systematic manipulation of influence factors to optimize training effects
- Development of a high-fidelity patient simulation manikin
- Integration of patient simulation manikins and medical equipment into the MR experience: context simulation, possibility of multiple patient simulation manikins and medical equipment providing haptic feedback for enhanced realism
- Richer sensory experience → brings virtual training closer to reality
- providing under- and after-action review abilities for training reflection



HORIZON 2020



HORIZON 2020



Training Framework

Developing effective training scenarios and a training curriculum through agile and user-centred design with cross-sectoral MFR



- Agile End User Centred Research (AEUCR) Methodology to integrate first responder (end user)
- co-creation and design thinking methods in cross-sectoral end user workshops to collaboratively develop user requirements and scenarios for MR training
- gain a joint understanding of the user requirements for the MR training solution and the field of MFR
- Development of training scenarios with end users
- Guidelines and Concepts for the implementation of MR training



Smart Scenario Control

Realisation of a physiological signal and trainee behavior feedback loop and smart scenario control to enhance effectiveness of MR training



- model for effective performance in medical emergencies (EPME model)
- Identification of sensors and signals and integration into wearables to implement a biosignal and trainee behavior feedback loop with body sensors (wearables)
- physiological and trainee behavior signal feedback loop to monitor the stress level of the MFR during training
- stress level displayed on a dashboard to the trainer for manual scenario control and used for automated smart scenario control.
- Smart scenario control adapts different factors in the scenarios based on the EPME model in relation to the stress level (based on AI)





Europe Wide Positioning

To position the pioneering MR training approach across Europe



- Dissemination and communication of project results
- Provide training concepts & guidelines as showcases
- Awareness rising and exploitation of results across Europe (conferences, events etc.)
- Networking
exchange of knowledge across countries and first responder organizations
- Carried out collaboratively by the partners



Project methodology & end user involvement



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Project research questions

- How can haptic feedback for training medical skills on victims be provided for MFRs?
- Which scenarios and use cases are most suitable for MR training and deliver the greatest benefits?
- How can effective MR training scenarios be developed?
- How effective are such training approaches, how good is the learning progress and how does it compare to real world training?
- How should a MR training curriculum be designed and merged with existing training curricula?
- What about the costs for the training system and does the benefit justify the effort?

"If the body produces a signal, we can measure it" – Pedro, PLUX Wireless Biosignals



Project methodology – go beyond agile

NEEDS

- Multidisciplinarity
- High number of consortium members – close the loop
- End user view

METHODOLOGY

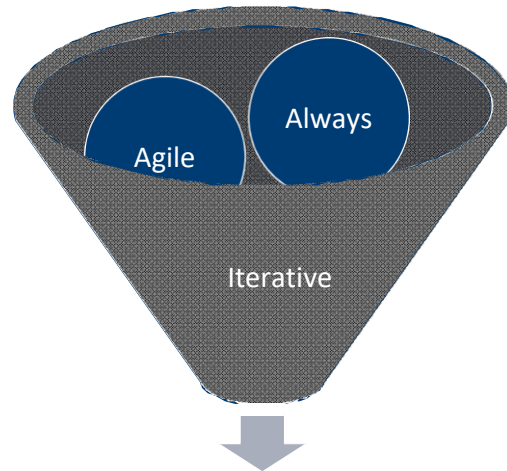
- **Agile End User Centered Research (AEUCR)** methodology = agile development COMBINED with user centered design/research

RESULTS

- highly innovative and beyond state-of-the-art solution
- User in the focus, NOT the technology

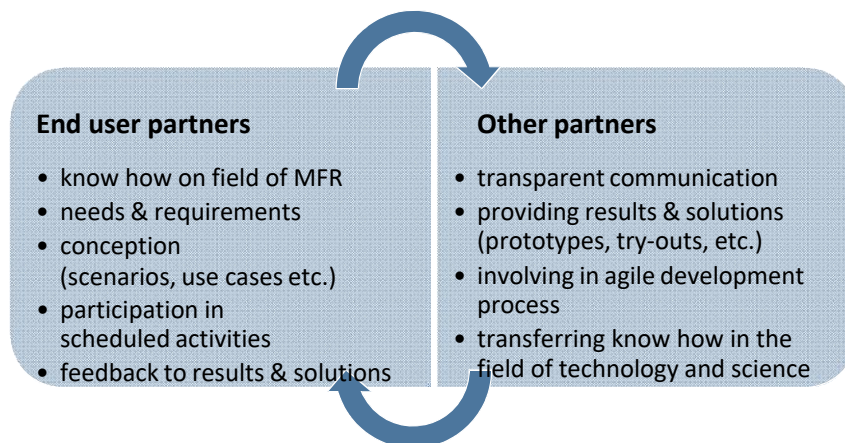
AEUCR methodology

- Requirements engineering
- Agile development (technological solutions)
- EPME model development
- Field Studies, evaluation, validation



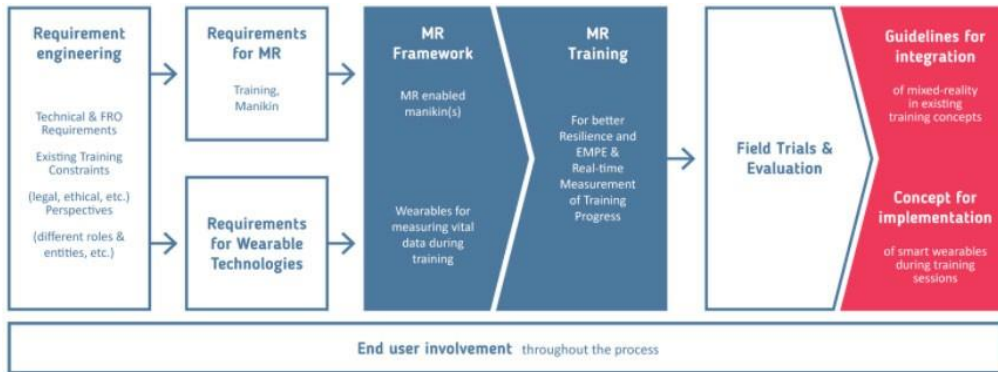
Transparent MED1stMR project methodology
Agile End User Centred Research Methodology

End user focus MED1stMR



"We have the region of Jämtland Herjedalen with few people and large distances and Madrid with short distances but many people – 2 extremes, the same goal regarding MFR but probably different needs – we want to bring all of this together in suitable scenarios for effective solutions"– Carmen, SERMAS

Project Workpackages (WPs)



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Next steps

"We want to bring the insights from the lab to the field" – Tom, Uni BERN

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Year plan

Year 1

- General strategy
- User Requirements
- System architecture
- Scientific model development
- Know how exchange
- Scenario definition

Year 2

- MR environment
- Development and validation of technical solutions
- Evaluation in the field – scientific studies

Year 3

- Technical solutions
- Large scale field trials for validation

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Spread the word

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- ResearchGate: <https://www.researchgate.net/project/MED1stMR-Medical-First-Responder-Training-using-a-Mixed-Reality-Approach-featuring-haptic-feedback-for-enhanced-realism>

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THANK YOU

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TEAM
[SKILLS
RESILIENCE
PERFORMANCE]
SAVE LIVES

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