Project Acronym: **GAIN**

Project Full Title: **Georgian Artificial Intelligence Networking and Twinning Initiative**

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Contents

1. Executive Summary

This document describes the **Dissemination, Impact and Sustainability Plan, Version 1** (D.5.5) of the project GAIN.

Document History			
Version	Date	Contributors	Description
1	27/02/2023	J. Alexandersson, P. Müller, A. Girenko – DFKI; F. Bremond, A. Konig – INRIA; G. Giorgobiani - MICM	Dissemination, Impact and Sustainability Plan, Version 1
2	03/03/2023	P. Müller, J. Alexandersson, A. Girenko – DFKI; F. Bremond, A. Konig – INRIA; G. Giorgobiani - MICM	Dissemination, Impact and Sustainability Plan, Version 1
3 (final)	18/03/2023	P. Müller, B. E. Wirth – DFKI; F. Bremond, A. Konig – INRIA; G. Giorgobiani - MICM	Dissemination, Impact and Sustainability Plan, Version 1

2. Versions and Updates

According to the DoW of the project, the dissemination, impact and sustainability plan will be updated in the middle of the project as Version 2 (Deliverable 5.7). Updates will be made based on the analysis and evaluation of dissemination activities of the past period according to the Dissemination/ Communication KPIs set out in the project. Finally, the Dissemination, Impact and Sustainability Report will be presented at the end of the project (Deliverable 5.6).

3. Introduction

As is set out in the project, Dissemination and Communication activities (together with the plan for the Exploitation of results) are the measures to maximise Impact. Despite being separate concepts, the Dissemination Strategy as well as the Communication Strategy are tightly interlinked and both ensure the Sustainability of the project's results. The project will continuously evaluate the impact of its activities and design the subsequent follow-up measures to ensure the sustainability and organic development of the project results.

4. Strategic impact of GAIN

The aim of the project is to strengthen the research, innovation and networking capacities of MICM to allow this organization to join the community of leading European research institutions in the area of AI. This achievement will be indicated by a substantially larger involvement of MICM in Horizon Europe, subsequent Framework Projects, and other R&I initiatives and networks in Europe. Furthermore, the success of the project can be measured by the number of resulting joint peer-reviewed publications, by the number of organized scientific events and other metrics (see Annex). For Georgia, the widening country involved in project GAIN finding its way into the European research community, this will represent an important element of the implementation of the European Integration Strategy in the fields of research and innovation.

The European research community will benefit thanks to the engagement with a new competent, dynamic, and capable partner organization with a significant research potential and access to complementary expertise and information resources – the most important aspect for successful research activity in the priority field. Moreover, being a central national research organization in the field, MICM will play a larger role as a middleman between European and regional research and innovation communities.

4.1. Expected outcomes

According to the work programme, there are 5 main expected outcomes of the GAIN project:

4.1.1. Improved excellence capacity and resources

Improved excellence capacity and resources will allow to close the still apparent research and innovation gap between widening countries and Europe. This will be achieved by two measures:

1. GAIN will build a new quality of research capacities in the field of artificial intelligence in the widening country, Georgia, with the help of the 2 leading European RTD performers in the field (INRIA and DFKI). Thus, the project will contribute to converging EU and Georgian research communities in the priority area.
2. Three new research groups will be established:
   - ✓ Machine Learning for deep speech analysis
   - ✓ AI methods for human behaviour recognition
   - ✓ AI methods for data fusion.

4.1.2. Enhanced strategic networking activities

The project aims at enhanced strategic networking activities between the research institution MICM and at least two internationally-leading counterparts at EU level. The project will enable joint research activities involving key research personnel of all partners, thus linking

them together via professional and personal relations. Moreover, the capacity building activities in research, innovation, and management will also contribute to establishing professional networks between MICM personnel and the peers in France and Germany. Two leading European research institutes and an innovative high-tech company will make their capacities available for networking.

