FINAL REPORT

Grant Agreement number:

Project acronym:

Project title:

Project type: ☐ Pilot A ☒ Pilot B ☐ TN ☐ BPN

Periodic report: 1st ☐ 2nd ☐ 3rd ☒ 4th ☐

Period covered: from March 1st 2014 to March 31st 2017

Project coordinator name, title and organisation:

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DECLARATION BY THE PROJECT COORDINATOR

I, as coordinator of this project and in line with my obligations as stated in Article II.2 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate):

  ☐ has fully achieved its objectives for the period;

  X has achieved most of its objectives for the period with relatively minor deviations;

  ☐ has failed to achieve critical objectives and/or is deviating significantly from the schedule.

- The public Website is up to date;
- *[this point only applies to projects with actual cost reimbursement]* To my best knowledge, the information contained in the financial statement(s) submitted as part of this report is in line with the actual work carried out and consistent with the reported resources and if applicable with the certificates on financial statements.

Name and position of Coordinator: .....

Date: ...../ ...../.....

Signature: .....

The objective of the Able to Include project is to improve the lives of people with intellectual or developmental disabilities (IDD) and similar conditions through the deployment of technology based support for their activities related to leisure, labour activities and communications with their counterparts.

Publishable summary

In modern life, technology is a valuable support, but the available mechanism for people with **intellectual or developmental disabilities** (IDD) is still limited. Even though technology can provide a valuable support for people with any disability, the focus is placed on sensory disabilities. IDD is not normally in the agenda of technology developers and Able to Include's work is directed to change this situation.

Within the project, a **software layer** was created to support software and apps developers in the process of creating accessible applications. This software layer provides developers with seamless access to a number of mechanisms for accessibility. During the project, three key technologies were included (text simplification, conversion text to pictograms, text to speech). The layer is offered as open source, so the number of functions can increase in the future.

In Able to Include, three **pilots** were deployed:

1. On Leisure: AbleSocial -- making Social Networking services such as FaceBook, Twitter, Messenger and WhatsApp accessible for users with IDD
2. On Mobility: AbleChat -- assisting users with IDD to travel independently from home to work or school, to do some shopping, to visit friends elsewhere in town
3. On Labour: AbleMail (Kolumba) -- to help people with IDD to compose, read, send and receive mails.

The first pilot was carried out in Belgium, Spain and UK, the second one in Belgium and the UK,

and the third in Spain. In all three, meaningful adaptations were done after the first round of pilots, proving that a user-centred approach is really worthwhile. Smaller adaptations, making the services more user friendly, were also done during these pilots.

One of the major adaptations concerned the first pilot, AbleSocial. The aim during the first year of the project was to come up with a safe kind of FaceBook social networking, etc. But the users made it clear that they wanted the 'real' ones, the versions their friends were also using. So we changed our approach, and came up with an app allowing for use of the true social media apps. However, we made a few short videos available within the AbleSocial App[1] from the SafeSurfing Project:[2]

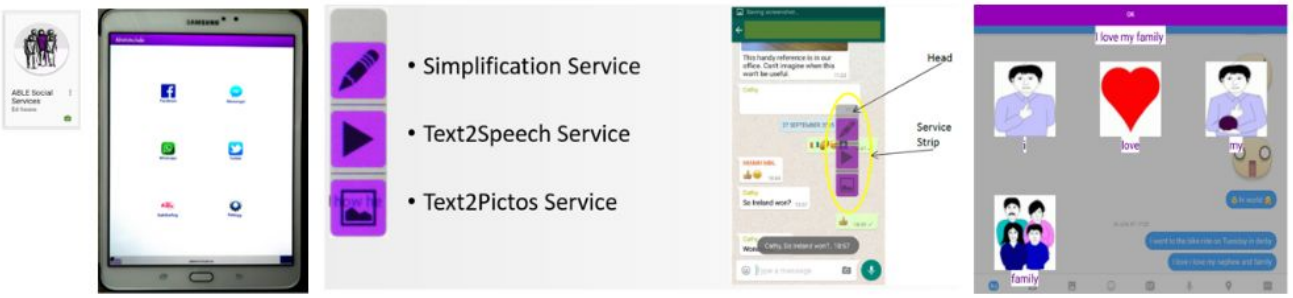

Fig. Screenshots of the AbleSocial app.

