Sign Language Translation Mobile Application and Open Communications Framework

Deliverable 6.4: Final Annual Report on

Communication and Dissemination Activities

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Overview: This document gives an overview of the communication and dissemination activities in the SignON project to date.

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Approval Procedure

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V0.1	D6.4	Vincent Vandeghinste	INT	07/12/2023

Acronyms

The following table provides definitions for acronyms and terms relevant to this document.

Acronym	Definition
SO	Strategic Objectives
DHH	Deaf and Hard of Hearing
TRL6	Technology Readiness Level 6 (*technology demonstrated in relevant environment*)
WP	Work Package

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1. Introduction

In daily life, deaf and hard-of hearing (DHH) individuals often encounter communication barriers with hearing people. Frequently, they resort to their repertoire of various communication methods, such as written communication, using gestures, pointing, oral communication, or a sign language. A translation application with automatic translation between signed languages and spoken/written languages is also an option within these communication choices. However, this last option is still in its infancy. The first SignON co-creation events with DHH participants, organised by EUD (see Deliverable 1.1), showed that previous projects addressing this objective often failed to meet the real needs of DHH communities. Moreover, the lack of DHH people working or involved in these projects exacerbated the gap between researchers and communities.

To bridge this gap, active and continuous engagement with DHH communities is paramount in project development. This is one of the underlying strategies of SignON. Communication and dissemination activities play a crucial role in keeping these user communities well informed and managing their expectations of these technologies. In addition, these activities serve as facilitators for the co-creation strategy, an aspect to which the SignON consortium has paid much attention. The SignON communication and dissemination plan (D6.1), underlines the commitment to a public-focused communication approach.

The deliverable D6.1 outlines four key strategic objectives (SOs) for the three project years:

- SO1: Increase visibility of the SignON project
- SO2: Disseminate information about and results of the SignON project
- SO3: Raise positive attitudes about and foster engagement with SignON
- SO4: Align visions between project partners internally

The ‘PDCA’ principle (Plan, Do, Check and Adjust) was used to shape our communication and dissemination plan (D6.1) which is still applied in the second and third years. Therefore, the "target groups" and "communication strategies and tools" sections below are incorporated unchanged from previous deliverables (D6.1, D6.2 and D6.3). They provide an important basis and guidance for describing and evaluating our implemented actions.

2. Project Context

The SignON project aims to develop a mobile application to translate between different European signed and spoken languages. The application, running on a standard mobile device, interacts with a cloud-based distributed framework dedicated to the computationally heavy tasks. The application and the framework have been designed through a co-creation approach where deaf, hard of hearing and hearing users work together with SignON researchers and engineers to build a solution that suits all user types. Furthermore, it is built with easy adaptability to other languages (signed and spoken) and modalities in mind. Ultimately, the application will/should promote the equitable exchange of information between all European citizens.

The translation process involves three major steps which need to be clearly communicated with the various research, industry and user communities:

- Recognition of the input message: spoken messages are transmitted as an audio file, signed messages are transmitted as a video file and text messages simply as text. The audio and/or video are processed accordingly for a suitable intermediate representation to be recognised.
- Translation from one language into another via an intermediate representation: symbolic and embedding based representations have been developed to facilitate the translation of (recognised) messages from one language (signed or spoken) to another.
- Output message synthesis: based on the output from the previous step, an output message is generated in the necessary modality - audio via text to speech; signed message via a 3D avatar and text simply as text.

3. Target Groups

The target groups of the project are not homogeneous, yet different target groups can be clustered based on more or less the same characteristics. The communication plan includes communications tailored to these different target groups. The table below lists various target groups to whom the SignON communication is addressed. It is copied from previous deliverables, with some changes in wording (see last column).

Target group	Importance of the target group	What messages should we convey?
EXTERNAL		
DEAF SIGNERS, mostly members of European deaf communities, who identify as a linguistic and cultural minority group and who use a sign language as their primary or preferred way of communicating.	Primary	The overall aim of this project is to provide an application to contribute to a repertoire of different communication possibilities between signers and non-signers. SignON initially provides limited TRL6 prototype services (do not yet work perfectly in all use-cases and scenarios) but will eventually grow to become a useful communication option between signers and non-signers.
ORGANISATIONS AND REPRESENTATIVES FOR DEAF PEOPLE AND SIGN LANGUAGES, including professionals and experts.	Primary	
DEAF AND HARD OF HEARING PEOPLE WHO ARE NON-SIGNERS, and do not necessarily identify themselves as members of a deaf community. They use a verbal language as their primary and preferred way of communicating.	Primary	The SignON application is flexible, scalable and adaptable (including personalisable) and provides multilingual translation via different input and output modes; it is not only a 'sign language app'.
HEARING PEOPLE with a connection to deaf and hard-of-hearing people and sign language(s). Involves hearing family, colleagues or relatives of deaf people, etc.	Primary	
SIGN LANGUAGE INTERPRETERS (both deaf and hearing) and their organisations.	Secondary	The SignON service is not a replacement of professional interpreters, but a tool to co-exist with them and facilitate the communication between deaf, hard of hearing and hearing people in low-impact situations where interpreters are not available. It is important to note that we only work with data from people and from interpreters with their consent.
SCIENTIFIC COMMUNITY, SISTER EU PROJECTS, REGULATORS, POLICY MAKERS, CLIENTS AND INVESTORS: people with a scientific, political or	Secondary	The SignON project contains new content and knowledge important for the advancement in SOTA; we stress the importance of the United

economic link to this project, in a wide range of domains.		Nations' Convention on the Rights of Persons with Disabilities and how this project fits in there.
INTERNAL		
CONSORTIUM PROJECT PARTNERS including the hearing researchers and the deaf representatives and organisations for the deaf people and sign languages.	Tertiary	The SignON project does not want to conclude or exclude anything about the application of the service. It is still a research project and is still open to dialogue in which all views and concerns can be expressed.

4. Communication Strategies and Tools

The communication strategies were chosen, and are described in detail in D6.1 (SignON Communication and Dissemination Plan) to increase the visibility of the project (SO1), in order to inform the target audiences about the project's progress and results (SO2), as well as to create a positive attitude towards it (SO3).

The following are some of the communication strategies that we have used with our primary target groups:

- Reputation strategy is the one applied to the "doubters" and "naysayers" about the intentions of the project. In our communication, using this we have strived to strengthen our reputation and to create the desired image among the target groups.
- Positioning strategy is the one in which we create the distinctive position of the SignON project in the minds and experiences of the target groups. In doing so, we are determining and strengthening the position of the project and its objectives, and clarifying what place the SignON service can occupy with the primary target groups.
- Word of mouth strategy is a common communication strategy within the close-knit deaf communities. The SignON project needs to acquire a distinctive identity within the primary target groups, which will make people talk positively about the project and share our posts on

social media. In this way SignON's brand awareness is raised and its image is strengthened. This will entice the target groups to behave more positively about the project.

- Finally, participation strategy is an important communication strategy to be applied to the target group of deaf people. This strategy is all about entering into a dialogue with the target groups, which should lead to cooperation. Through co-design and co-development, solutions can be found to any issues in the project, by using the expertise and experiences of the primary target groups.

For other stakeholders such as representatives and organisations of deaf and sign languages (primary), sign language interpreters and their associations (secondary) and our tertiary target group of scientific community, regulators, policy makers, clients and investors, we have opted for a network strategy in which building long-term relationships is key. This is done by highlighting the project's own role in the network of relations and by paying attention to the interests of other stakeholders in the network.

