Deliverable D7.1

Plan for dissemination and exploitation including communication activities

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Project Acronym	AI4Life
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Change Log

Version	Date	Author	Description of changes
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v0.2	12.02.2023	Beatriz Serrano-Solano (EMBL-Bio-Hub)	Draft submitted for internal review
v0.3	12.02.2023	Florian Jug (HT)	Edits and suggestions
v0.4	20.02.2023	Beatriz Serrano-Solano (EMBL-Bio-Hub)	Draft submitted for consortium review
v0.5	06.03.2023	Arrate Muñoz Barrutia (UC3M)	Edits
v0.6	22.03.2023	Beatriz Serrano-Solano (EMBL-Bio-Hub)	Final draft approved

Acronyms and Abbreviations

AI	Artificial Intelligence
BMZ	BioImage Model Zoo
CoFest	Collaboration, Cooperation and Contribution Festivals
D	Deliverable
EOSC	European Open Science Cloud
ML	Machine Learning
PU	Public
RI	Research Infrastructure
v	Version
WP	Work Package

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Executive Summary

AI4Life is a project from the Horizon Europe Work Programme that brings together 10 partners from 8 countries into a 4 million EUR effort for 3 years.

The success of AI4Life relies on the development, deployment, sharing, and dissemination of AI-based methods for life scientists. Addressing diverse audiences, such as life scientists and computational experts, is hence crucial to bridging the gap between state-of-the-art AI methods and the life sciences.

This document outlines the dissemination and exploitation plan for AI4Life. A subsequent report on AI4Life workshops, hackathons (CoFests), and communication activities will be reported in deliverable D7.2 (month 30).

For this dissemination and exploitation plan, a stakeholder analysis has been conducted to identify target audiences that AI4Life addresses: life scientists, image analysts, computational experts, AI4Life partners, AI4Life consortium bodies, industry, national and international organisations, policymakers, funding agencies, and the general public.

Besides identifying stakeholders, this document also details project branding, including all outreach assets provided to project partners.

In terms of dissemination and exploitation, this deliverable describes the tools used to ensure that the different stakeholders are aware of the project outcomes and opportunities.

Finally, some ways to measure the impact of the plan delineated are gathered with a focus on the tracking of outreach activities and statistics derived from communication tools.

1. Introduction

The AI4Life project is part of the European Union's Horizon Europe research and innovation programme, led by the project coordinator Euro-BioImaging and participated by 10 partners, 4 of them being European Research Infrastructures themselves. The project started in September 2022 and will continue until September 2025.

AI4Life aims at bringing state-of-the-art AI-based image analysis to life scientists by establishing and supporting innovative services that target both researchers in the life sciences and computational methods developers in the AI and computer vision fields.

More specifically, the objectives of AI4Life are

- **Objective 1**: **Democratised availability of AI-based image analysis methods** as a FAIR service accessible through the AI4Life service landscape and computationally powered by the European Open Science Cloud (EOSC) infrastructure.
- **Objective 2**: **Establish standards** for the submission, storage, and FAIR access of reference data, reference annotations (ground-truth), trained AI models, and trainable AI methods.
- **Objective 3**: **Simple model deployment, sharing, and dissemination** of AI-based methods as a new developer-facing service of the [BioImage Model Zoo (BMZ)](#).
- **Objective 4**: **Organise Open Calls and Challenges** for outstanding image analysis.
- **Objective 5**: **Empower common image analysis platforms with AI tools.**
- **Objective 6**: **Organise outreach and training events.**

This deliverable is part of Work Package 7 (WP7), on 'Communication, Outreach and Training'. WP7 contributes to Objectives 3, 4, and 6 by creating awareness around AI4Life and the opportunities for life scientists offered throughout the project. For that, WP7 develops and implements a communication and outreach strategy as well as training opportunities for diverse audiences that could benefit from using AI-based analysis tools on image data.

In this document, the plan for dissemination and exploitation of the outcomes of AI4Life is described.