•What should I share
•Use the Internet Safely
•Internet things I need to know
•Use Mobile Devices Safely
•Be safe on Facebook and Social Media

These videos provide caregivers a means to talk with their users about the issues in their use of social media.

Now our users can work with Facebook etc, just like their peers. Messages they want to read can be read aloud, simplified or translated into pictos. They just need to select a block of text, and use the service strip to decide how they want to digest it.

[1] able-to-include.com

[2] www.safesurfing.eu. The SafeSurfing project is led by our partner Inclusion Europe.

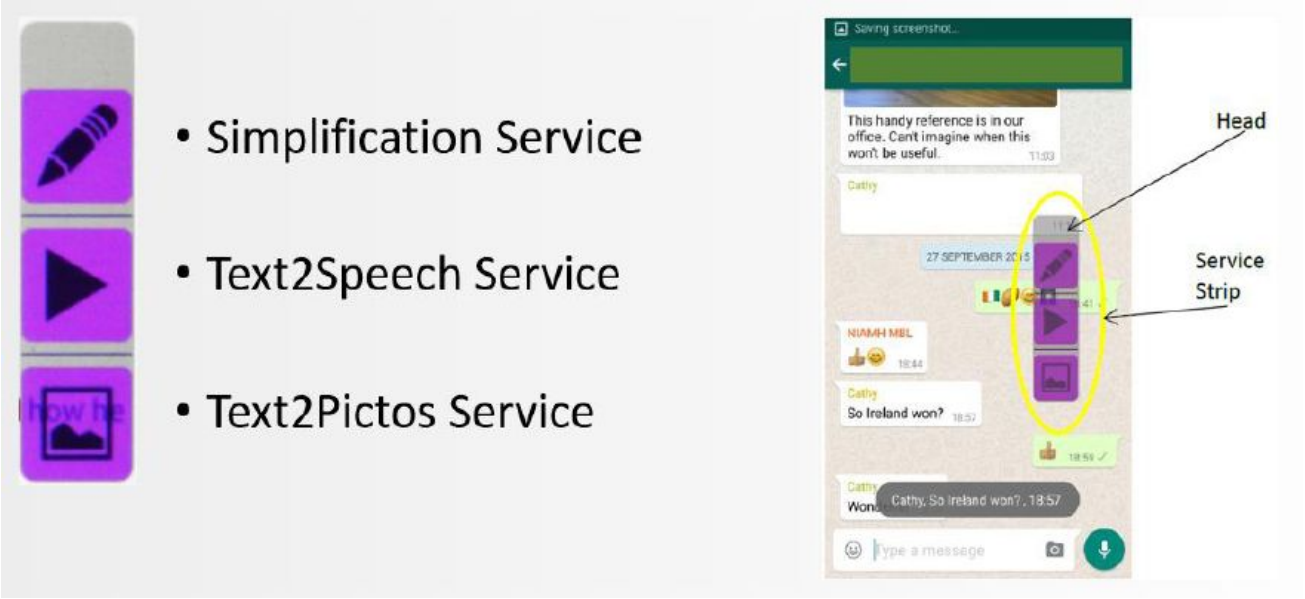

Fig. The AbleSocial Service Strip with all three language technologies.

When they decide to have it simplified, or translated into pictos, there always is the opportunity to touch the text, or the picto, to have it read aloud.

Simplification gives the following result:

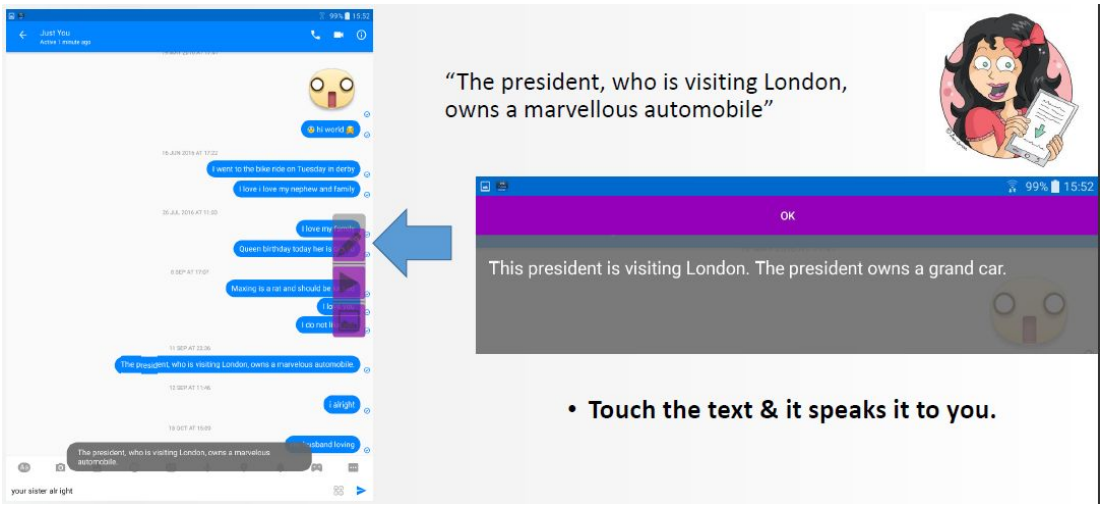

Fig. The AbleSocial simplification service.

And an example of a translation into pictos of part of a Facebook message:

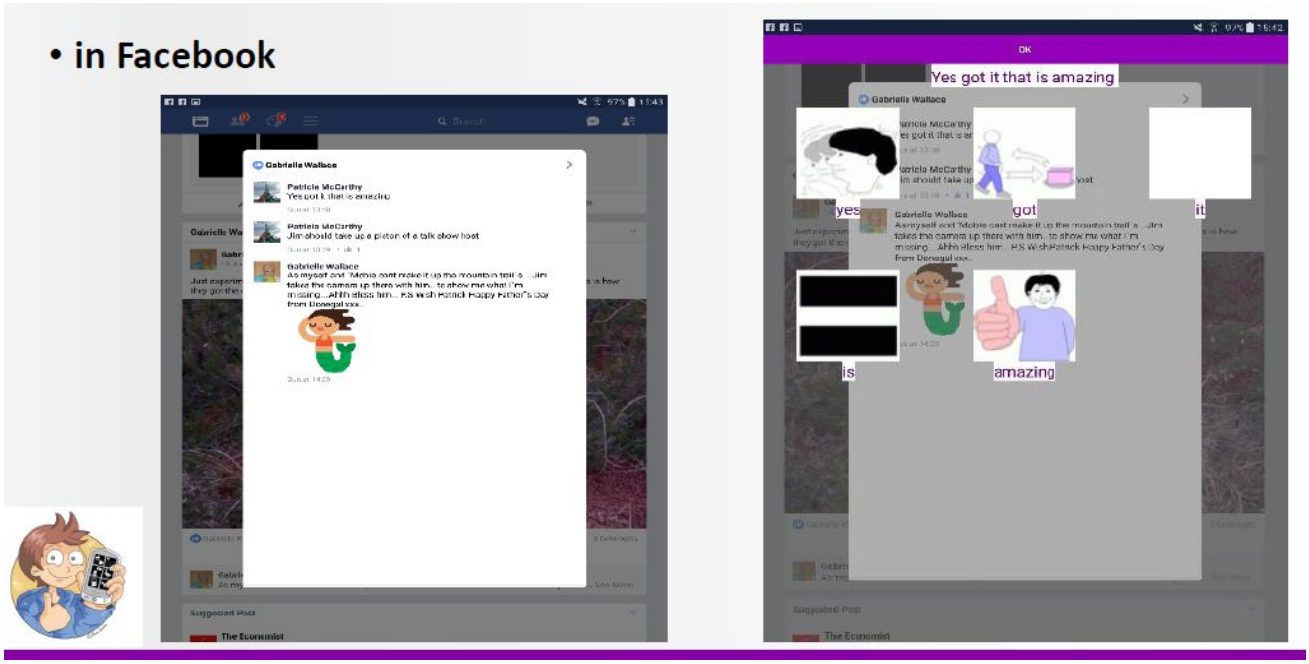

Fig. The AbleSocial pictograph translation service.