For internal communication needs, we use a family strategy where stronger involvement is created between different project partners. The aim of this strategy is to find common focus and appreciation (SO4).

In our communication and dissemination plan, the following communication tools and quantitative objectives were chosen:

Channel	Target group	Measure	Project target
Project website	All	# site visits	6,000 during the project lifecycle
Social media	All	# followers	10,000 during the project lifecycle
Newsletter	All	#subscribers	200
Workshops by SignON	All	#attendees	3 workshops during the project lifecycle + 20-40 people per workshop
Internal workshops	Project partners	#attendees	Min. 3 workshops

Demonstrations	Deaf community and industry partners	#demonstrations	5 (over the lifecycle of the project)
Industry presentations and conferences	Industry partners and investors	#presentations	12 (4 per year)
Scientific publications	Scientific community	#submitted papers	Min. 31 submitted papers for the project lifecycle (15 for conferences, 10 for workshops and 6 for journals)
White papers	Policy makers	#papers	2
Media publications	All	#publications	10

5. Progress to date

In D6.1 (SignON Communication and Dissemination Plan), the SMART (Specific, Measurable, Achievable, Realistic and Timely) operational objectives were formulated. In the next section, for each strategic objective, the activities (operational objectives) and concrete implementations are described.

SO1 - Increase visibility of the SignON project

In the second annual report on communication and dissemination activities (D6.3), it was noted that all operational objectives outlined in the original plan (D6.1) were successfully achieved during the first two project years. However, in the first annual report on communication and dissemination activities (D6.2), subsequent to the evaluation of the initial project application, only one operational objective was appended to the original plan (D6.1). Given that the project's targets for the reach of social media channels were originally set ambitiously in SignON's project application, relative to the actual outcomes, an additional operational objective, "**OO1.8 - Increasing reach of social media channels**," was introduced. This objective aims to engage diverse target groups and enhance the visibility of the SignON project, aligning with the positioning strategy.

At the time of writing, on 30th November 2023, we noted the progress status of number of visitors and followers on the SignON website and social media channels:

Channel	Measure	Project target	November 2021	November 2022	November 2023
Project website	# site visits	6,000 during the project lifecycle	1,326 users	3,500 unique visitors 10,600 page views	10,600 unique visitors 30,200 page views
Facebook	# followers	10,000 during the project lifecycle	186 followers	564 followers	617 followers
Twitter (now 'X')			180 followers	419 followers	519 followers
LinkedIn			57 followers	113 followers	160 followers
Instagram			72 followers	155 followers	251 followers

To attract more followers to our social media, we launched a new video series called "SignON Arts". In this series, we invited deaf artists to share their artistic perspectives on Sign Language Technology, aiming to present "dry and scientific" content in a fun and artistic manner, making it more accessible. The following artists took up the challenge:

- Boaz Blume from the Netherlands performed a Visual Vernacular (VV), portraying the role of a sign language avatar. Video was first screened on World Deaf Day 23th September 2023 and then posted on SignON social media channels.

Figure 1 - Screenshot of the video https://vimeo.com/865367284

- Aimee Campbell, an artist from the UK, created a video illustrating the potential pitfalls when relying too heavily on Machine Translation applications for sign languages. The video was first screened on World Deaf Day 23th September 2023 and then posted on SignON social media channels.

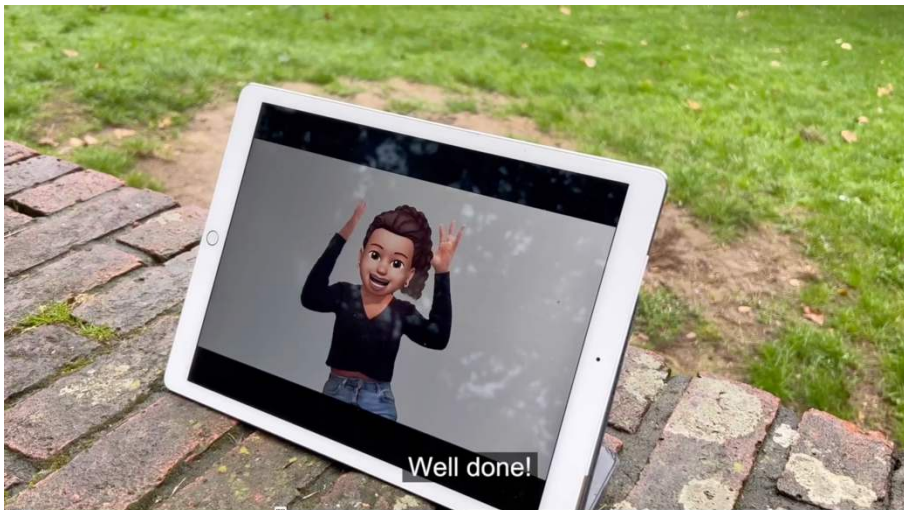

Figure 2 - Screenshot of the video https://vimeo.com/868025977

- Hilde Verhelst from Flanders (Belgium) delivered poetry. Her poetry in the video showcases how AI has significantly improved her daily life. Video was first screened on World Deaf Day 23th September 2023 and then posted on SignON social media channels.

Figure 3 - Screenshot of the video https://vimeo.com/865375895

- Lianne Quigley and Alvean Jones (Dublin) adapted their performance of *All the Worlds a Screen* (a Shakespeare performance in Irish Sign Language for people and machines) for the camera, to create the short film *That is the Question*. The short film asks how AI might 'perceive' sign language. This project was supported by a Discover Science Week grant from Science Foundation Ireland.

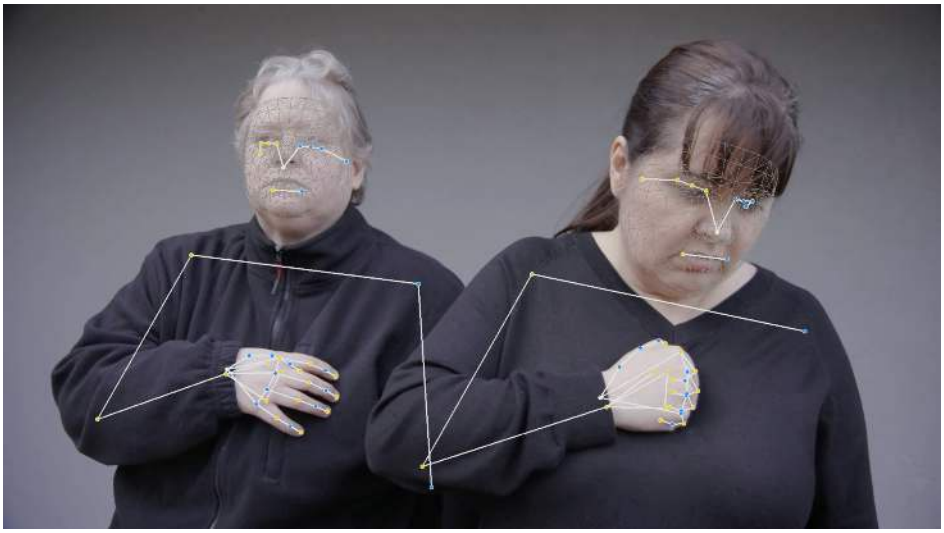

Figure 4 - Screenshot of That is the Question https://youtu.be/l82-E6wz1M4

SO2 - Disseminate information about and results of the SignON project

In the context of the second strategic objective, transparent communication (reputation strategy) serves as the primary approach, with a strong emphasis on enhancing the knowledge of the target groups and offering them a clearer understanding of the project's objectives and their respective roles (positioning strategy).

