ODELIA

Deliverable D7.1

COMMUNICATION KIT INCLUDING WEBSITE

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DISCLAIMER

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EXECUTIVE SUMMARY

The ODELIA Communication Kit provides a comprehensive resource to effectively promote the groundbreaking project focused on revolutionizing AI in healthcare through swarm learning. The kit contains essential materials to streamline communication and collaboration, ensuring a unified message across all channels. Inside, you'll find the project's scientific abstract, a layperson summary, press release, work package summaries, branding guidelines, logo usage, typography, and color palette information. Additionally, the kit includes a PowerPoint template, social media guidelines, templates, hashtags, institutional accounts, pre-written posts, and information on security, compliance, and cookie policy. This report serves as a quick reference to navigate the extensive resources available, enabling all project partners to efficiently present and promote ODELIA to various audiences.

INTRODUCTION

The ODELIA project is a groundbreaking initiative that aims to revolutionize the use of artificial intelligence (AI) in healthcare by harnessing the power of swarm learning. By addressing the challenges of data privacy, security, and trust in AI, ODELIA seeks to improve patient outcomes and pave the way for a brighter future in medicine.

This communication kit serves as a comprehensive resource for project partners, providing them with the necessary materials and guidelines to effectively introduce, present, and promote the ODELIA project. The kit contains a range of items, including project summaries, press releases, branding guidelines, templates for presentations and social media, and more. The goal of this kit is to streamline communication efforts, ensure a unified message, and facilitate smooth collaboration among all involved parties.

SCIENTIFIC ABSTRACT

The ODELIA communication kit includes the scientific abstract that succinctly outlines the objectives, methodology, and expected outcomes of the project. The abstract serves as a comprehensive yet concise summary, making it an invaluable resource for project partners who need to quickly familiarize themselves with the project's details or share information with external stakeholders. It is written in a technical and precise language to cater to a more specialized audience, ensuring that the project's intricacies are accurately conveyed. Please refer to the scientific abstract at the end of this section for a brief overview of the ODELIA project.

> Artificial Intelligence (AI) will revolutionize healthcare as its diagnostic performance approaches that of clinical experts. In particular, in cancer screening, AI helps patients to make better-informed decisions and reduce medical error. However, this requires large datasets whose collection faces severe practical, ethical and legal obstacles. These obstacles can be overcome with swarm learning (SL) where partners jointly train AI models without sharing any data. Yet, access to SL technology is seriously limited because no studies have implemented SL in a true multinational setup, no practically usable implementation of SL is available, researchers & healthcare providers have no experience with setting up SL networks and policymakers are currently unaware of the broader implications of SL. ODELIA will address & solve these issues: ODELIA will build the first open-source software framework for SL, providing an assembly line for the streamlined development of AI solutions. To serve as a blueprint for future SL-based AI systems, ODELIA partners collaborate as a swarm to develop the first clinically useful AI algorithm for the detection of breast cancer in magnetic resonance imaging (MRI). The size of ODELIA's

distributed database will exceed all previous studies and ODELIA's AI models will reach expert-level performance for breast cancer screening. Thereby, ODELIA will not only deliver a useful medical application, but prove the clinical benefit of SL in terms of accelerated development, increased performance and robust generalizability to ultimately save thousands of lives of European patients. ODELIA's success will push partners to serve as nuclei for the exponential growth of the SL network and extend SL to a multitude of medical applications. Thus, patients, healthcare providers and citizens in Europe will be provided with a digital infrastructure that enables development of expert-level AI tools on big data without compromising data safety and data privacy.

SUMMARY FOR A LAY AUDIENCE

In addition to the scientific abstract, the ODELIA communication kit provides a summary tailored for a lay audience. This summary aims to effectively communicate the project's goals, progress, and significance to non-experts or individuals outside the field of medical research and imaging. Written in clear, non-technical language, it ensures that the project's key aspects are easily understood by a broader audience, facilitating wider outreach and engagement. The lay audience summary can be particularly useful when communicating with the general public, media, or non-specialized stakeholders. Please find the lay audience summary at the end of this section.

Imagine a world where artificial intelligence (AI) in healthcare not only improves patient outcomes but also ensures data privacy and security. The ODELIA project aims to bring this vision to life by developing an open source swarm learning solution for the medical sector, with an initial focus on accurately identifying breast cancer in MRI screenings.

Swarm learning is a cutting-edge approach to AI that enables devices and systems to learn from each other while preserving data privacy. Unlike traditional AI methods, swarm learning does not require the sharing of raw data, ensuring patient privacy is maintained. By using swarm learning, ODELIA aims to overcome the challenges of data privacy and security, which have limited the adoption of AI in healthcare.

At its core, the ODELIA project has four primary objectives. First, it seeks to create an open source swarm learning framework, making the technology accessible to healthcare professionals and researchers across the globe. This framework will be designed to be user-friendly, allowing for seamless integration into existing healthcare systems.