2. Description of work

2.1. Stakeholders

The main stakeholders of AI4Life fall within the following categories:

Stakeholder category	Definition
Life scientists	Scientists from the public and private sectors using imaging techniques with an interest in exploring AI methods for their research.
Image analysts	Staff, often working at imaging facilities, that support researchers in their image data analysis.
Computational experts	Experts working on the use and development of computational methods, e.g. methods making use of AI to help analyse image data.
AI4Life partners	Participants of the project that either provide services and infrastructure or are potential users of them.
AI4Life Consortium Bodies	There are 4 Consortium Bodies in AI4Life: • *Project Management Executive Board*, in charge of the project management. The Project Management Executive Board consists of the Administrative Coordinator, the Scientific Coordinators, and the Project Manager. • *Steering Committee*, a supervisory body for the execution of the Project that reports to and is accountable to the General Assembly. The Steering Committee consists of the Work Package Leaders and the Project Manager. • *Executive Board*, which oversees the Virtual Access ("VA") infrastructures and regularly assesses all services provided. The Executive Board is appointed by the General Assembly and steered by the Scientific Coordinators • *Open Calls Selection Committee*: oversees the Challenges and Open Call review and selection processes.
Industry	Members of industry interested in using the AI models provided at the BMZ and participating in the opportunities that AI4Life offers in the form of Open Calls and Challenges.
National and international organisations and initiatives	National, European or international initiatives, projects and organisations in the imaging or AI fields.

| Policymakers and funding organisations	Entities that support the implementation of science and the integration of science into policies.
General public	Individuals outside the primary users that might be interested in the project outcomes, such as imaging and/or AI enthusiasts, member states, scientific journals, and media (print, online, tv, radio, journals).

2.2. Branding

AI4Life presents a coherent branding strategy and provides the consortium members with a set of assets to facilitate their use for internal and external purposes.

2.2.1. Logo

The AI4Life logo features the giraffe, with a clear link to the BioImage Model Zoo branding. Since the project's launch, the giraffe has become a popular and identifiable icon among the stakeholders. It symbolises the role of the project as a service to the scientific community: AI4Life helps you to better analyse your image data, so you can not only pluck the low-hanging fruits.

The logo is available for white and dark backgrounds in 3 file formats (png, pdf, ai).

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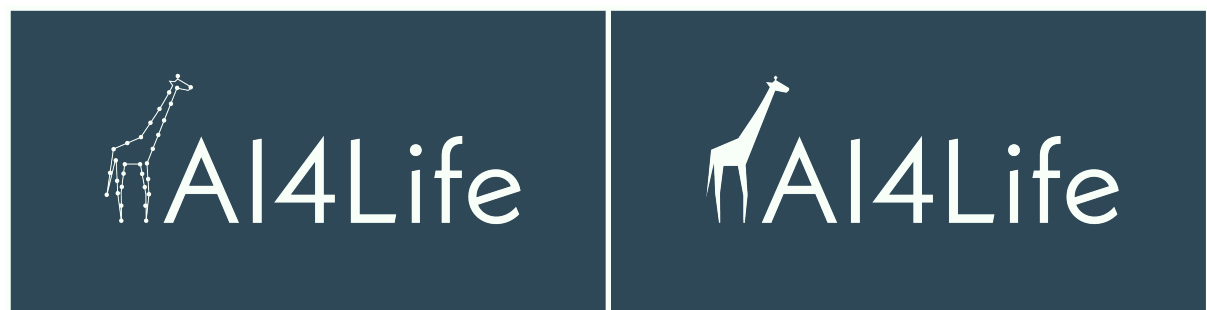
2.2.2. Representative image

Besides the logo, AI4Life provides an extra image that represents the aim of the project: bridging the gap between the life scientists' expertise and the availability of methods and expertise contributed by computational experts. The giraffe, as a symbol of AI4Life, supports life scientists on their way to computational methods.

All images are provided in 2 formats: jpg and pdf.

2.2.3. Templates

Templates are available to all project partners, ensuring clear and coherent communication of messages for different purposes:

- Presentations: a slide deck with an overview of the project (goal, partners, objectives, structure) is available in pptx format. Over time, all partners will contribute to a more technical slide deck that can be presented to more specific audiences.

- One-slide summary of the project ready to be inserted in presentations.

- Letterhead document for official communications.

- Template for deliverables of the project.

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2.2.4. Videos

The consortium foresees a number of videos for outreach and training purposes to be created during the course of the project. To facilitate the creation and present them in a coherent way, we have created intro and outro videos for the partners to use at the beginning and end of their own video recordings, tutorials, screencast, or any other video material.

2.2.5. Guidelines

All the mentioned assets (logo, representative image, videos, and templates) are part of an Outreach Support Pack, publicly available on the *Google Drive* of the project. The goal is to facilitate and encourage the use of communication materials. All of them, and the new ones that will be created based on the needs of the project, are aligned with the branding guidelines:

AI4Life will follow the spelling convention for the name of the project by only capitalising the first 2 letters ('AI') as shown in the logo of the project.