During the initial project year, the primary emphasis was on developing the website, establishing a transparent framework for understanding the project's structure and operations, and ensuring the availability of accessible information and communication about the project. In the third and last project year, our efforts extended to ongoing updates for the following web pages (not all updates may have been executed at the time of publishing this deliverable):

- The FAQ page (https://signon-project.eu/about-signon/faqs/) was updated with four new questions and answers (**OO2.4 - Create FAQ**):
    - What is the name sign for SignON?

  - Why was the SignON logo designed this way?
  - What are the outcomes of the three-year SignON project?
  - What happens after the SignON project ends?
- Who are we? (https://signon-project.eu/consortium/who-are-we/) with an updated list of newly joined and former SignON consortium members.
- Events (https://signon-project.eu/events/) with new events of the year 2023, organised by or related to the SignON project.
- Data Collection (https://signon-project.eu/co-creation/data-collection/) is a new page where visitors can participate in speech and sign language recording to improve our automatic speech and sign language recognition.
- Latest news (https://signon-project.eu/latest-news/) with an updated overview of the latest news related to SignON.
- Press releases (https://signon-project.eu/news/press-releases/) is updated.
- Newsletter (https://signon-project.eu/news/newsletter/) where we added an archive of previous newsletters.
- Scientific Publications (https://signon-project.eu/publications/scientific-publications/) with an updated overview of our scientific publications.
- Public Deliverables (https://signon-project.eu/publications/public-deliverables/) with an updated overview of our public deliverables.
- Video Series (https://signon-project.eu/publications/video-series/) a new page with an overview of all our SignON video series and complemented by new video from our series SignON Forum and new videos of 'SignON Arts'.
- Other publications https://signon-project.eu/publications/other-publications/) with an overview of our white papers.

In the final year of SignON, significant efforts were made behind the scenes to develop the application and gather new data (including user-generated data). The new posts (**OO2.5 Communicating news and (intermediate) results about the project**) primarily focus on events, workshops, and invitations to participate in our SignON Data Collection activities. Additionally, a new video from SignON Forum (featuring a deaf woman Ashley from the Netherlands) and new videos from SignON Arts were posted. In the final year of the SignON project, four newsletters were also released.

In 2023, SignON garnered increased attention from the media (**OO2.7 Dissemination by (mainstream) media publications**). Following our workshop on World Deaf Day in Bruges (see below), our project was featured in three media publications:

- VRT NWS: The national news broadcast covered the event: https://www.vrt.be/vrtnws/nl/kijk/2023/09/23/wereld-dovendag-arvato-60338771/?fbclid=IwAR2tBCm1ym39djWO5M-63NmcEESQu9tciXQgcadM0Lv_D8vumBKaI40lg7Q
- VGT Nieuws: A news website by deaf people in Flanders, conducted an interview with Jorn Rijckaert, the Communication and Dissemination Coordinator: https://visualbox.media/vgt-nieuws/interview-met-jorn-rijckaert-over-gebarentaaltechnologie-als-thema-van-werelddovendag/

In the week of November 21, 2023, Science Foundation Ireland announced the SignON project as the winner of their Engaged Research of the Year 2023 Award. You can read more about this achievement at https://www.dcu.ie/engineeringandcomputing/news/2023/nov/signon-project-win-sfi-engaged-research-year-award-2023 and https://www.adaptcentre.ie/news-and-events/signon-wins-engaged-research-award-at-2023-science-foundation-ireland-awards/.

In the final project year, we added 18 new scientific publications on the website (**OO2.6 Dissemination of research data and specific publications**) however, we have published in total 30 papers since the last reporting period but it has been challenging to prepare sign language translations to all due to budget limits:

- **Irene Murtagh, Víctor Ubieto Nogales, Josep Blat (2022)**. Sign Language Machine Translation and the Sign Language Lexicon: A Linguistically Informed Approach. In Proceedings of the 15th biennial conference of the Association for Machine Translation in the Americas (Volume 1: Research Track).
- **Parikh, A, Ten Bosch, L., Van den Heuvel, H. & C. Tejedor Garcia (2023).** Comparing Modular and End-To-End Approaches in ASR for Well-Resourced and Low-Resourced Languages. In: Proceedings of The 6th International Conference on Natural Language and Speech Processing (ICNLSP 2023)
- **Vincent Vandeghinste and Oliver Guhr (2023).** FullStop: Punctuation and Segmentation

Prediction for Dutch with Transformers. *Language Resources and Evaluation.* Springer. https://doi.org/10.1007/s10579-023-09676-x.

- **Mirella De Sisto, Dimitar Shterionov, Lien Soetemans, Vincent Vandeghinste, Caro Brosens (2023).** NGT-HoReCo and GoSt-ParC-Sign: Two new Sign Language - Spoken Language parallel corpora. In *Proceedings of the CLARIN Annual Conference* . Leuven.
- **Vincent Vandeghinste, Dimitar Shterionov, Mirella De Sisto, Aoife Brady, Mathieu De Coster, Lorraine Leeson, Josep Blat, Frankie Picron, Marcello Paolo Scipioni, Aditya Parikh, Louis ten Bosch, John O'Flaherty, Joni Dambre, Jorn Rijckaert, Bram Vanroy, Victor Ubieto Nogales, Santiago Egea Gomez, Ineke Schuurman, Gorka Labaka, Adrian Nunez-Marcos, Irene Murtagh, Euan McGill and Horacio Saggion (2023)**. SignON: Sign Language Translation. Progress and challenges. *Proceedings of the 24th Annual Conference of the European Association for Machine Translation. pp.* 501–502, Tampere, Finland, June 2023.
- **Mirella De Sisto, Vincent Vandeghinste, Lien Soetemans, Caro Brosens, Dimitar Shterionov (2023**). GoSt-ParC-Sign: Gold Standard Parallel Corpus of Sign and spoken language. *Proceedings of the 24th Annual Conference of the European Association for Machine Translation. pp.* 501–502, Tampere, Finland, June 2023. pp. 503-504
- **Ineke Schuurman, Thierry Declerck, Caro Brosens, Margo Janssens, Vincent Vandeghinste, Bram Vanroy (2023)**. Are there just WordNets or also SignNets? *Proceedings of the 13th Global WordNet Conference.* Donostia, Spain.
- **Thierry Declerck, Sam Bigeard, Fahad Khan, Irene Murtagh, Sussi Olsen, Mike Rosner, Ineke Schuurman, Andon Tchechmedjiev, and Andy Way (2023)**. A Linked Data Approach for linking and aligning Sign Language and Spoken Language Data. In Proceedings of the Second International Workshop on Automatic Translation for Signed and Spoken Languages, pages 11–21, Tampere, Finland. European Association for Machine Translation.
- **Lien Soetemans and Myriam Vermeerbergen** (**2023)**. When shared space and time don't matter. Remote video-mediated (synchronous and asynchronous) communication

in Flemish Sign Language. In Proceedings of the 2023 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Rhodos, Greece.