Second, the project aims to demonstrate the effectiveness of swarm learning in real-world medical applications. To achieve this, ODELIA will be tested in various medical settings, starting with the development and validation of cutting-edge AI algorithms for breast cancer detection in MRI screenings. The goal is to provide concrete evidence of the benefits of swarm learning in healthcare.

The third objective is to ensure that ODELIA's swarm learning solution is secure and trustworthy. This means developing methods to protect the privacy of patient data and to ensure the AI models used are accurate and reliable. Building trust in the technology is crucial for its widespread adoption in the healthcare sector.

Lastly, the ODELIA project aims to promote the potential of swarm learning by engaging with opinion leaders, fostering collaboration, and initiating follow-up

projects. By raising awareness and encouraging dialogue, the project hopes to inspire further innovation and advancements in the field of AI in healthcare.

The ODELIA project is a multinational effort, with partners from seven countries working together to achieve these ambitious goals. The consortium comprises a diverse group of experts, including researchers, medical professionals, and industry leaders, ensuring a multidisciplinary approach to tackling the challenges ahead.

In summary, the ODELIA project represents a significant step forward in the world of AI in healthcare. By developing an open source swarm learning solution, the project aims to improve patient outcomes, maintain data privacy, and build trust in AI technology. With its initial focus on breast cancer detection, ODELIA is paving the way for a brighter, healthier future for all.

PRESS RELEASE

The ODELIA communication kit features the initial press release, which provides a comprehensive overview of the project's objectives, consortium, and potential impact. It marks the official launch of the project and highlights its significance in the context of Europe's Beating Cancer Plan. Further press releases will be developed throughout the project's duration to keep stakeholders and the public informed about key milestones and accomplishments. As with the initial press release, all future press releases will be shared with project partners ahead of publication to ensure proper dissemination and alignment across all parties. The initial press release can be found at the end of this section.

New Research Project ODELIA Launches to Revolutionise Artificial Intelligence in Healthcare using Swarm Learning

On January 1, 2023, a new EU-funded research project establishing an Open Consortium for Decentralized Medical Artificial Intelligence (ODELIA) has officially begun, with the goal of revolutionising Artificial Intelligence (AI) in healthcare through the use of Swarm Learning (SL). Over the next five years, the project aims to overcome the obstacles of data collection in healthcare by utilising SL, where partners work together to train AI models without the need to share any personal patient data. Thereby, ODELIA will break data sharing boundaries and accelerate the scale-up of medical AI in Europe for the benefit of European citizens, patients, and clinicians.

AI models in healthcare have the huge potential to improve decision-making in clinical routine resulting in earlier, better, and more precise diagnosis, prognosis, and treatment of diseases. One of the main challenges in implementing AI in healthcare is the lack of large enough datasets to train models with. This is especially true for cancer screening, where the collection of data faces severe practical, ethical, and legal obstacles. ODELIA aims to overcome these obstacles by implementing SL, a novel approach to AI training that allows for privacy-conserving training of medical AI algorithms without sharing any sensitive and private data.

ODELIA's main objective is to build the first open-source software framework for SL, providing an assembly line for the streamlined development of AI solutions. The project partners will collaborate to develop the first clinically useful AI algorithm for the detection of breast cancer in magnetic resonance imaging (MRI), using a distributed database that exceeds all previous studies. This will not only deliver a useful medical application, but also prove the clinical benefit of SL in terms of accelerated development, increased performance, and robust generalisability to ultimately improve treatment and healthcare for European patients.

The success of the ODELIA project is expected to push partners to serve as nuclei for the exponential growth of the SL network and extend SL to a multitude of medical applications. This will provide patients, healthcare providers, and citizens in Europe with a digital infrastructure that enables the development of expert-level AI tools on big data without compromising data safety and data privacy.

"We are thrilled to officially launch the ODELIA project and begin working towards our goal of establishing an open-source SL framework," says Dr. Daniel Truhn of the University Hospital Aachen, one of the project's two Scientific Coordinators. "SL has the potential to address the challenges of data collection and providing a framework for collaboration in AI training, and ultimately improve the quality of healthcare for patients in Europe," said Prof. Jakob N. Kather of the Else Kröner Fresenius Center for Digital Health at Technische Universität in Dresden, who acts as the other Scientific Coordinator for ODELIA.

About ODELIA

The ODELIA consortium brings together partners from twelves academic institutions and industry partners from across Europe: European Institute for Biomedical Imaging Research (Austria), University Hospital Aachen (Germany), Vall d'Hebron Institute of Oncology (Spain), Mitera Hospita (Greece), Radboud University Medical Center (Netherlands), University Medical Center Utrecht (Netherlands), Ribera Salud (Spain), Fraunhofer Institute for Digital Medicine MEVIS (Germany), OSIMIS (Belgium), Technische Universität Dresden (Germany), University of Zurich (Switzerland) and University of Cambridge (United Kingdom). The project will run from January 2023 to December 2027. Total funding: € 8 691 755.00. Website: www.odelia.ai

Contact: odelia@eibir.org

SUMMARIES OF ALL WORK PACKAGES

The ODELIA project is organized into a series of Work Packages (WPs) that outline the specific tasks and objectives required to achieve the project's overall goals. Each WP represents a distinct area of focus and contributes to the efficient execution and completion of the project. To help project partners and stakeholders better understand the structure and responsibilities of each WP, concise summaries have been prepared for all eight Work Packages. These summaries provide an overview of the objectives, tasks, and expected outcomes of each WP, enabling a comprehensive understanding of the project's organization and progress. The WP summaries themselves will be attached at the end of this section, offering a valuable reference for project partners in their communication and collaboration efforts.