4.1.3. Raised reputation, research profile and attractiveness

The project aims at raising the reputation, research profile, and attractiveness of the coordinating institution MICM and the research profiles of its staff. By involving the researchers of MICM in their mainstream research projects, the European partners will enable them not only to raise their professional qualification, but also to publish in prestigious journals and to present at leading conferences. This is the main way to improve scientific reputation. The target publication opportunities, conferences, and respective KPIs are given in the Tables 1, 2 (see Annex).

4.1.4. Strengthened research management capacities and administrative skills

The project's goal is to strengthen research management capacities and administrative skills of the staff working at MICM. The project activities will involve the managerial and administrative staff of MICM, who will be offered various forms of training (events, on-the-job, placements) in order to facilitate and support the research excellence at MICM. Moreover, the respective practices at MICM will be modernized using the experiences of advanced partners. The goal is to make the managerial and administrative structures of MICM responsive to the evolving environment, capable of competitive fundraising, and supportive towards innovation.

4.1.5. Improved creativity

The project aims at improving the research creativity at MICM, which will be supported by the development of new approaches in R&I collaboration and by the increased mobility (inwards and outwards) of qualified scientists. One of the aspects of the joint work on the TRIP[1] is the research co-creation methodology, which is widely accepted among the advanced research partners. Practically, this is realized by involving all relevant stakeholders (e.g., clinical personnel, technical partners, potential patients, etc.) in the planned research. This will result in better research outcomes and higher acceptance of research-based technologies. This practice and the methods of co-creation will be transferred to MICM. The project research and capacity building activities will also provide a supportive environment regarding the

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[1] Twinning Research and Innovation Programme

mobility of the research and supporting personnel (taken together, up to 100 person/trips will be supported).

5. Dissemination, exploitation and communication

The project dissemination and communication activities are designed to maximally contribute to attaining the overall project goal – the integration of MICM into the community of leading European research organizations in the field of AI. Therefore, the project dissemination will be focused on spreading the research results obtained through pursuing the TRIP and address the research audience, while the communication activities will address the wider audience of stakeholders, such as policy-makers, authorities, businesses, and the general public in Europe and in the South Caucasus region, in order to shape an image of MICM as a regional centre of excellence.

The dissemination and communication activities will address the following target groups:

- European researchers and research bodies in the field of AI. The project will employ the most natural and effective dissemination channels for this target group: scientific conferences and workshops, research paper publications, research training activities, etc. – all aspects of core research activities.
- R&I policy level and networking bodies. The project will use direct contacts to several selected European organizations and networks of that kind, namely EIT, CLAIRE, ELLIS and ADRA, as well as AI networks of excellence. INRIA and DFKI are core participants/members. Therefore, capitalizing on the networking capabilities of these institutions, MICM will be introduced and promoted.
- Innovative businesses, governmental bodies, and NGOs as potential users of the MICM services. Traditional dissemination and marketing tools (online dissemination visibility at events, direct contacts) will be applied in this case.
- General public. The project will promote the benefits and added value of the European S&T cooperation in the field, highlighting the impact on quality of life in Europe and in the South Caucasus, as well as the impact on other key European policies.

5. 1. Dissemination Towards Research

The primary target group is European researchers and research bodies in the field of AI. Major research results of the TRIP such as journal articles, conference talks and presentations, Open Access databases, etc. will be the main dissemination material to reach the target groups.

5.1.1. Dissemination Opportunities

Major dissemination opportunities are defined in accordance to the two topics (subprojects, D 2.1) as follows:

Topic 1: AI Methods for Deep Speech Analysis in Health.

❖ **Planned scientific results**
  o Methodology and tools (transcription, annotation, etc.) for developing multilingual corpora of dialogue data for the target application
  o Methodology and tools for transfer learning and domain adaptation, especially for low-resourced languages (e.g. Georgian)
  o New solutions for several application areas, e.g. machine learning tools for extracting bio markers of mental/mood disorders (e.g. depression, stress) from speech.