- **Lien Soetemans and Margot Janssens** (**2023)**. Onderzoek naar constituentenvolgorde in Vlaamse Gebarentaal. Enkelvoudige mededelende zinnen bij jongeren van 12 tot 18 jaar. Onderzoeksrapport KU Leuven, campus Antwerpen & Vlaams GebarentaalCentrum.
- **Lien Soetemans and Myriam Vermeerbergen (2023)**. Use cases in het kader van het SignON-project. Onderzoeksrapport KU Leuven, campus Antwerpen.
- **Mathieu De Coster, Ellen Rushe, Ruth Holmes, Anthony Ventresque, and Joni Dambre**. 2023. Towards the extraction of robust sign embeddings for low resource sign language recognition. arXiV pre-print arXiv:2306.17558.
- **Mathieu De Coster and Joni Dambre (2023)**. Querying A Sign Language Dictionary with Videos Using Dense Vector Search. Proceedings of the 2023 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Rhodos, Greece.
- **Mathieu De Coster, Dimitar Shterionov, Mieke Van Herreweghe, and Joni Dambre (2023)**. Machine translation from signed to spoken languages: State of the art and challenges. Universal Access in the Information Society.
- **Ruth Holmes, Ellen Rushe, Mathieu De Coster, Maxim Bonnaerens, Shin'ichi Satoh, Akihiro Sugimoto, and Anthony Ventresque (2023)**. From Scarcity to Understanding: Transfer Learning for the Extremely Low Resource Irish Sign Language. Proceedings of the IEEE/CVF International Conference on Computer Vision, pages 2008-2017, Paris, France.
- **Jérôme Fink, Mathieu De Coster, Joni Dambre, Benoît Frénay (2023)**. Trends and challenges for sign language recognition with machine learning. Proceedings of the 2023 European Symposium on Artificial Neural Networks, Bruges, Belgium.
- **Zaid Mohammed and Irene Murtagh** (2023). Towards Accommodating Gerunds within the Sign Language Lexicon. In *Proceedings of the Second International Workshop on Automatic Translation for Signed and Spoken Languages*, pages 44–47, Tampere, Finland. European Association for Machine Translation.

- **Brady, Aoife, Clarke, Emma, Dunne, Jane, Kearns, Anne, Leeson, Lorraine, Mathews, Elizabeth, Moiselle, Rachel, O'Boyle, Shaun, Omardeen, Rehana, Picron, Frankie, Shterionov, Dimitar, Van Landuyt, Davy** (2023). Realising Inclusive Design Through Co-creation; EARMA Conference, April 2023, Prague.

The SignON and EASIER projects worked on a white paper which aims at bringing to the attention of policy makers the scarcity of language technology resources available for European sign languages. This paper stresses the necessity for more investments targeting those languages and the development of their resources. It has been published as an additional deliverable of the European Language Equality 2 Project:

- **Vincent Vandeghinste, Mirella De Sisto, Maria Kopf, Marc Schulder, Caro Brosens, Lien Soetemans, Rehana Omardeen, Frankie Picron, Davy Van Landuyt, Irene Murtagh, Eleftherios Avramidis, Mathieu De Coster (2023)**. Report on Europe's Sign Languages. *ELE Project Deliverable 1.40*. https://zenodo.org/record/8047005

In 2023, some consortium members co-edited the book Sign Language Machine Translation, Springer edts, ISBN: 978-3-031-47361-6 / 978-3-031-47364-7 / 978-3-031-47362-3, under press, expected April 2024. The book contains 14 chapters. Nine of the chapters are authored by members of the SignON consortium. The chapters of this book are listed below:

- Chapter 1. The Pipeline of Sign Language Machine Translation by Dimitar Shterionov, Lorraine Leeson and Andy Way.
- Chapter 2. How it Started and How it's Going: Sign-Language Machine Translation and Engagement with Deaf Communities over the past 25 years. by Lorraine Leeson, Sara Morrissey, Daniel Stein, Dimitar Shterionov, Henk van den Heuvel and Andy Way.
- Chapter 3. The Importance of including Signed Languages in NLP by Kayo Yin, Katherine Atwell, Julie Hochgesang and Malihe Alikhani.
- Chapter 4. Signed Languages (and) Machine Translation: Challenges and Opportunities. by Mirella De Sisto, Irene Murtagh and Myriam Vermeerbergen.
- Chapter 5. Challenges with Sign Language Datasets by Vincent Vandeghinste, Mirella De Sisto, Santiago Egea Gomez and Mathieu De Coster.

- Chapter 6. The Sign Languages of Europe by Vincent Vandeghinste, Mirella De Sisto, Maria Kopf, Marc Schulder, Caro Brosens, Lien Soetemans, Rehana Omardeen, Frankie Picron, Davy Van Landuyt, Irene Murtagh, Elefterios Avramidis and Mathieu De Coster.
- Chapter 7. Sign languages as source language for machine translation: historical overview and challenges by Joni Dambre and Mathieu De Coster.
- Chapter 8. Linguistic Processing for Sign Language Translation by Horacio Saggion, Euan McGill, Luis Chiruzzo and Santiago Egea Gómez.
- Chapter 9. Improving Sign Language Gloss Translation with Low-Resource Machine Translation Techniques by Xuan Zhang and Kevin Duh.
- Chapter 10. Implementing a Real-Time Collision Detection and Avoidance Algorithm for Fingerspelling Animation by Souad Baowidan.
- Chapter 11. Sign Language Synthesis: Current Signing Avatar Systems and Representation by Victor Ubieto, Jaume Pozo, Eva Valls, Beatriz Cabrero, and Josep Blat.
- Chapter 12. Bridging the Gap: Understanding the Intersection of Deaf and Technical Perspectives on Signing Avatars by Robin Angelini, Katta Spiel and Maartje de Meulder.
- Chapter 13. Sign Language Machine Translation Communication and Engagement by Shaun O'Boyle, Jorn Rijckaert and Elizabeth S. Mathews.
- Chapter 14. (Towards) Sign Language Machine Translation in Practice by Frankie Picron, Davy Van Landuyt and Rehana Omardeen.

In 2023, some consortium members attended several academic events in which they gave poster presentations, organised or attended workshops, or gave a lecture (**OO2.8. Organising demonstrations, conferences and workshops**). An overview is given below:

Event	Date	Location	Description
Global Wordnet Conference	23-27/01/2023	Donostia / San Sebastian, Spain	A poster on WordNet and SignNet was presented by Ineke Schuurman
EASIER Conference on Neologisms in Sign Languages	10/02/2023	Athens, Greece	Rachel Moiselle (Trinity College Dublin): presented a poster on her work investigating gesture and depiction in a range of new glossaries of Irish Sign Language and

			leveraging focus groups for insight into neologisms
Conference “Sign Languages on the Island of Ireland: Recognition and Human Rights”	24 February 2023	Dublin, Ireland	This was an all-Ireland event with speakers and participants invited from both the Republic of Ireland and Northern Ireland. Coordinated by Professor Lorraine Leeson from the Centre of Deaf Studies in TCD, the conference was hosted by the Royal Irish Academy in conjunction with the Centre for Deaf Studies in Trinity College Dublin and supported by the Irish Deaf Society, the Ulster Society, Bridge Interpreting Ltd., and the SFI ADAPT Centre. This was the first time that the Royal Irish Academy hosted an event focused on sign languages and was the first time that an all-island meeting bringing together researchers, policy makers, community leaders and politicians has taken place. The SignON consortium members Lianne Quigley, Lorraine Leeson and Elizabeth Mathews gave presentations.
Language-Identity-Hard-of-Hearing International Conference	20-21/04/ 2023	Poznań, Poland	The conference was organised in cooperation with European Federation of Hard of Hearing people and was the opportunity to exchange different experiences among the researchers from different fields related to the life and languages of hard-of-hearing people.
EARMA Conference 2023	April 24 - 26 2023	Prague, Czech Republic	The poster “Realising Inclusive Design Through Co-creation” was presented at the EARMA 2023 conference in Prague by Aoife Brady.
Séminaires du CENTAL	April 28 2023	Louvain la Neuve, Belgium	"Challenges in Machine Translation for Sign Languages" -- talk by Vincent Vandeghinste for doctoral students at UCLouvain. This talk is about the SignON project, in which we aim to build MT engines from Sign Languages to Spoken Languages and vice versa. While this is MT between two natural languages there are several major differences with regular MT between written languages. This talk will be about these differences and how we try to tackle them in the SignON project.