Work package 1: Creating a Minimum Viable Product

WP1 focuses on demonstrating the feasibility of swarm learning by setting up the necessary hardware at international partner sites and connecting them in a swarm.

The work package then trains an AI algorithm using publicly available x-ray, CT, and MRI data.

Work package 2: Testing Local Models Against the Swarm

WP2 utilizes the swarm learning network to train an AI algorithm for breast cancer detection in MRI, using real data from clinical experts. Local models based on gathered data are trained and compared to models trained on the swarm. A public challenge is set up to engage the worldwide community and select the best model structure. Finally, the AI model is fine-tuned to account for regional data differences.

Work package 3: Open-source Implementation of Swarm Learning

In WP3, open-source code for swarm learning is implemented, making it accessible to the worldwide research community and enhancing it with functionalities important for clinical AI development. Active learning and access for regulatory bodies are added to facilitate regulatory adoption. The full working capacity of the product is demonstrated.

Work package 4: Front-end Development

WP4 is dedicated to building a front end that facilitates both data gathering for new AI model development and bridging the gap to clinical usability. A fully functional lightweight radiological image viewer is created for easy control over training inputs. This viewer is then amended to display the results of AI algorithms developed based on swarm learning. The clinical usability of both the AI algorithm and the front-end is tested on extended non-partner sites.

Work package 5: Regulatory Framework

WP5 aims to bridge the gap between research and commercial exploitation. The open-source implementation of swarm learning is refactored according to regulatory guidelines to be CE-ready. The medical viewer from WP4 is certified as a medical product for use in clinical studies. The work package also liaises with policy makers to realize the full potential of swarm learning for commercial exploitation.

Work package 6: Exploitation & Marketplace of Ideas

WP6 streamlines swarm learning for further clinically and commercially viable projects after ODELIA's runtime. It initiates new ideas that make use of swarm learning and prepares them for continuation after the project's end. The work package also engages industry participation to exploit swarm learning's potential.

Work package 7: Dissemination, Communication & Policy Making

WP7 coordinates ODELIA's communication activities, preparing project results for dissemination and policy recommendations. The work package ensures the project's visibility and wide outreach to relevant stakeholders, disseminating research outputs and results, managing intellectual property, and establishing policy recommendations.

Work package 8: Project Management & Coordination

WP8 focuses on the effective legal, contractual, administrative, and financial management of the project. It coordinates project governance, including the management of consortium-internal and external bodies, meetings, and ensures the

quality and timeliness of project progress and results. The work package also addresses risk planning and the management of ethical issues.Visual identity

Branding guidelines

The ODELIA project's visual identity plays a crucial role in maintaining a consistent and professional image across all communication materials. To ensure that all project partners adhere to the same design principles, a set of branding guidelines has been developed. These guidelines cover various aspects of the project's visual identity, including logo usage, typography, color palette, and other design elements. By following the branding guidelines, partners can ensure that all ODELIA-related materials are easily recognizable and convey a unified message.

Logo usage

The ODELIA logo is an essential component of the project's visual identity. This section outlines the proper use of the logo, including placement, sizing, and any restrictions on altering its design. By adhering to these guidelines, partners can ensure that the logo is used consistently across all communication materials.

The ODELIA logo is available in two colourways and two orientations:

- **Inline**
  - o Full color
  - o Monochrome (black or white)
- **Stacked**
  - o Full color
  - o Monochrome (black or white)

The full colour logo is to be used whenever possible and legible. The choice between inline or stacked is dependent on the space.

Whenever the logo is used, it should be surrounded with clear space to ensure its visibility and impact. No graphic elements of any kind should invade this zone.
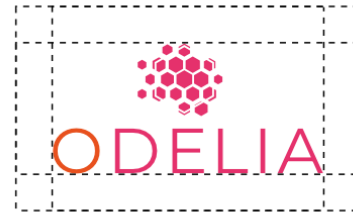
The logo and the icon's exclusion zone is equal to half the height of the icon.

Typography

Typography plays a significant role in maintaining a consistent visual identity for the ODELIA project. This section provides details on the typefaces, font sizes, and font styles that should be used in project materials, as well as any recommended usage for headings, subheadings, and body text.

The typeface used in the logo is a modern, wide, sans-serif typeface with a uniform weight and thickness, while not monospaced.

This typeface supports the modern and high tech approach used in ODELIA.