❖ **Relevant conferences to be attended**
  o International Conference on Human-Computer Interaction (HCI International)
  o EAI International Conference on Pervasive Computing in Healthcare
  o International Conference of Experimental Linguistics (ExLing)
  o International Conference on Computational Semantics (IWCS)
  o Annual Meeting of the Association for Computational Linguistics (ACL)
  o International Joint Conference on Artificial Intelligence (IJCAI)
  o Association for the Advancement of Artificial Intelligence Conference (AAAI)
  o Conference on Empirical Methods in Natural Language Processing (EMNLP)
  o Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)
  o Interspeech
  o IEEE Joint Conference on Neural Networks (IJCNN)
  o IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)

❖ **Relevant publication opportunities**
  o Machine Learning Journal. Springer
  o IEEE Transactions on Affective Computing
  o Lecture Notes in Computer Science. Springer
  o Respective Conference Proceedings.

Important vehicles for networking (and capacity building) will be the relevant ongoing projects at the partner institutions: MePheSTO, KI@HOME (German project in the field of AI technologies for "smart ageing" at home, BMWi), RICAIP (Research and Innovation Centre for Advanced Industrial Production, H2020), TRACTAT (Transfer-of-Control between autonomous system and Humans in cyber-physical environments, BMBF), Sister Twinning Projects Focus Group, initiated by the project EPIBOOST, etc. Along the project implementation new, in-planning projects will be considered as well.

Topic 2: AI Technologies for Human Behaviour Understanding

❖ **Planned scientific results:**

- o Methodology for the comparative analysis of machine learning methods,
- o Recommendations for optimal use of machine learning methods for video analytics,
- o New solutions for several application areas (e.g. ML tools for the extraction of bio-markers of mental disorders (e.g. depression, stress) from video).

❖ **Relevant Scientific Conferences:**

- o IEEE European Conference on Computer Vision (ECCV),
- o IEEE Winter Conference on Applications of Computer Vision, WACV,
- o IEEE International Conference on Advanced Video and Signal-Based Surveillance, AVSS,
- o IEEE International Conference on Computer Vision, ICCV,
- o IEEE Conference on Computer Vision and Pattern Recognition, CVPR.
- o ACM International Conference on Multimedia (ACM MM)
- o ACM International Conference on Multimodal Interaction (ICMI)
- o Affective Computing and Intelligent Interaction (ACII)
- o ACM Symposium of Eye Tracking Research & Applications (ETRA)

❖ **Publication opportunities:**

- o PAMI, IEEE Transactions on Pattern Analysis and Machine Intelligence Journal
- o Lecture Notes in Computer Science. Springer
- o Respective Conference Proceedings.

Relevant research network opportunities will be provided by the INRIA Stars Team, which is a member of several European and French projects (e.g. MePheSTO, DeepSPA, Silver-Economy, SafEE, Activis, and Reminary). The INRIA Stars Team collaborates with several prestigious academic institutions: Univ. Reading (UK), Kingston (UK), DFKI (D), Tainan (Taiwan), USC (Los Angeles, USA), Beijing – CAS (China), CHU Nice, as well as industrials Nively, FantasticSourcing, Thales, Digital Barriers (Keeneo), ESI. INRIA Stars has a strong ties with CoBTeK and Nice hospital.

5.1.2. Open Access and FAIR data principles

To enhance the visibility of the obtained research results, the GAIN consortium has reserved funds for covering the fees for Open Access publications (papers, books). GAIN will seek Gold Open Access publishing options and will also ensure that the articles reporting the project results will be published

in journals with high scientific impact and coverage. In cases, where the gold model is not feasible (e.g., if the budget for open access is exhausted), open access will be provided according to the "Green Model" (i.e., publications are made available on the project website after a potential embargo period).