NNDR 16 conference	May 10 – 12 2023	Reykjavik, Iceland	An oral presentation regarding SignNets was given by Ineke Schuurman and Caro Brosens.
Colloquium Vlaamse Gebarentaal – KANTL	12 May 2023	Ghent, Belgium	On 12 May 2023, Lien Soetemans gave a presentation at the "Colloquium Vlaamse Gebarentaal" organised by KANTL (Koninklijke Academie voor Nederlandse Taal en Letteren) titled "Vertaaltechnologie voor gebarentalen: uitdagingen en lessons learned in het SignON project" (Translation technology for signed languages: challenges and lessons learned within the framework of the SignON project)
RESOURCEFUL 2023	22/05/2023	Tórshavn, Faroe Islands	A workshop which focused on resources and representations for under-resourced languages and domains.
EUD General Assembly 2023	25 May 2023	Stockholm, Sweden	This event addressed the audience of the EUD GA: deaf delegates from around Europe attending the General Assembly as representatives of their National Associations of the Deaf. The event was held in collaboration with the EASIER project, with representatives from both projects presenting different aspects of the technology and co-creation to the audience of deaf leaders from the whole EU. It engaged the audience in discussions and enlightened them on what is going on with regards to sign language technologies, to plant seeds to better prepare deaf representative organisations for their future work.
ADAPT Annual Scientific Conference 2023	30/05/2023	Dublin, Ireland	Presented the paper "Towards Accommodating Irish Sign Language Gerunds within the Sign Language Lexicon" at the ADAPT 2023 internal conference (papers presented at the conference will not be published).
Workshop of the Network of Interdisciplinary Translation Studies in the Netherlands and Flanders 2023	02/06/2023	Leiden, the Netherlands	NITS is the Network of Interdisciplinary Translation Studies in the Netherlands and Flanders. The aim of the network is for researchers in translation studies and other related disciplines, such as interpreting, machine translation or translation

			technology, to come together once a year for a one-day conference to present research ideas, ongoing projects or teaching innovations that happen at the intersection of translation studies with other disciplines in this geographical area, and from this platform be able to collaborate further on projects, research and teaching. The following paper was presented: Mirella De Sisto, Vincent Vandeghinste, Dimitar Shterionov, Bram Vanroy, Caro Brosens and Lien Soetemans “Two new parallel datasets of signed and spoken language".
SLTAT 2023	10 June 2023	Rhodes, Greece	Mathieu De Coster (UGent) presented work on “Querying A Sign Language Dictionary with Videos Using Dense Vector Search” (by Mathieu De Coster and Joni Dambre) at SLTAT 2023, related to evaluating the quality of the SLR models developed in the SignON project. Lien Soetemans and Myriam Vermeerbergen presented their work on “When (shared) space and time don’t matter. Remote video-mediated (synchronous and asynchronous) communication in Flemish Sign Language” at SLTAT 2023, regarding the potential impact of video-mediated and video-recorded communication on the sign language production of Flemish signers.
24th Annual Conference of the European Association for Machine Translation (EAMT 2023)	12-15/06/2023	Tampere, Finland	The following papers were presented: Vincent Vandeghinste, et al., “SignON: Sign Language Translation. Progress and challenges”, and Mirella De Sisto, Vincent Vandeghinste, Lien Soetemans, Caro Brosens and Dimitar Shterionov “GoSt-ParC-Sign: Gold Standard Parallel Corpus of Sign and spoken language”
2nd International Workshop on Automatic Translation for	16/06/2023	Tampere, Finland	Keynote presentation: Challenges with Sign Language Datasets by Vincent Vandeghinste. Presentation available from https://docs.google.com/presentation/d/1kF

Signed and Spoken Languages			u3ckDC9EyLuZztjUwYXr9RTiWxEXz8GktT7aMr6Gg/edit?usp=sharing Presente the paper "A Linked Data Approach for linking and aligning Sign Language and Spoken Language Data" by Thierry Declerck, Sam Bigeard, Fahad Khan, Irene Murtagh, Sussi Olsen, Mike Rosner, Ineke Schuurman, Andon Tchechmedjiev and Andy Way Presented the paper "A New English-Dutch-NGT Corpus for the Hospitality Domain" by Mirella De Sisto, Vincent Vandeghinste and Dimitar Shterionov Presented the paper: "BSL-Hansard: A parallel, multimodal corpus of English and interpreted British Sign Language data from parliamentary proceedings" by Euan McGill and Horacio Saggion. Presented the paper "Towards Accommodating Gerunds within the Sign Language Lexicon" by Zaid Mohammed and Irene Murtagh
First Annual Teaching and Research Showcase 2023	20/06/2023	Dublin, Ireland	Presented the poster "Towards Accommodating Gerunds within the Sign Language Lexicon" within the faculty showcase event.
Cardiff NLP Workshop	27/06/2023	Cardiff, Wales	Showcasing state-of-the-art research and directions in NLP, also included PhD students' posters (on topics such as Text2Gloss, Gloss2Text and NLP tagging in SLs).
AIAIAI Podcast Van Auteur naar AI-teur	13/07/2023	/	Vincent Vandeghinste: Explained the SignON project.
XIX World Congress of the World Federation of the Deaf	11-15 July 2023	Jeju, South Korea	Mark Wheatley, the EUD Executive Director, gave a presentation, in collaboration with Maartje de Meulder, on the 2023 WFD Congress, titled "Sign Language Machine Translation and Deaf Communities: the case for co-creation" which built on EUD's experience with co-creation in the SignON project.

AT4SSL 2023	15 June 2023	Tampere, Finland	The second international workshop on Automatic Translation for Signed and Spoken Languages was collocated with the European conference on Machine Translation (EAMT). It was co-organised by SignON and EASIER. Vincent Vandeghinste (INT) gave a keynote on the challenges with sign language datasets. Sam Bigeard presented joint work with, among others, Irene Murtagh and Ineke Schuurman of SignON on "A Linked Data Approach for linking and aligning Sign Language and Spoken Language data". Mirella De Sisto presented joint work with Vincent Vandeghinste and Dimitar Shterionov on a new multilingual dataset for the hospitality domain. Euan McGill introduced BSL-Hansard, work done with Horacio Saggion, on a dataset of parliamentary proceedings for English and interpreted British Sign Language. And Zaid Mohammed talked about the position of gerunds in a sign language lexicon, linguistic work together with Irene Murtagh.
METAFORUM 2023	27 June 2023	Brussels, Belgium	The NGT-HoReCo corpus was presented by Mirella De Sisto at METAFORUM.
Launch of That is the Question	16 August 2023	Dublin, Ireland	DCU hosted a launch for That is the Question, a short film featuring Lianne Quigley and Alvean Jones that was produced as part of SignON with the support of SFI to engage audiences with sign language machine translation.
IBC 2023	13-16/09/2023	Amsterdam, The Netherlands	IBC is the world's most inspiring content and technology event. It draws together the global media, entertainment and technology industry for a compelling live experience that enables every attendee to gain critical insights, share expertise and unlock business opportunities. During the event, at the Innovation Stage, there was a presentation of a project on digital avatars with sign language. Afterwards we had a long conversation with the people behind the project in which we shared experiences and knowledge.