For regular use, the Montserrat typeface is recommended, as this has widespread web support and is available on multiple systems by default. Alternatively, it is also being distributed for free through Google Fonts. It is not an exact match however for the custom typography in the ODELIA wordmark.

Font sizes should be selected for optimal legibility and not condensed.
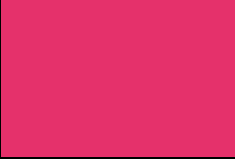
Increased font weights should be used for emphasis, together with a colour emphasis.

Headings, subheading and body text can use the same typeface. The typefaces within one type of text should not be mixed, i.e., if headings are using a different typeface that the body, the heading should always use the same typeface and the body text should only use one typeface as well.

Colour palette

The ODELIA project's colour palette consists of a primary and a secondary colour and accent colour, with a shade each, that have been carefully chosen to represent the project's values and goals. The primary colour cerise is a pink-violet colour that matches well with the breast cancer theme. The warmer secondary colour cinnabar, which is an orange tone, exudes warmth and familiarity. The accent colour turquoise surf provide a visual accent, and its turquoise shade is modern and progressive.

The table below outlines the specific colour codes (RGB, HEX, HSL and CMYK) for each colour in the palette and provides guidelines on how to apply these colors to various communication materials.

Color	Cerise	Cinnabar	Violet-Red	Turquoise Surf	Skobeloff
Swatch					
RGB	229,49,107	231,77,46	148,19,60	0,189,217	0,113,130
HEX	#E5316B	#E74D2E	#94133C	#00BDD9	#007182
HSL	341,79,90	10,80,91	341,87,58	188,100,85	188,100,51
CMYK	0,79,53,10	0,67,80,9	0,87,59,42	100,13,0,15	100,13,0,49
Usage	Primary	Secondary	Shade	Accent	Shade
Logo	X	X			
Text	X	X		X	
Graphs	X	X	X	X	X
Gradient	X	X			

The colours cerise and cinnabar are used in the logo, and main gradients.

POWERPOINT TEMPLATE FOR PRESENTATIONS

To ensure consistency in presentations related to the ODELIA project, a PowerPoint template has been developed for use by all project partners. This template includes pre-designed slide layouts, typography, and colour schemes that adhere to the project's branding guidelines. By using the PowerPoint template, partners can create professional and visually cohesive presentations that align with the ODELIA project's visual identity.

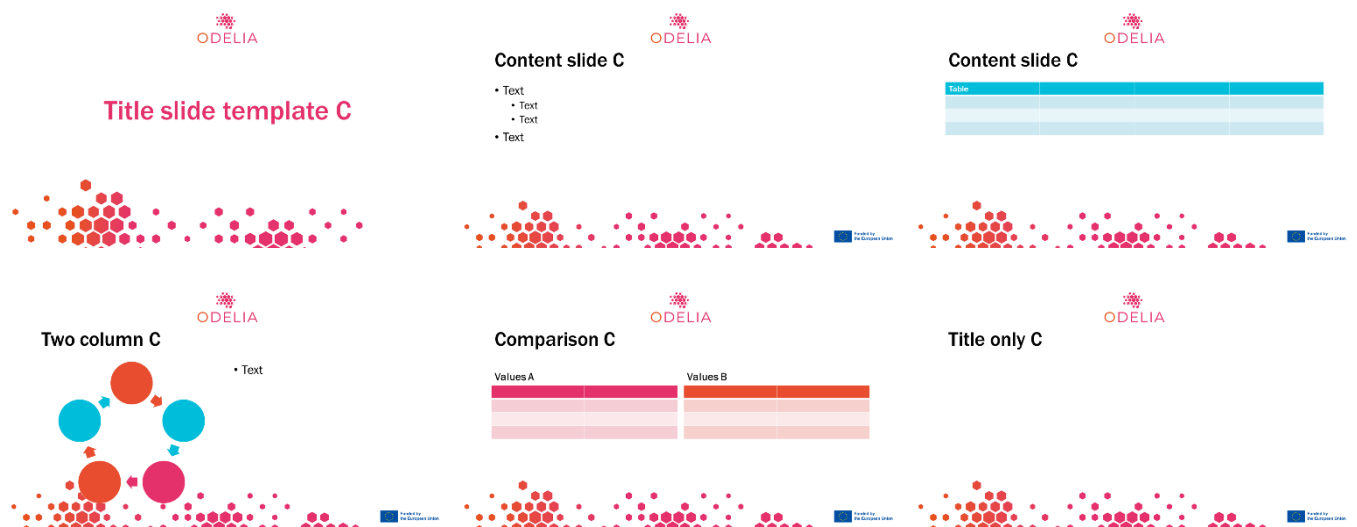It features three designs with a total of 19 layouts, suited for various situations.