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2.2.6. Giveaways

Giveaways (flyers, stickers, pins, etc.) will be distributed in the events organised by AI4Life and stakeholders, being mindful of the environmental impact that they could create.

2.3. Text

In order to ease the usage of text in communications, AI4Life provides some boilerplate text and key messages that can be reused in different contexts.

2.3.1. Boilerplate text

A boilerplate text is available in the section *About us* on the website:

https://ai4life.eurobioimaging.eu/about-us/

AI4Life in a nutshell

AI4Life is a Horizon Europe-funded project that brings together the computational and life science communities.
Its goal is to empower life science researchers to harness the full potential of Artificial Intelligence (AI) and Machine Learning (ML) methods for bioimage analysis, particularly microscopy image analysis, by providing services, and developing standards aimed at both developers and users.
AI4Life promises to create harmonized and interoperable AI tools & methods via open calls and public challenges and bring these developments to researchers via strategic outreach and advanced training.
The services provided and solutions developed within the AI4Life framework are crucial to solving today's microscopy image analysis problems and will contribute to boosting the pace of biological and medical insights and discovery in the coming years.
The BioImage Model Zoo and FAIR data principles are core facets of the AI4Life project.

2.3.2. Key messages

Objectives	• Empower life science researchers to use AI and ML methods for their image data analysis. • Establish standards for FAIR AI models and data that enable interoperability between resources. • Provide infrastructure to deploy and share models.
Motivation	• Bridge the gap between state-of-the-art AI methods and life science problems.
Approach	• Organise Open Calls to support life scientists in solving their problems. • Organise Challenges for computational experts to solve complex AI problems. • Train life scientists to use AI models. • Engage computational experts through hackathons and CoFests to improve and develop new models.
Outcomes	• Make models available at the BioImage Model Zoo. • Make training data available at the BioImage Archive. • Establish standards that allow interoperability between resources.

2.4. Dissemination

Dissemination will take place through different channels, being the website the first contact point for partners and external members.

2.4.1. Website

The website (https://ai4life.eurobioimaging.eu/) serves as the primary source of information for all the stakeholders in the project. Euro-BioImaging has full editorial control over the content and encourages and welcomes contributions from all partners by sharing them with the WP7 leader. The website is structured as follows:

Main page	Subpage	Content	Status
About us	Objectives	Objectives of the project	Online
	Partners	Partners involved in the project: communities and RIs	Online
	Structure	Work Packages and distribution of work	Online

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	[Contact](#)	Ways to interact and engage with the project	Online
Life Scientists	[Open Calls](#)	Information about the past, current and upcoming Open Calls	Online
	Access Models	Link to the [BMZ](#) for scientists to retrieve models	Online in 2023 Q2
	Use Cases	Examples of user projects gathered from the Open Calls	Online in 2023 Q4
	Helpdesk	Direct user support (e.g., forum.image.sc)	Online in 2023 Q2
Computer Scientists	Challenges	Information about the challenges organized over the duration of the project	Online in 2024
	Submit Models	Link to the [BMZ](#) for scientists to submit models	Online in 2023 Q2
	Access Data	Link to data repositories	Online in 2024
Opportunities	[Training](#)	Report of training activities involving AI4Life and training materials generated	Online
	[Events](#)	List of workshops, hackathons organized by AI4Life partners	Online
	[Join Us](#)	Job opportunities offered within the consortium	Online
[News](#)		Examples of pieces of news that can be published on the website: • New model in [BMZ](#) • New community partner in [BMZ](#) • New publication from the partners • New service available • New standard developed • Deliverable published • Open Call announcements: launch, deadlines, updates… • Open Challenge announcements: launch, deadlines, updates… • Event organised • Interviews	Online

2.4.2. Social media

AI4Life has accounts in different social media platforms:

Platform	Account
LinkedIn	https://www.linkedin.com/company/ai4life-eu-project
Mastodon	https://qoto.org/@AI4Life
Twitter	https://twitter.com/AI4LifeTeam
YouTube	https://www.youtube.com/@ai4life

The primary goal of the *Mastodon*, *Twitter,* and *LinkedIn* accounts is to promote activities and share relevant content about the project and retweet/repost from the AI4Life partners. *YouTube* will be used to host original content developed in the project for training and outreach purposes. The content posted on all the mentioned platforms can be embedded in the website.

2.4.3. Newsletter

We will release quarterly email newsletters in March, June, September, and December to address everybody interested in the project news and outcomes. There might be *ad hoc* communications upon relevant events within the project, such as the Open Calls and Challenges. All the published newsletters will also be accessible on the AI4Life website.