Note that when a user composes a message in pictos, people reading the message will be able to see it in Dutch, English or Spanish, using the Picto2Text service. A carer can personalise the app for individual users:

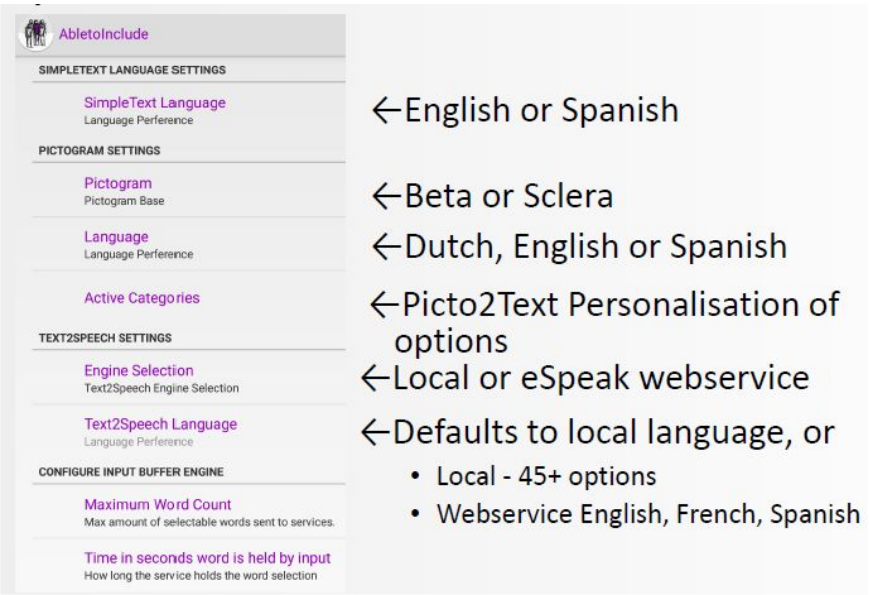

Fig. Customisable settings in the AbleSocial app.

A similar story can be told about the second pilot. We first wanted to extend an existing app, Viamigo[3] [4]from our partner Thomas More, in collaboration with IMOB (UHasselt).[5] Viamigo allows a user to travel independently, from home to school or a sheltered workshop, to the bakery, to family or friends. They can do it alone, after a carer has registered the route, and has explored these trips with the user. The moment the user wants to make a specific trip, (s)he selects it in the app, the carer receives a signal, and can supervise from the distance. But it turned out that the users wanted to be able to communicate about more things than just the trip they are making. Therefore a new app was developed, which can be used in combination with Viamigo. The new app, AbleChat, allows the user to communicate with pictos with one or more carers.

Fig. The Viamigo application.

As this app is meant to be used on a smartphone, the number of pictos that can be selected is rather limited, but personalized. Of course, there will be a larger overlap between the chosen pictos, all want to be able to say hello, to use notions like 'I'm OK, 'I like this', 'How are you'?, etc. But, for example, Bart (cf image of his keyboard below) wants to be able to mention horses, as he is working at stables. So that's one of the pictos he needs. Using such pictos carers and users can exchange messages. In the image below a carer is chatting with an user, the messages received are in blue, those sent in yellow. A picture in front of a message marks the sender. In this case, the carer, Jo, asks when Toon, the user, will come home: 'wanneer kom je naar huis'. Toon replies that that will be at 8

[3] www.viamigo.be/en , picture taken from that website.

[4] https://www.youtube.com/watch?v=91DPxAewtFI

[5] http://www.uhasselt.be/IMOB-EN

o'clock ('acht uur').

The users, and their family, are very enthusiastic about the new app. One mother told us that this was the first time her son was able to send her a message telling that his favourite football club had won the match with 3-1!

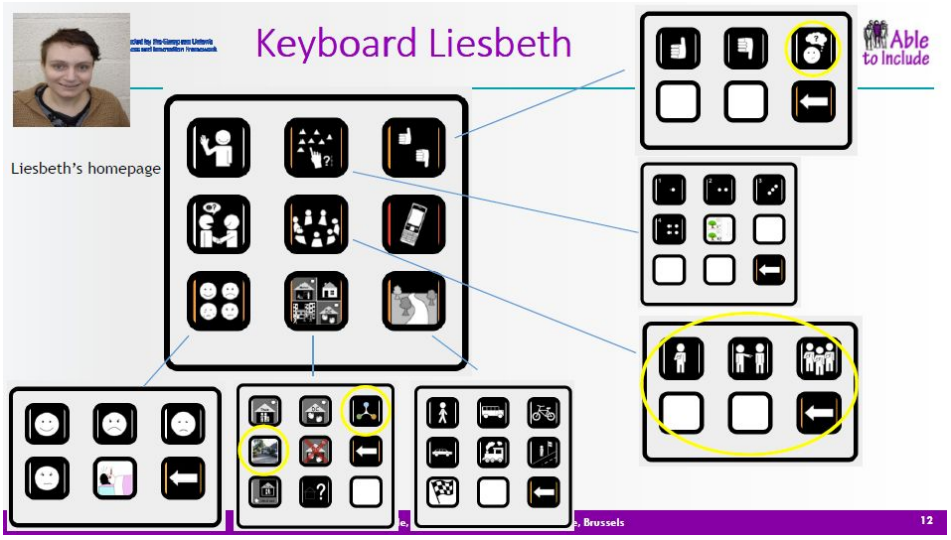

Fig. Liesbeth's AbleChat keyboard.