Design A
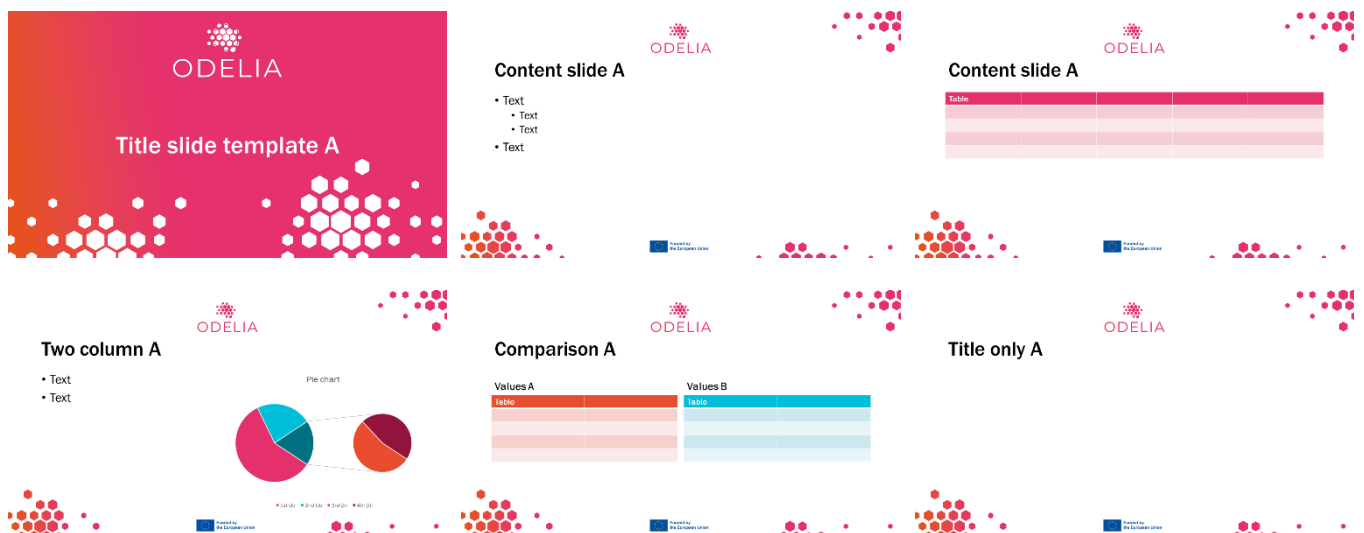
Design B

Design C

The template is available to the consortium on its collaborate platform and document repository.

ODELIA ONLINE PRESENCE

The ODELIA project website, odelia.ai, has been developed as the main public-facing online presence for the project.

Currently, it contains the most important information about the project and efforts were made to keep the information understandable for the general public.

The website is a constantly changing and evolving platform. The initial release provides basic functionality and information, but will change over the course of the project. Potential direct links to developed and deployed tools may be included in the future.

This also means that the overall look of the website can change, and the order of pages and information will be tweaked and finetuned as well.

All separate pages are attached at the end of this document.

Landing page

The landing page features an attention grabbing hero element at the top of the page with a bold headline. This is followed by more details about the key objectives and impacts of the project. Both sections link to more in-depth information about ODELIA.

A section linking to the project's publications and achievements is included after this. This links to publications, public deliverables and reports and a section linking to released tools and resources.

Related to this is the newsroom section, which is simply a collection of news posts.

The website also includes some quotes from key personnel: Peter Gordebeke (Project Coordinator from EIBIR), Daniel Truhn (Scientific Coordinator from UKA) and Jakob Kather (Scientific Coordinator from TUD)

As a final section, an overview of the consortium is included. All consortium partners are included with their logo and a link to a page for more details for all consortium partners is added.

The menu at the top of the page remains at the top for easy navigation.

A footer at the bottom of the page includes information about the EC funding and the disclaimer regarding the public views of ODELIA. It also includes direct contact details and quick links to each main section.

About Us page

The About Us page provides more details about the project, it's mission and vision, as well as the overall context.

Work Plan page

The Work Plan page provides more details on the workplan of the ODELIA project, such as key challenges and solutions and the work package descriptions.

Achievements

The Achievements page features searchable and sortable tables for three categories of public results: scientific publications, public deliverables and reports and tools/resources. The respective tables will be populated with results as they become available.

Consortium and partner-specific pages

This page provides a geographical overview of the consortium, showing its pan-European nature, as a list of partners. More details about each partner are available also. This includes a general description of the organisation, their role in the project and the staff involved.

This page also includes information about the multidisciplinary nature of the consortium, and its complementary expertise.

Contact page

The contact page does not include any contact forms, but only provides details for direct contact means; a dedicated email address and a phone number.

The decision not to include a contact form was made for GDPR compliance reasons.

SOCIAL MEDIA GUIDELINES AND TEMPLATES

To facilitate effective communication and promote the ODELIA project on social media, we have prepared a set of guidelines and templates for project partners. These guidelines aim to ensure a

consistent message and tone across various social media platforms while leveraging the existing reach of partners' institutional accounts.

The social media guidelines outline best practices for partners when sharing ODELIA-related content on their institutional accounts. These guidelines cover aspects such as tone, language, and the use of visuals, ensuring that all social media posts align with the project's overall communication strategy and visual identity.