As given in the data management Plan (Deliverable 6.3), the scientific data will be managed according to the 4 principles of FAIR Data: Findability, Accessibility, Interoperability and Reusability.

5.1.3. Zenodo Platform

Zenodo (https://zenodo.org) is a general-purpose open repository enabling researchers from all disciplines to share and preserve their research output, regardless of size or format. Free to upload and free to access, Zenodo enables long-term citation, sharing and discovery of research results of any kind. The project GAIN has created an account and a community (Deliverable 6.3) by the name "Georgian Artificial Intelligence Networking and Twinning Initiative" at the Zenodo platform (see Figure 1 in ANNEX).

5.1.4. GESJ: Computer Sciences and Telecommunications

MICM curates a journal by the name of "Georgian Electronic Scientific Journal, Computer Sciences and Telecommunications" (https://gesj.internet-academy.org.ge/, ISSN 1512-1232), which is completely Open Access, purely electronic, and has no publication fees. The aim and scope of the journal is to support the development of computer science and related branches in Georgia. Covered research areas include Computer Sciences, Telecommunication, AI, Machine Learning, Statistics, etc. The journal is indexed in Google Scholar. The Editorial Board strives to enhance the indexing and apply for the Scopus, Elsevier Abstract and Citation Database in the near future. The journal will be an additional opportunity to publish the new results obtained within the GAIN project.

5.2. Event-based dissemination

The project will organize a set of scientific events aimed at presenting the research results and, indirectly, promoting MICM, its personnel and capacities. The following events will be organized as an integral part of the Scientific Excellence and Networking Capacity Building programme:

- Three Scientific workshops matching the research topics of the TRIP. In order to increase the impact, all workshops shall be collocated with relevant significant community events, such as European-level scientific conferences or other similar event. The identification of suitable options will be done by the respective European topic leaders and included into the dissemination plan. The scope of each event shall be 30-40 participants (at least 75% of them – from outside of the GAIN consortium). Moreover, the project will take efforts to increase the visibility of MICM at "parental" conferences by putting posters, distributing other promotional materials, organizing Days of MICM/Georgia ("Georgian AI Days"), etc.
- One final project conference with a title to be developed during the 2nd project year will be held in Tbilisi (Georgia). This conference will be a scientific event of high visibility where the TRIP

results are presented and where MICM – as the hosting institute – can be introduced as a new member of the European AI community. In order to attract quality attendance, the consortium will make the following arrangements

- The Conference proceedings will be published as an Open Access book (prime target Springer Nature publishing, Wiley, Elsevier, or other)
- Three to four leading international experts will be invited as keynote speakers
- The conference participation fee will be either waived or reduced to a minimum (to be decided after the 1st project year).

The local team will mobilize resources to increase the impact of the event by the following measures:

- Policy level visibility will be ensured by organizing an AI S&T policy panel with participation of the representatives of governments, CLAIRE, AU4EU, and other relevant stakeholders.
- An attached industrial and innovation exhibition with the participation of local and European companies presenting innovative added value products and services, AI technologies, etc. will be held.

- Dissemination through 2 Summer Schools organized during the 1st and 2nd project years[2]. The goal will be to initiate a sort of "viva voce, word-of-mouth" spreading of information about MICM through the European participants of the schools. In order to increase the impact, the design of the schools (e.g. definition of topics, speakers, marketing and selection policy, etc.) will give the priority to those who are closer to a scientific career (ESRs, including MSc. and PhD students). The following measures will increase the attractiveness of the schools:
  - Cutting-edge training topics and best trainers (where necessary the invitation of external trainers will be considered)
  - Opportunities for networking and participation in running TRIP projects
  - No or little participation fee
  - Interesting social programme.

- Dissemination through online webinars open for external participants. The scientific training offered at the webinars will be based on the content and results of TRIP. Moreover, the recordings of all webinars will be openly available from the project website, which will extend the visibility and dissemination impact.