Inteligencia Artificial para Inclusión y Accesibilidad (Artificial Intelligence for Inclusion and Accessibility)	18/09/2023	Montevideo, Uruguay	An Introduction to Natural Language Processing for Sign Language Processing in the SignON Project.
SLIN 2023	21/09/2023	Antwerp, Belgium	Sign Language in the Netherlands, a small meeting to discuss sign language and SLR, SLT. Attendees were both from inside and outside SignON.
CLIN33	22 September 2023	Antwerp, Belgium	A poster was presented regarding SignNets by Ineke Schuurman and Caro Brosens. ● Automatic Speech Recogniton in SignOn Project and Beyond Aditya Parikh, Louis ten Bosch, Henk van den Heuvel ● ODWN, OMW: issues when dealing with spoken languages, but especially also with sign languages Ineke Schuurman, Bram Vanroy, Vincent Vandeghinste, Caro Brosens, Margot Janssens, Thierry Declerck & Sam Bigeard
World Deaf Day 2023	23 September 2023	Bruges, Belgium	As the SignON project approaches its conclusion at the end of 2023, a comprehensive event was organised in the autumn of 2023 with the aim of showcasing the results of the SignON project and mentioning its challenges. For this event, we collaborated with the National Deaf Association in Belgium, Doof Vlaanderen vzw, which hosts World Deaf Day annually on the Saturday of the International Week of the Deaf. This event draws a large audience, primarily composed of deaf sign language users and sign language interpreters. Traditionally, a theme is selected for this event. We proposed to Doof Vlaanderen vzw that the theme for this year be “Sign Language Technology. Jorn Rijckaert, Davy

			Van Landuyt, Hannes De Durpel and Caro Brosens gave presentations in the morning session. In the afternoon two workshops were organised by Jorn Rijckaert from VGTC.
START / EU Researchers' Night	29 September 2023	Dublin, Ireland	This free event, held in Trinity College Dublin, and hosted in partnership with Royal College of Surgeons Ireland and ADAPT, the SFI Research Centre for AI-Driven Digital Content Technology, invited visitors to take an up-close look at the fascinating research that is shaping our world, explore solutions to society's biggest problems, and learn about cutting-edge thinking through debates, interactive workshops, screenings, a presentation on the SignON project and much more. SignON had a strong presence at the START event in TCD on the 29th of September 2023.
Weekend van de Klant 2023 at VRT	30/09-01/10/2023	Brussels, Belgium	During the Weekend van de Klant (Customer Weekend), VRT opened its doors to the general public. Visitors were given a behind-the-scenes tour and discovered how radio and television are made. In the experience room they discovered the process of subtitling and audio description and learned more about virtual avatars and the possibilities to make content more accessible. The importance of sign language was explained to the visitors (mostly hearing ones) and reference was made to the future possibilities that the SignON project can bring.
ACVR	03/10/2023	Paris, France	Ruth Holmes (TCD) presented a poster "From Scarcity to Understanding: Transfer Learning for the Extremely Low Resource Irish Sign Language" at the Assistive Computer Vision and Robotics workshop in conjunction with ICCV 2023.
ESANN 2023	04-06/10/2023	Bruges, Belgium	The European Symposium on Artificial Neural Networks is a yearly conference held in Bruges on Machine Learning topics. Mathieu De Coster and Joni Dambre (UGent) co-organised a special session on Machine Learning applied to Sign Language with

			researchers of the University of Namur (Belgium). Together with Jérôme Fink (UNamur), Mathieu De Coster gave an oral presentation on the challenges of sign language recognition and chaired this special session.
Presentation for MIDI, KU Leuven	6 October 2023	Leuven, Belgium	Lisa Rombouts presented an overview of the SignON project for the members of MIDI (Research Group Multimodality, Interaction and Discourse) of KU Leuven.
CLARIN Annual Conference 2023	16-18 October 2023	Leuven, Belgium	Mirella De Sisto presented joint work with Vincent Vandeghinste, Dimitar Shterionov, Lien Soetemans and Caro Brosens on two new parallel corpora of sign and spoken languages, NGT-HoReCo and GoSt-ParC-Sign. The reference to the paper: Mirella De Sisto, Dimitar Shterionov, Lien Soetemans, Vincent Vandeghinste, Caro Brosens (2023). NGT-HoReCo and GoSt-ParC-Sign: Two new Sign Language - Spoken Language parallel corpora. In *Proceedings of the CLARIN Annual Conference.* Leuven.
Dag van de wetenschap	26 November 2023	Ghent, Belgium	Demo of sign language recognition technologies by Mathieu De Coster and Joni Dambre at the "Science Day 2023".
SignON/EASIER Workshop	29 November 2023	Brussels, Belgium	On the 29th of November 2023, we, SignON, as well as the EASIER project, held a joint workshop at the European Commission to present and discuss the outcomes and outputs of the projects. This one-day event aimed to bring the two teams together and to showcase their innovations and imagine the next steps for sign language translation technologies. It provided a platform for forward-looking interactions between project representatives, end-users, policy makers and industry stakeholders as well as to engage with experts and professionals in policy-making and industry sectors to discuss the outcomes and future prospects of research related to Sign Language in Europe.

SFI Engaged Research Award	21 November 2023	Dublin	The SignON Project was chosen as the winner of the Science Foundation Ireland Engaged Research of the Year 2023 Award. Engaged Research aims to improve, understand, or investigate an issue of public interest or concern including societal challenges and is advanced in collaboration with societal partners. This award recognises the important role of Engaged Research in enabling Science Foundation Ireland-funded research to deliver societal impact for Ireland. Lorraine Leeson (SignON TCD), Lianne Quigley (SignON TCD) and Dave Lewis (Interim Director of the ADAPT Centre) accepted the award on behalf of the SignON Team.
WMT Shared task on SLT	06-07/12/2023	Singapore	This shared task was co-organised by EASIER and SignON members and produced a joint paper on the findings of the shared task.

SO3 - Raise positive attitudes about and foster engagement with SignON

This strategic objective primarily aims to improve engagement of our target groups, especially deaf signers, regarding sign language technology. Historically, many projects were executed without involving deaf signers, leading them to often associate sign language technology with negative or threatening connotations. Unfortunately, due to COVID-19 measures, several operational objectives aimed at fostering a constructive dialogue between researchers and target groups could not be implemented in the first project year. However, in the second project year, there is noticeable improvement, particularly attributed to the workshop held at the European Parliament (see the Deliverable D6.3 - Second Annual Report on Communication and Dissemination Activities), where initial contacts with local organisations for Deaf and Hard of Hearing individuals were established.