Anyone can subscribe via the online form at https://bit.ly/ai4life-newsletter, where we employ double opt-in registration in a GDPR-compliant way by providing name, affiliation, and email address. Additionally, the signup form is also embedded on our website.

Euro-BioImaging will create and send the newsletter using WordPress. The content will be related to AI4Life and the consortium member activities, with third-party announcements, only included when considered relevant to the recipients.

Euro-BioImaging will request content from the project partners regularly to be included, first, in the *News* section of the website and second, gathered in the quarterly newsletter. Since the AI4Life stakeholders are diverse and from a mix of life sciences and computational backgrounds, the language used has to be understandable for both of them.

2.4.4. Publications

Publications are a key aspect of scientific research. We will encourage the Open Call applicants and participants in Open Challenges to publish their results in open-access journals.

In hackathons (CoFests), we will encourage participants to write up the outcomes in preprints and upload them to BiohackXiv.

To acknowledge the funding, publications need to use the following sentence:

> AI4Life has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement number 101057970.

2.4.5. Zenodo

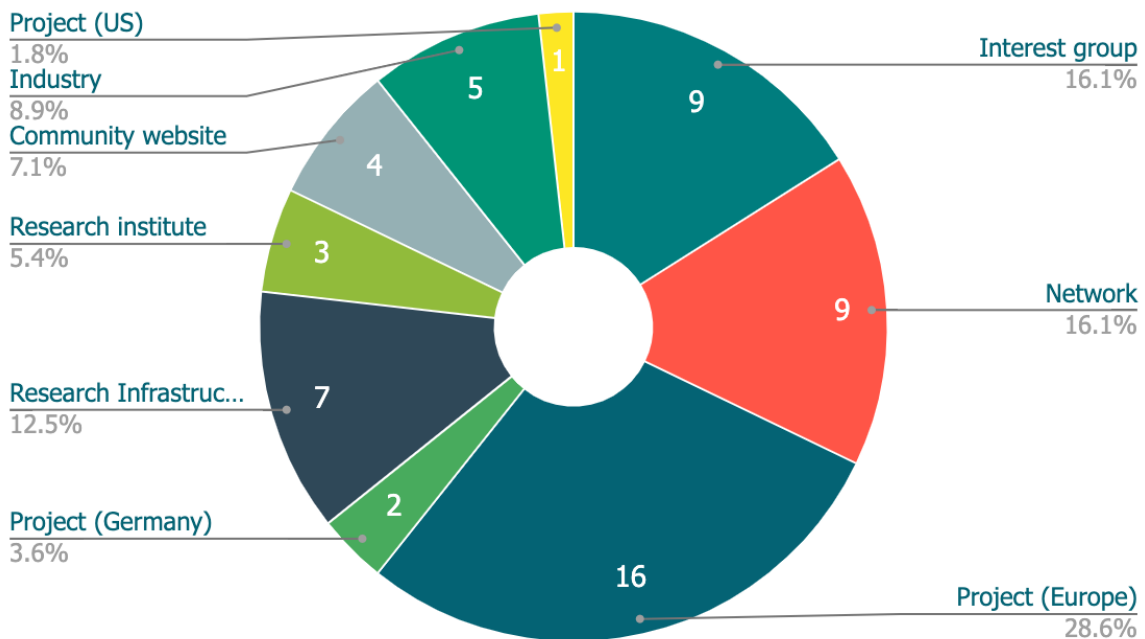AI models and associated training datasets are currently deposited in a Zenodo Community created for the BMZ.

For deliverables, reports, and other outcomes of the project, the Zenodo AI4Life Community will be used instead.

2.4.7. Other channels

For topics around image data analysis, the imaging community gathers around the image.sc forum, where questions and answers are exchanged vividly. AI4Life plans to use this forum extensively to stay in touch with the community and to provide support regarding AI4Life-related topics. For that purpose, an account for the project has been created: https://forum.image.sc/u/ai4life

To further disseminate outcomes and results, AI4Life partners have been requested to provide communication contact details (name, description, type of channel, contact point, and who can reach out) for the abovementioned stakeholders. At the time of writing this deliverable, we have collected 56 channels of different sorts:

Channels collected by the AI4Life partners for dissemination

Project (US)
1.8%
Industry
8.9%
Community website
7.1%
Research institute
5.4%
Research Infrastruc...
12.5%
Project (Germany)
3.6%
Interest group
16.1%
Network
16.1%
Project (Europe)
28.6%

2.5. Exploitation

It is essential to advertise the opportunities that AI4Life offers to both life scientists and computational experts. The scientific community will directly benefit from the work done in AI4Life through different activities such as Open Calls and Challenges. WP7 will support their promotion and other outreach and training activities organised by all WPs of AI4Life.