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[2] The first Summer Schools will be organized by INRIA, September 2023, Sophia-Antipolice

5.3. Exploitation

Though the research activities mainly play a facilitating and enabling role to integrate MICM into ERA, the project will also deliver research results with a potential to be exploited and transferred to economy and society. The project exploitation planning activities comprise:

- Two topics of the TRIP will indicate their exploitation targets, namely potential application domains for all principle results and products/services produced within the project, degree of maturity, ownership, where appropriate IPR protection and sharing mechanism, time-to-market, other parameters important for exploitation planning
- New knowledge (exploitable results) will be detected
- During the 3rd project, year MICM will implement the exploitation planning for all detected items of exploitable results (with the assistance of EXO). The resulting exploitation plan will be included in to the final project report.

An important element of the project exploitation strategy will be the pilot innovation sub-project to be implemented during the 3rd project year. Using the experience obtained through the collaboration with EIT and utilizing EXO's expertise in innovation-related activities, the project will select one of the most promising and high impact research results and implement a set of innovation activities in order to bring it closer to the market. This will include any steps typical for any innovation projects, for instance, business case development and business modelling, market research, IP regime definition, initial marketing, etc. Additionally to using the exercise as a training tool for innovation capacity building, it will also ensure the exploitation of some of the project results.

5.4. Communication activities

The project communication activities will target a broader audience and contain mainly information with a socioeconomic focus. The goal will be to raise awareness of GAIN and to promote the project and MICM as a main driving force behind it. The project will employ traditional PR tools.

5.4.1. Online Communication Tools

Project Website, Version 1:
The GAIN consortium has already designed the Project Website, Version 1 (https://www.gain-twinning.eu/) as part of Work Package 5 "Visibility and Social Impact" (D. 5.1). The website (which will be updated to Version 2 in the middle of the project), will be maintained for at least a period of three years after the project's end (see Figure 2 in ANNEX).
Through the public area of the GAIN web platform, public information will be disseminated, e.g., public deliverables, open data repository for the scientific publications (Zenodo Platform), events, news, etc. In addition, the web platform will include a private area for the distribution of restricted information amongst the consortium members and for the management.
Version 1 of the project website is designed by the researchers of MICM with active participation of all

the partners of the project. Its initial design and functionality was agreed upon with the project steering board at the kick-off meeting of the project, which was held at MICM, Tbilisi, 19 October, 2022.

Technical parameters

- The project website is publically accessible at https://gain-twinning.eu
- The web hosting service is provided by DFKI
- The website is built by use of the WordPress technical platform, which enables flexible updating.

Social Media

The consortium will also utilize social media for the dissemination of the GAIN project. The respective social media micro-sites will be established to spread special target-group tailored information from the GAIN project to the users of these platforms and direct them to the GAIN website. In order to enable the best user experience, everything on the public area of the GAIN website will be liked and shared via Facebook and LinkedIn, which are already linked to the project website. The consortium will also examine the distribution of multimedia material through YouTube, which will include a promotional video of MICM.

5.4.2. Non-Electronic Communication

This channel includes classical means of knowledge transfer such as leaflets, brochures and articles in magazines, publications in broadcast media and business papers focusing on the promotion of the project and MICM for the general public, policy makers, businesses, NGOs, etc.

5.4.3. Interactive Communication

This channel will offer a chance for personal interaction in academic, professional, and socio-economic conferences and workshops, EU organized events, trade fairs and exhibitions. It is intended for target groups with a high level of information need as well as involvement and provides information tailored to highly targeted audiences.