To maintain these contacts with representative organisations of the European deaf communities (**OO3.2 – Actively entering into dialogue with representatives and organisations**), SignON delivered a presentation during a workshop on Sign Language Machine Translation organised at the General Assembly of EUD on May 25, 2023, in Stockholm. At this event, deaf delegates from across Europe attended the General Assembly as representatives of their National Associations of the Deaf. The event

was organised in collaboration with the EASIER project, with representatives from both projects presenting various aspects of technology and co-creation to the audience of deaf leaders from the entire EU. The presentation sparked discussions and provided insights into the current landscape of sign language technologies. At this event members from SignON, EASIER and EUD decided to organise the event at the European Commission in Brussels on the 29th of November 2023.

Additionally, Jaron Garitte, a SignON communication and dissemination staff member from VGTC, attended the 19th World Congress of the World Federation of the Deaf (WFD) in Jeju, South Korea. This congress took place from July 11 to July 15, 2023, and featured lectures on sign language technology. Jaron Garitte compiled a report on these events on SignON social media channels and utilized this global platform to raise awareness of SignON among DHH individuals and organisations worldwide.

As the SignON project approaches its conclusion at the end of 2023, a comprehensive event was organised in the autumn of 2023 to showcase the results of the SignON project and address its challenges. For this event, we collaborated with the National Deaf Association in Belgium, Doof Vlaanderen vzw, which hosts World Deaf Day annually on the Saturday of the International Week of the Deaf. This particular Saturday, September 23, 2023, also coincided with the International Day of Sign Languages. The event attracted a large audience, primarily composed of deaf sign language users and sign language interpreters (**OO3.1 – Actively entering into dialogue with potential users**). Traditionally, a theme is selected for this event. We proposed to Doof Vlaanderen vzw that the theme for this year be "Sign Language Technology." In the morning session, four SignON consortium members gave presentations, and in the afternoon, two workshops were organised. During the workshops, the Communication and Dissemination Coordinator, Jorn Rijckaert, engaged in dialogue with DHH attendees, addressing their questions (for more information, see Deliverable D6.5 – Workshops, Showcases & Demonstrations). Moreover, the SignON consortium members proactively participated in various academic events, fostering connections with researchers beyond the SignON consortium (**OO3.3. Actively entering into dialogue with research and innovation groups**), as outlined in the events overview above.

As the SignON project serves as a good practice for how researchers in the "Sign Language Technology" domain actively embrace the co-creation principle by engaging in extensive dialogue and collaboration with DHH individuals, VGTC has authored two publications outlining recommendations for scientific communication and cooperation with DHH communities for upcoming projects (**OO3.4 – Preparing communication scenarios**):

- The SignON Communication and Dissemination Coordinator, Jorn Rijckaert (VGTC), collaborated with other consortium members, Dr. Shaun O'Boyle, and Prof. Elizabeth Matthews (Dublin City University), to contribute a chapter titled "Sign Language Machine Translation Communication and Engagement" for the upcoming book "Sign Language Machine Translation," edited by Prof. Andy Way, Prof. Lorraine Leeson, and Dr. Dimitar Shterionov (in press, ISBN: 978-3-031-47361-6 / 978-3-031-47362-3).

- In collaboration with EUD, Jorn Rijckaert initiated the writing of a white paper titled "Sign Language Technology: Do's and Don'ts – A Guide to Inclusive Collaboration Among Policymakers, Researchers, and End Users." At the time of writing this deliverable, the white paper is still under review by the entire SignON consortium and has not been published (expected by the end of December 2023).

Over the course of three SignON project years, various recordings were conducted with the aim of creating a PR video that highlights the transparent operation and cooperation within the project, especially targeting DHH (**OO3.6 – PR videos about transparent operation and cooperation**). The video features quotes from interviews with various consortium members, accompanied by atmospheric footage. The intention behind this video is to demonstrate to viewers the paramount importance of co-creation within the Sign Language Technology domain. As of writing this deliverable, the video is still in the post-production phase and is scheduled to be published by the end of December 2023.

SO4 - Align visions between project partners internally

Collaboration between deaf and hearing consortium members, particularly in the realm of sign language technology, poses an enduring challenge because of different cultural and linguistic experiences. As a

response to this, this strategic objective places a significant emphasis on adopting a family strategy. Alongside the face-to-face meeting held on 22nd and 23rd February 2023 in Dublin and on 14th and 15th November 2023 in Bilbao, we organised six internal seminars to learn more about the topics on Sign Language Technology and Machine Translations (**OO4.1. Raising awareness about the deaf and sign language communities among project partners**). In 2023 these are:

- 16th January 2023 by Dimitar Shterionov about Text-to-text Machine Translation.
- 20th March 2023 by Lee Kezar from the University of Southern California, who gave a presentation on "Exploring Models for Sign Language Phonology".
- 18th April 2023 by Shaun O'Boyle on Scientific Communications Training.
- 22nd May 2023 by Santiago Egea Gómez about Sign Language Recognition.
- 28th September 2023 by Bastien David about Machine Translation of Medical Speech to SL Animation.
- 9th November 2023 by Bram Vanroy about his work on Abstract Meaning Representation.

6. Evaluation

In this section, we examine which operational objectives have or have not been (fully) implemented and evaluate them with a view to recommendations for the upcoming project.

SO1 - Increase visibility of the SignON project

The primary goal of the first strategic objective (SO1) is to enhance the visibility of the SignON project. The following list provides an overview of the operational objectives initially specified in our SignON Communication and Dissemination Plan (D6.1) and indicates their status of implementation by the conclusion of the project year. Additionally, it should be noted that one new operational objective (OO1.8) has been added to this list during the project.

No.	Description	Status
OO1.1	Design of new SignON logo	Done
OO1.2	Sign name for SignON	Done

OO1.3	Create a corporate style guide	Done
OO1.4	Create templates	Done
OO1.5	Website update	Done
OO1.6	Start-up of social media	Done
OO1.7	Introducing hashtag #signon	Done
OO1.8	Increasing reach of social media channels	Not reached

Only the last operational objective (OO1.8) was not achieved in the sense that it did not meet the specified target of 10,000 followers on social media. We achieved almost 16% of this goal, totaling 1547 followers. It has been observed that the set target in the project application may have been too ambitious for a scientific project with a small target audience of DHH individuals. This was a point of discussion in both the face-to-face consortium meeting (16th June 2022, Tilburg) and a workshop involving representatives from organisations for DHH and sign languages (30th September 2022, Brussels). The outcomes of the latter workshop led to an upcoming paper “Sign Language Machine Translation Communication and Engagement”, in the Sign Language Machine Translation book (under press, ISBN: 978-3-031-47361-6 / 978-3-031-47362-3). Together, we explored solutions to attract more followers on social media, resulting in the implementation of the following suggestions:

- Invest more in external communication using national sign languages rather than solely relying on International Sign. Not everyone is proficient in International Sign, and it was often perceived as something for the "elite" within the deaf community (too distant from their own national sign language).
- Be more transparent in communication, including showcasing the individuals working behind the project.
- Provide samples of concrete results, such as demonstrations of a translation application or a sign language avatar.
- Decrease the use of green screen technology, which involves a deaf presenter/translator in front of a green screen with the background edited by a SignON template. Instead, opt for more spontaneous language in natural settings.