Last but not least, we want to mention that industry partners will be invited to all the above-mentioned events, hopefully leading to fruitful partnerships and potential post-funding sustainability options.

The following sections outline the main project exploitation routes.

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2.5.1. Open Calls

Open Calls are a way for AI4Life to offer computational support and direct help and solutions to life scientists. Three Open Calls will be launched in total (one per year, in 2023 Q1, 2024 Q1, and 2024 Q4), each aiming at supporting life scientists and microscopists to analyse their image data. A timeline for Open Call launches has been published on the AI4Life [website](#).

Dedicated posters, pre-prepared texts, zoom background and summary slides will be distributed among all partners to foster the promotion of the Open Calls in their own circles and communities.

The mailing list ai4life@eurobioimaging.eu will be the primary contact point for Open Call applicants.

Over the duration of the Open Call project, estimated in 6 months, Collaboration, Cooperation and Contribution Festivals (CoFests) will be organised to (1) understand the needs of the applicants and (2) work together on developing models to improve the state-of-the-art on how image data is analysed so far. When these events are hosted in person, giveaways will be distributed among the participants.

After each Open Call project phase, a number of selected projects will have been supported by AI4Life. Results will be made publicly available to the respective partners and all other members of her/his community to also benefit from the new achievements. The original problem and the solution we have worked out will also be summarised for interested lay audiences and published in the AI4Life newsletter, on our homepage, and via other visible outlets.

2.5.2. Open Challenges

Open Challenges are an opportunity for computational experts to improve on the best existing methodological approaches to solve a given image analysis task. Open Challenges will take inspiration from pressing real-world problems as they have been brought to us via the above-mentioned Open Calls. In some instances, e.g., when a Challenge topic is especially urgent to make progress with, we will even have prizes for best-performing contributors, i.e., submissions that improve the quality of automatically generated solutions to the tasks and exercises the Challenge is composed of.

Besides this, Open Challenges come with another big advantage for participants: if one can show that a given method is the best-performing approach for a given task, publishing this method is typically much easier. Hence, our Open Challenges will lead to healthy competition among computational experts that might otherwise solve tasks that would not have a direct impact on life sciences.

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2.5.3. Other Events

Training events will regularly be organised. These events are open for everybody to join or apply for. For example, there will several user-facing training events on AI methods for bioimage analysis.

Project partners are encouraged and eager to represent AI4Life at national, **European and international conferences**. A list of relevant events over the course of the project has been provided to the partners. AI4Life will be advertised at all these events, and branding materials will be distributed among the participants.

Members of AI4Life are also part of conference organising committees and will, whenever possible, suggest making AI4Life visible within the respective conference to be organised. One prime example is I2K (*From Images to Knowledge*) which will, unfortunately, only happen once during the project runtime of AI4Life, in 2024.

Last but not least, we would like to mention developer-facing hackathons (CoFests). These events have two purposes: *(i)* reaching out to creators of popular image analysis software packages and supporting them to adopt the standards, libraries, and models we develop and provide within AI4Life and via bioimage.io, and *(ii)* team up with with the tool developer community to find solutions for technical challenges of all sorts.

2.5.4. Data and Model sharing

All the data derived from the project activities will be made publicly available in the BioImage Archive and (so far) on Zenodo. The models will be available for download and reuse in the BioImage Model Zoo.

2.6. Impact measurement

2.6.1. Tracking and monitoring

All WP are responsible for the dissemination and exploitation of the project outcomes.

To monitor the impact, we have set up a *Dissemination Registry* and circulated it among the partners to include all the events and project outcomes. This registry contains the date, type of event, name of the event, host institution and organisers, audience, speaker, and title of the contribution.

2.6.2. Communication metrics

We will gather and analyze metrics from the social media platforms (Twitter, LinkedIn, YouTube) and the AI4Life website.

WordPress makes available all the information related to the spread of the newsletter, such as the subscriber trend, click and opening rates.

3. Conclusion

The AI4Life Dissemination and Exploitation plan describes the strategy to reach out to specialised communities and other stakeholders. It will serve as a guideline for the consortium to raise awareness of AI4Life coherently, facilitating the partners' outreach activities and giving visibility among different target audiences.

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