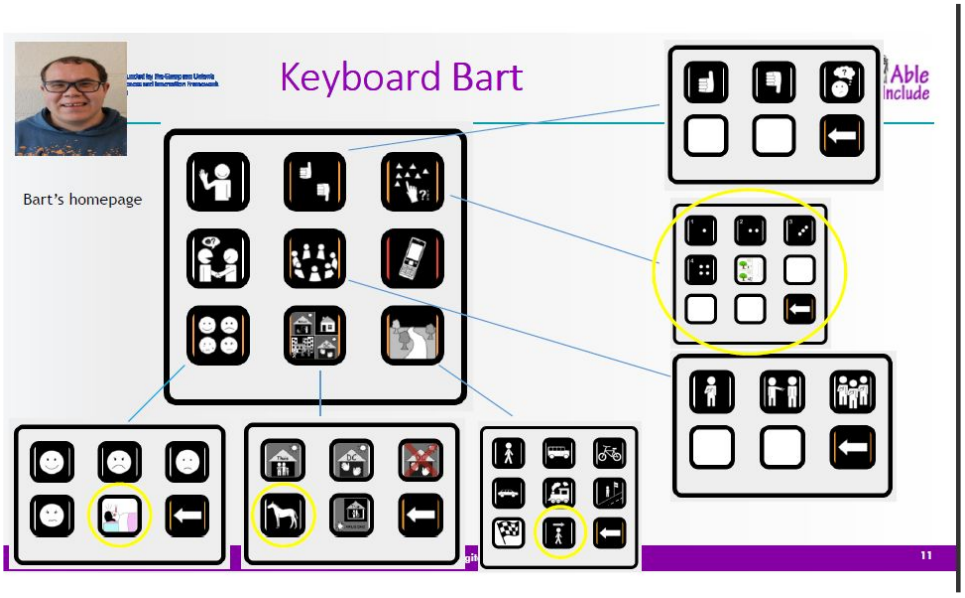

Fig. Bart's AbleChat keyboard.