Thanks to Facebook's "Meta Business Suite" tool, we gained insights into the most popular posts on SignON media channels, meaning those that received the most likes and/or had a larger reach. We identified that the following posts garnered the most likes and/or reach:

- Posts in national sign languages, especially the video post explaining the SignON project in Dutch and Flemish Sign Language on 8th December 2021.
- Interviews and video reports, such as the interview with Mark Wheatley, Director of EUD, on 27th December 2021, emphasizing the importance of co-creation. For instance, a video report posted on 8th December 2021, in which we interviewed several Flemish sign language users about their thoughts on "Sign Language Technology".
- Posts featuring photos from our events. For example, those from 28th September 2022, at the European Parliament, or 15th June 2022, showcasing a group photo of the SignON consortium at the first face-to-face meeting in Tilburg, and 3rd March 2023, in Dublin.
- Video posts where less "dry scientific" content is communicated, such as the post on 11th May 2022, explaining the design of the SignON logo.
- Posts featuring sign language avatars, for instance, on 25th November 2021, about the avatar for the Winter Olympics 2022 in China and the post on 14th December 2022, where the SignON avatar signs "Happy Irish Sign Language Day".
- Posts that engage DHH communities, such as on 24th May 2022, where we called for votes for a name sign for SignON, and the announcement of the chosen name sign on 17th December 2022.
- Posts aimed at providing information and education about the subject of "Sign Language Technology" were also effective. For instance, consider the post on 17th December 2022, in which a deaf consortium member explains various terms such as AI, Machine Translation, Virtual 3D characters, Sign Language Recognition, etc.

These findings underscore the validity of the aforementioned recommendations. Contrary to expectations, the three video posts of the new series "SignON Arts" did not have a good reach. After a small informal survey by the communication and dissemination coordinator of VGTC, it became evident that DHH audiences did not fully understand the art performances of deaf artists because the subject matter of "sign language technology" was still very new.

SO2 - Disseminate information about and the results of the SignON project

The operational objectives of this second strategic objective primarily concentrate on disseminating information about and results from the SignON project. Although certain operational objectives (OO2.4, OO2.5, OO2.6, OO2.7 and OO2.8) are designated with a lifetime throughout the project lifecycle, they have been marked as completed.

No.	Description	Status
OO2.1	Announcement of the SignON project	Done
OO2.2	Setting up accessible information and communication about the project	Done
OO2.3	Making the structure and functioning of the project transparent	Done
OO2.4	Create FAQ	Done
OO2.5	Communicating news and (intermediate) results about the project	Done
OO2.6	Dissemination of research data and specific publications	Done
OO2.7	Dissemination by (mainstream) media publications	Done
OO2.8	Organising demonstrations, conferences and workshops	Done

The overview below shows the quota to be achieved and how much we have achieved so far (at the time of writing on 30th November 2023):

Channel	Measure	Project target	Final year
Newsletter	#subscribers	200	52
Workshops by SignON	#attendees	3 workshops during the project lifecycle + 20-40 people per workshop	10
Demonstrations, presentations and conferences	#demonstrations & #presentations	17	39
Scientific publications	#submitted papers	Min. 31 submitted papers for the project lifecycle (15 for conferences, 10 for workshops and 6 for journals)	30 (since last reporting period, 53 in total)

White papers	#papers	2	2 (1 more is forthcoming)
Media publications	#publications	10	6

The SignON project has achieved impressive figures, surpassing the project target quotas in organised workshops, demonstrations, presentations, conferences, and the number of scientific publications. Additionally, we successfully produced two white papers, meeting the established quota. However, it appears that we have encountered lower engagement with the sign-ups for our quarterly newsletters. This may be attributed to a potential lack of interest in newsletters due to the information already being available on our social media channels.

While we did not reach the desired goal of 10 media publications, we are content with the six publications achieved. It's noteworthy that these publications primarily focus on the objectives of the SignON project rather than solely on its outcomes which may be more visible after the end of the project (after the writing of this deliverable).

SO3 - Raise positive attitude about and foster engagement with SignON

To implement our participation and network strategy, we established the following operational objectives. The initial five objectives have been marked as completed. Only objective 003.6 is still in the post-production phase and is slated for publication by the end of the year 2023.

No.	Description	Status
OO3.1	Actively entering into dialogue with potential users	Done
OO3.2	Actively entering into dialogue with representatives and organisations	Done
OO3.3	Actively entering into dialogue with research and innovation groups	Done
OO3.4	Preparing communication scenarios	Done
OO3.5	Managing reactions on social media	Done
OO3.6	PR videos about the transparent operation and cooperation	Ongoing
OO3.7	Create demonstration videos on the use of SignON service	Cancelled

Only one operational objective (OO3.7) was cancelled. Initially, demonstration videos were planned to showcase the usage of the SignON application. However, the application is not currently ready for immediate use in real-world scenarios. Considering the need to manage the expectations of DHH communities in the right direction, creating a demonstration video seems impractical. Given that many DHH individuals may have limited education and awareness about Sign Language Technology, we aim to avoid creating unrealistic expectations regarding the use of the automatic translation application with sign languages. Instead, our PR video emphasises that there is still a long way ahead and encourages participation in generating more sign language data.

SO4 - Align visions between project partners internally

Given the well-coordinated consortium and the swift development of insights into the language and cultural needs of DHH individuals and the objectives of researchers in Sign Language Technology, the operational objectives below were quickly marked as completed in the second project year.

No.	Description	Status
OO4.1	Raising awareness about the deaf and sign language communities among project partners	Done
OO4.2	Communication training for project partners and disseminating correct terminology about being deaf and sign language	Done
OO4.3	Aligning visions among different project partners	Done

The table below indicates the quota for internal workshops to be achieved. In total, 13 internal seminars were organised, significantly surpassing the set quota.

Channel	Measure	Project target	First year	Second year	Final year
Internal workshops	#attendees	Min. 3 workshops	2	5	6

7. Recommendations

Scientific communication for DHH individuals, specifically for sign language users, is a relatively new frontier, particularly in the realm of Sign Language Technology. The SignON project provides a valuable opportunity for VGTC, alongside other SignON consortium partners, to explore effective communication strategies tailored to these communities, considering their past negative experiences with previous projects that lacked or had minimal involvement of potential Deaf and Hard of Hearing users.

From our co-creation events and communication with DHH people, we learned that clear and transparent communication about both parties' expectations of sign language technology is crucial. Expectation management emerged as an important factor during the process and played an important role in establishing a fruitful collaboration.

In addition, we have gleaned insights from our communication and dissemination activities that language choice significantly impacts reach. Our posts in national sign languages garner more views and appreciation than those in International Sign. Unfortunately, due to budget constraints, it was not always feasible to provide everything in national sign languages. Nevertheless, this stands out as a crucial consideration for the future. Given that information on sign language technology is quite novel for DHH individuals, who generally have limited access to information and education, using national sign languages facilitates a more accessible delivery of new material to our DHH target audiences.

Moreover, a shift away from reliance on translators in green-screen studios, translating written language news and information into sign languages using templates to replace the green background, would likely enhance engagement from sign language communities. To boost engagement, it is advisable to employ Deaf communication experts who can produce video reports on location in a natural setting.

Attention should also be paid to recruiting deaf sign language users from different countries to increase the reach of the project. SignON has a greater impact in Flanders because the deaf communication staff is a member of the Flemish deaf community. Later in the project, an Irish deaf team member joined, giving us a better connection with the Irish deaf community. Working more on a national level rather than an international level is thus essential to effectively reach national communities with our communication and dissemination activities. In addition, it would be useful to involve hard-of-hearing (non-signers) and hearing communication staff to best reach other non-signers DHH and potential

hearing users. Although the SignON budget for WP6 for communication and dissemination was insufficient to achieve these goals, it serves as a valuable focus for future projects.