6. Acknowledgement

The acknowledgement is defined in the communication strategy and it follows the requirements for promoting EU funding in line with the grant agreement. For the purposes of the scientific acknowledgement, the following cases have been identified:

- **For scientific and other results** (i.e., as part of publications when registered or submitted) the following acknowledgement must be used and can be (but not necessarily) modified according to the type of the result / outcome:

This scientific result (scientific article / conference abstract / patent / SW / technology / report / study / design / utility model / prototype / event...) is part of the European Commission HORIZON EUROPE WIDERA-2021-ACCESS-03 Grant Project GAIN (grant agreement no.101078950)

- **For the Authors** following acknowledgement must be used:

The author (Name, Surname) was (partially) supported by the European Commission HORIZON EUROPE WIDERA-2021-ACCESS-03 Grant Project GAIN (grant agreement no.101078950)

ANNEX

Institutional KPIs to be used to monitor the evolution of MICM capacities

Number	Key Performance Indicators	Target for the end of the project
Scientific performance		
1	Number of peer-reviewed publications	25
2	Number of peer-reviewed publications per researcher	1
3	Number of presentations at scientific conferences	30
4	Number of publications/presentations co-authored by young researchers	40
5	Number of scientific conferences, workshops, symposia organized	10
6	Number of MSc and PhD dissertations defended	5/3
7	Number of researchers affiliated with the Joint Virtual Laboratory	25
8	Number of international project proposals submitted/accepted	10/3
9	Combined h-index of MICM researchers (sum)	40
10	Average "time-to-depreciation" of the MICM research equipment	30 months
	To be developed further	
Innovation performance		
1	Number of patents (by category: world-wide, European, national) granted	1/1/3
2	Number of other IPRs protected (copyright, industrial design, etc.)	3
3	Number of spin-off companies established	1

4	Number of knowledge transfer agreements and other types of licenses provided	3
5	Number of new products/services based on research results brought to the market	3
	To be developed further	
Economic performance		
1	Volume of the research budget (annual)	0,7 MEuro
2	Share of competitive funding in the research budget	50%
3	Share of non-governmental funding in the research budget	10%
4	Share of international project funding in the research budget	30%
5	Volume of funding accumulated in Joint Virtual Laboratory thanks to GAIN	150,000 euro
6	Return on Investments (through equity in spin-off companies, licensing, etc.)	10,000 euro
7	Research budget per researcher	15,000 Euro
	To be developed further	
Human Capital		
1	Percentage of staff members with doctoral degrees	60%
2	Average age of research staff	45
3	Age balance (percentage of researchers in age groups)	40% under 40
4	Percentage of women in research staff	30%
5	Percentage of staff members with acquired new skills	75%
	To be developed further	
The Strategic Development Plan to be developed as a result of GAIN will include the detailed description of the Evaluation Procedure with full-blown system of KPIs (including target values per KPI)		

Table 1.

For the GAIN project evaluation, the consortium will use the following KPIs (tentative, will be extended)

No.	Key Performance Indicator	Target value
1	Number of consortium staff members participating in the research mobility	60
2	Number of established contacts (research leads) with potential collaborators outside of the GAIN consortium	100
3	Number of committed strategic supporters (local and international)	10
4	Number of European organizations expressing interest to cooperate (LoI)	20
5	Number of research proposals where MICM is invited to participate	10