Hashtags
The hashtag that should be included in all ODELIA-related social media posts is #ODELIA. By using this hashtag, partners can contribute to the online conversation surrounding the project and increase its visibility.

Institutional Accounts
Partners are encouraged to use their institutional social media accounts to share updates about the ODELIA project. This approach takes advantage of the established audiences and reach of these accounts, ensuring that the project's messages reach a wide audience without the need to build a new follower base from scratch.

Pre-written posts
To streamline the process of creating social media content, we have provided a set of templates for various platforms, including Twitter, Facebook, and LinkedIn. These templates include suggested post formats, imagery, and key messaging points that partners can customize to suit their specific needs and audiences.

These social media templates are available to the consortium on its collaborate platform and document repository.

SECURITY AND COMPLIANCE
All connections to and from the website are SSL-encrypted and secure.

All data is stored in a data center in Belgium.

A GDPR-compliant cookie banner for consent and management is implemented.

The backend of the website is running on WordPress with Elementor. Elementor does not set HTTP cookies. Instead, Elementor works with LocalStorage and Session Storage. However, these are legally treated as (HTTP) cookies. Rather than HTTP cookies, data stored is an entry in the local storage and in the session storage of the browser. The collected data will most only be stored on the visitor's local browser for a limited period and will not be sent to Elementor, the website operator's server or any third party.

The LocalStorage and Session Storage data is classified as essential according to the current state of knowledge. In this case, local storage and session storage are responsible for ensuring that pop-ups, sitebars, etc. are not displayed again so that the visitor can use the website undisturbed. Whether these "cookies" are actually considered necessary is disputed.

Nevertheless, according to ePrivacy Directive 2002/58/EC, access to browser memory is only permitted if the visitor has consented (GDPR Article 6 (1) lit. a) or if the access is absolutely necessary in order to provide or operate the service.

In both cases, this means that European users of Elementor should provide their website visitors with detailed information on what data is stored locally in accordance with the GDPR.

Since we consider local and session storage to be essential in this case, opt-in consent from website visitors is technically not needed. However, to err in the safe side, we comply with the obligation to inform according to Article 13 of the GDPR. In addition to cookies, we refer to the data storage in our cookie notice.

In addition to the Elementor local storage, we also intend to use Matomo Cloud for tracking visitor statistics. This data is also stored in Belgium. Matomo is a fully GDPR-compliant alternative to Google's Analytics for website. At the time of submission of this deliverable, this has not been implemented however.

Cookies are only stored on the visitors computer if they consent in the cookie notice. Following this, an option to manage consent is permanently available at the bottom right of each page.

A contact form is not provided on this website, as the added value and ease of use of such a contact form is not high enough considering the implication in processing data in terms of GDPR compliance.

Cookie policy

This Cookie Policy was last updated on March 30, 2023 and applies to citizens and legal permanent residents of the European Economic Area and Switzerland.

1. Introduction

Our website, https://odelia.ai (hereinafter: "the website") uses cookies and other related technologies (for convenience all technologies are referred to as "cookies"). Cookies are also placed by third parties we have engaged. In the document below we inform you about the use of cookies on our website.

2. What are cookies?

A cookie is a small simple file that is sent along with pages of this website and stored by your browser on the hard drive of your computer or another device. The information stored therein may be returned to our servers or to the servers of the relevant third parties during a subsequent visit.

3. What are scripts?

A script is a piece of program code that is used to make our website function properly and interactively. This code is executed on our server or on your device.

4. What is a web beacon?

A web beacon (or a pixel tag) is a small, invisible piece of text or image on a website that is used to monitor traffic on a website. In order to do this, various data about you is stored using web beacons.

5. Cookies

5.1 Technical or functional cookies

Some cookies ensure that certain parts of the website work properly and that your user preferences remain known. By placing functional cookies, we make it easier for you to visit our website. This way, you do not need to repeatedly enter the same information when visiting our website and, for example, the items remain in your shopping cart until you have paid. We may place these cookies without your consent.

5.2 Statistics cookies

We use statistics cookies to optimize the website experience for our users. With these statistics cookies we get insights in the usage of our website. We ask your permission to place statistics cookies.

5.3 Marketing/Tracking cookies

Marketing/Tracking cookies are cookies or any other form of local storage, used to create user profiles to display advertising or to track the user on this website or across several websites for similar marketing purposes.

6. Placed cookies

Elementor - Statistics (anonymous)

We use Elementor for content creation.

This data is not shared with third parties.

7. Consent

When you visit our website for the first time, we will show you a pop-up with an explanation about cookies. As soon as you click on "Save preferences", you consent to us using the categories of cookies and plug-ins you selected in the pop-up, as described in this Cookie Policy. You can disable the use of cookies via your browser, but please note that our website may no longer work properly.

7.1 Manage your consent settings

Functional (Always active)

The technical storage or access is strictly necessary for the legitimate purpose of enabling the use of a specific service explicitly requested by the subscriber or user, or for the sole purpose of carrying out the transmission of a communication over an electronic communications network.