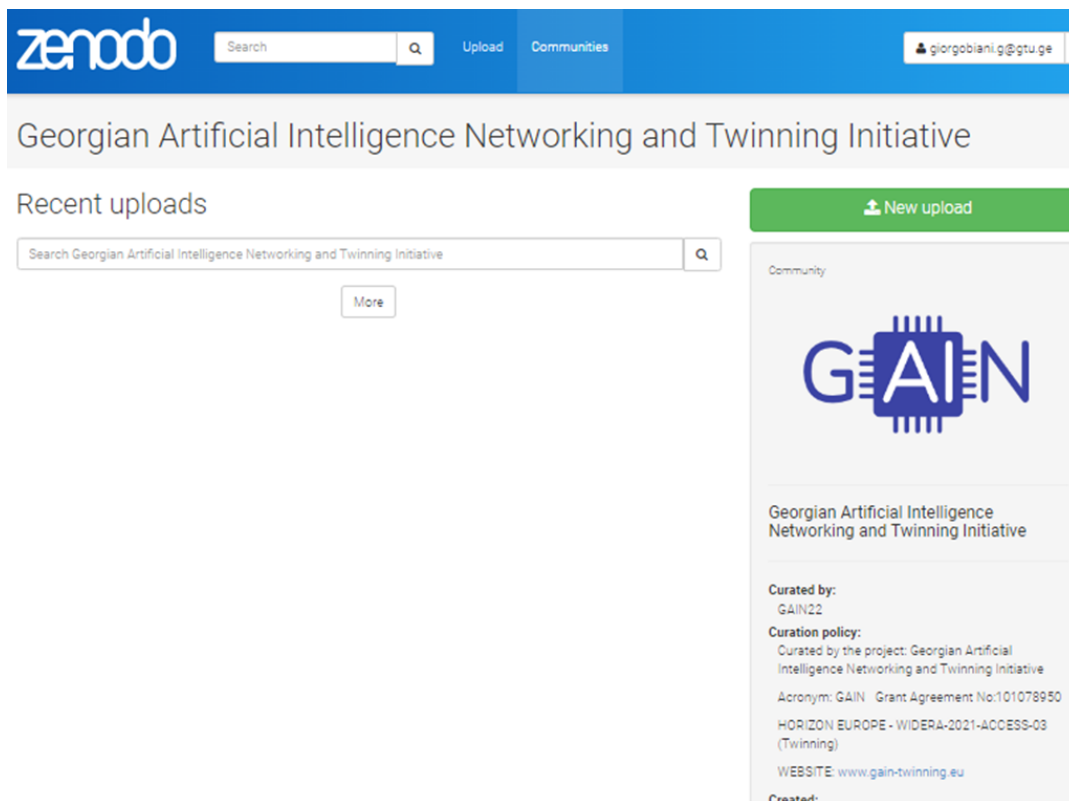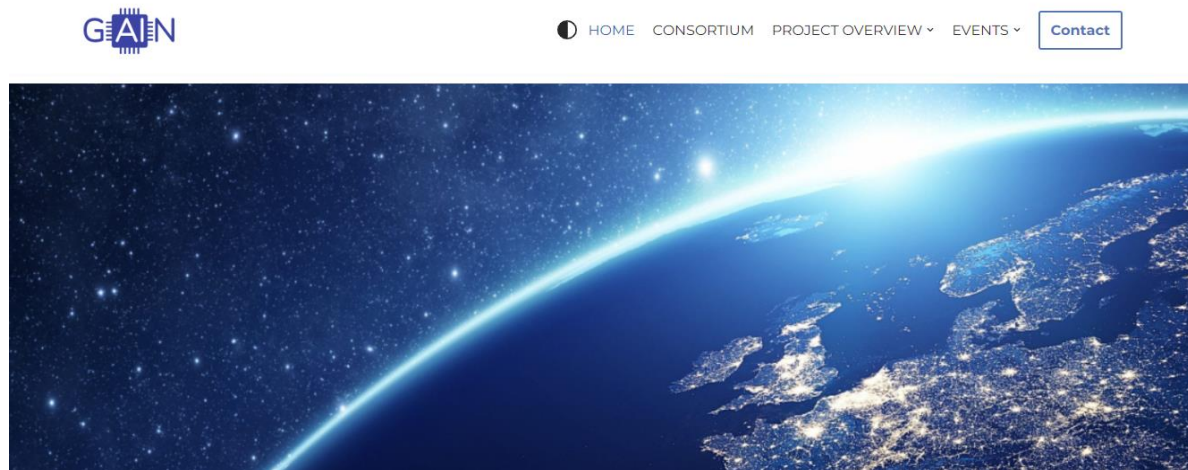| 6	Number of research events organized by the project	11
7	Number of research papers (non peer-reviewed/peer-viewed) published on the basis of results received through the TRIP implementation	45/25

Table 2.

Figure 1.

Figure 2