Statistics

The technical storage or access that is used exclusively for statistical purposes.

Marketing

The technical storage or access is required to create user profiles to send advertising, or to track the user on a website or across several websites for similar marketing purposes.

8. Enabling/disabling and deleting cookies

You can use your internet browser to automatically or manually delete cookies. You can also specify that certain cookies may not be placed. Another option is to change the settings of your internet browser so that you receive a message each time a cookie is placed. For more information about these options, please refer to the instructions in the Help section of your browser.

Please note that our website may not work properly if all cookies are disabled. If you do delete the cookies in your browser, they will be placed again after your consent when you visit our websites again.

9. Your rights with respect to personal data

You have the following rights with respect to your personal data:

You have the right to know why your personal data is needed, what will happen to it, and how long it will be retained for.

Right of access: You have the right to access your personal data that is known to us.

Right to rectification: you have the right to supplement, correct, have deleted or blocked your personal data whenever you wish.

If you give us your consent to process your data, you have the right to revoke that consent and to have your personal data deleted.

Right to transfer your data: you have the right to request all your personal data from the controller and transfer it in its entirety to another controller.

Right to object: you may object to the processing of your data. We comply with this, unless there are justified grounds for processing.

To exercise these rights, please contact us. Please refer to the contact details at the bottom of this Cookie Policy. If you have a complaint about how we handle your data, we would like to hear from you, but you also have the right to submit a complaint to the supervisory authority (the Data Protection Authority).

10. Contact details

For questions and/or comments about our Cookie Policy and this statement, please contact us by using the following contact details:

EIBIR - European Institute for Biomedical Imaging Research
Am Gestade 1
1010 Vienna
Austria
Website: https://cancerimage.eu
Email: office@eibir.org
Phone number: +431533406420

This Cookie Policy was synchronized with cookiedatabase.org on March 30, 2023.

ANNEX: SCREENSHOTS

Swarm Learning

Our Vision And Our Mission

Mission

ODELIA's mission is to develop and implement a pan-European swarm learning network that enables privacy-preserving and democratic training of medical AI algorithms. By focusing on breast cancer detection in MRI screenings, the project aims to demonstrate the power of swarm learning and its potential applications in various clinical settings.

Our Vision For The Future

ODELIA envisions a future where swarm learning becomes a standard practice in the development of medical AI models, ensuring data privacy and fostering collaboration among healthcare institutions. The project aspires to pave the way for a new era of AI-driven medical advancements that empower healthcare providers and improve patient outcomes across Europe and beyond.
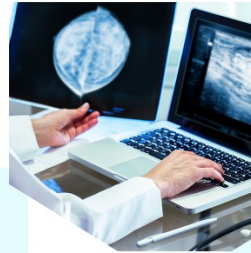
Collaboration

Fostering a strong, pan-European network of partners to collectively advance medical AI.

Innovation

Developing groundbreaking swarm learning techniques to transform medical imaging and diagnostics.

Impact

Striving to improve patient outcomes and healthcare decision-making by applying AI-driven solutions to real-world clinical needs.

Open Source - Open Access

Driven By Practical, Real-World Goals And Values

Manage consent

Privacy And Security

Ensuring patient data remains secure and confidential through decentralized training methods.

Accessibility

Creating open-source resources and tools, empowering the global research community and promoting widespread adoption.

Project Context

In a rapidly evolving healthcare landscape, the need for advanced AI-driven solutions and secure data sharing has become increasingly important. ODELIA tackles these challenges by harnessing the power of swarm learning, providing a decentralized, privacy-preserving approach to AI model training. By addressing the limitations of traditional AI training methods, ODELIA paves the way for improved diagnostic accuracy and enhanced collaboration among healthcare providers. The project focuses on the critical area of breast cancer detection in MRI screenings, demonstrating the real-world impact of swarm learning on patient outcomes and advancing the field of medical AI.

Interested To Found Out More?

Drop Us A Line And Keep In Touch!

CONTACT US →

ODELIA

What We Do And How We Do It
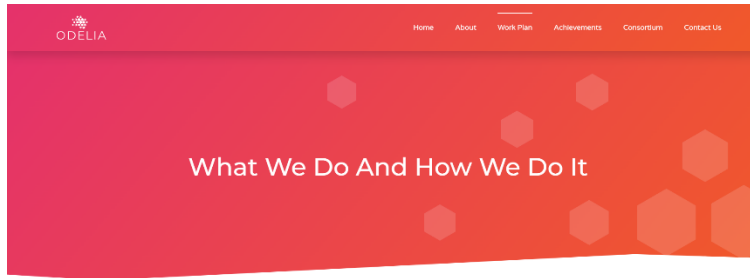
Our Workplan

The ODELIA project is structured to facilitate collaboration among a diverse consortium of partners, spanning multiple countries and disciplines. At its core, the project is organized into eight distinct work packages (WPs), each with a specific focus and set of objectives. These work packages are interconnected, ensuring a seamless progression from research and development to implementation and evaluation. Throughout the project, our consortium members leverage their unique expertise and resources to address complex challenges and drive innovation in medical AI and swarm learning.

Key Challenges & Solutions

CHALLENGE 1

Data Privacy And Security Solution

ODELIA employs swarm learning, a decentralized approach to AI model training that does not require sharing patient data or relying on a central coordinator. This approach effectively addresses data privacy and security concerns, allowing institutions to collaborate without compromising sensitive information.

CHALLENGE 2

AI Robustness And Trustworthiness Solution

By involving a diverse set of partners and using swarm learning to train AI models, ODELIA ensures that the resulting AI algorithms are more robust, generalizable, and trustworthy. The project also emphasizes transparency and open-source development, fostering trust and encouraging further collaboration.

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CHALLENGE 3

Regulatory Compliance And Adoption Solution

ODELIA works closely with regulatory bodies and policy makers to ensure that its AI solutions are developed in accordance with relevant guidelines and standards. This proactive engagement facilitates the swift adoption of ODELIA's AI models in clinical practice, bridging the gap between research and real-world applications.

CHALLENGE 4

Dissemination And Collaboration Solution

To maximize the potential of swarm learning and its impact on healthcare, ODELIA actively engages with opinion leaders, fosters collaboration, and initiates follow-up projects. By creating a marketplace for ideas and promoting the benefits of swarm learning, the project encourages widespread adoption and the development of new AI solutions.

Shaping The **Next Era Of Medical AI** With Swarm Learning

Our Work Packages

WORK PACKAGE 1
Creating A Minimum Viable Product

WP1 focuses on demonstrating the feasibility of swarm learning by setting up the necessary hardware at international partner sites and connecting them in a swarm. The work package then trains an AI algorithm using publicly available x-ray, CT, and MRI data.

WORK PACKAGE 2
Testing Local Models Against The Swarm

WP2 utilizes the swarm learning network to train an AI algorithm for breast cancer detection in MRI, using real data from clinical experts. Local models based on gathered data are trained and compared to models trained on the swarm. A public challenge is set up to engage the worldwide community and select the best model structure. Finally, the AI model is fine-tuned to account for regional data differences.

WORK PACKAGE 3
Open-Source Implementation Of Swarm Learning

In WP3, open-source code for swarm learning is implemented, making it accessible to the worldwide research community and enhancing it with functionalities important for clinical AI development. Active learning and access for regulatory bodies are added to facilitate regulatory adoption. The full working capacity of the product is demonstrated.

WORK PACKAGE 4
Front-End Development

WP4 is dedicated to building a front end that facilitates both data gathering for new AI model development and bridging the gap to clinical usability. A fully functional lightweight radiological image viewer is created for easy control over training inputs. This viewer is then amended to display the results of AI algorithms developed based on swarm learning. The clinical usability of both the AI algorithm and the front-end is tested on extended non-partner sites.

ODELIA

Achievements & Resources

Research Results & Publications

Take A Look At Our Latest Achievements & Resources

Discover The Most Recent Accomplishments And Resources From The EUCAIM Project As We Continue To Push The Boundaries Of Cancer Diagnostics And Treatment.

Publications & Reports

Dive into our latest scientific publications, where our team of experts share cutting-edge research and findings that are shaping the future of cancer care.

Browse through our comprehensive public deliverables and reports to stay up-to-date with the project's progress and learn about the milestones we have achieved.

Tools & Resources

Finally, take advantage of our innovative online tools, developed to provide researchers, clinicians, and innovators with access to invaluable data and insights, ultimately driving transformative advancements in cancer diagnostics and treatment.

Join Us On Our Journey Towards Revolutionizing Cancer Care Through The Power Of AI And Medical Imaging.

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Questions?

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Our Consortium
Uniting Expertise Across Europe

Driving Innovation
Meet The Team

The ODELIA consortium is a diverse and multidisciplinary team consisting of partners from numerous institutions across multiple countries. United by a shared vision for the future of medical AI, our team members bring together expertise in fields such as healthcare, artificial intelligence, data privacy, and more. With our strong collaborative spirit and dedication to innovation, we are working together to transform the landscape of medical AI and advance data privacy through swarm learning.

UNIKLINIK RWTH AACHEN

TECHNISCHE UNIVERSITÄT DRESDEN

VHIO VALL D'HEBRON Institute of Oncology

EUROPEAN INSTITUTE FOR BIOMEDICAL IMAGING RESEARCH

Radboudumc university medical center

UMC Utrecht

ribera

MHTEPF

OSIMIS

Universität Zürich UZH

UNIVERSITY OF CAMBRIDGE Department of Radiology

Fraunhofer MEV

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Get In Touch!
We're Happy To Explain Further

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We're Happy To Get In Touch With You!

Ask Us Anything!

We're Excited To Talk About ODELIA.
If You Have Any Questions, Let Us Know!

Give Us A Call

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Open Source Swarm Learning to Empower Medical AI