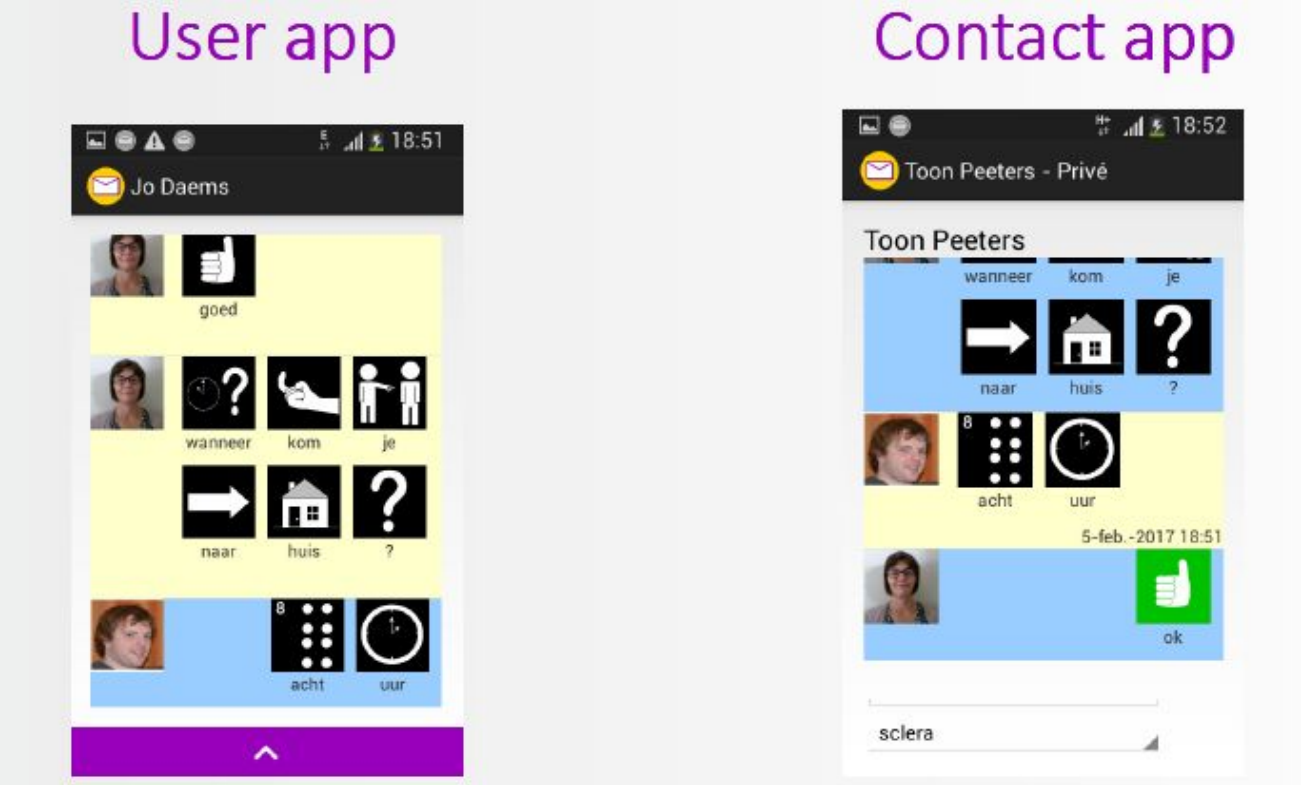

Fig. Differences between the user app and the contact app.

The third app is Ablemail, mostly called Kolumba.
It is an accessible email client, adapted to people with IDD, designed in such a way that it can be used in the work environment. It's goal is to stimulate labour integration of people with IDD. In that context, it is essential to be able to use a mail client. Most existing ones are too complex, and therefore confusing, for people with IDD. Therefore, a client without all kinds of fuss had already been developed by Ariadna Computer Services (an ex-partner of Able to Include, no longer existing). This version was tested in the first phase of the project, and adapted thereafter to the needs of the users. AbleMail/Kolumba is especially used with Gmail. It alows for the use of all three techniques used in the project:

- SIMPLEXT: Any text received is translated to easy reading.
- TEXT2PICTO: It translates a text into pictograms. It is a technology to be used by people with lower literacy or reading comprehension skills.
- TEXT2SPEECH: Changes written text to voice.

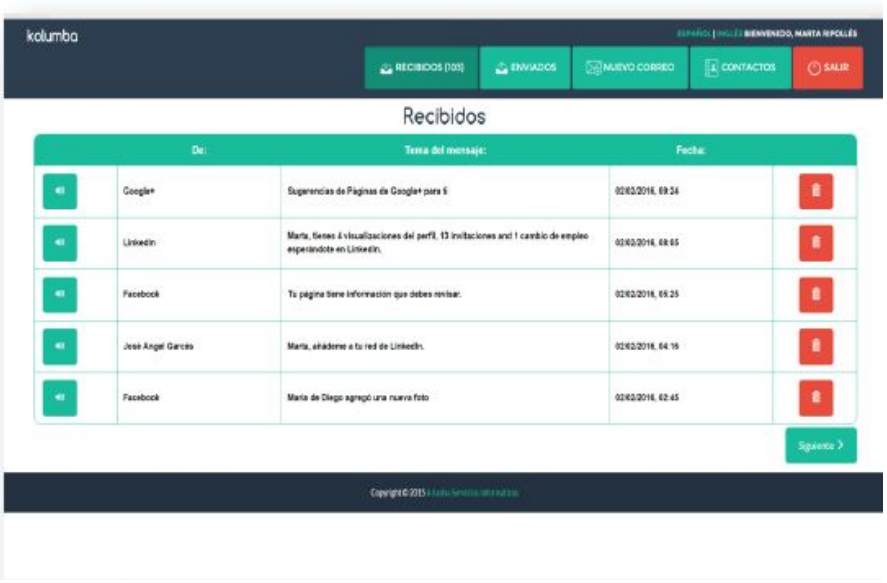

Fig. The Kolumba app: mailbox.

In the upper right the language can be chosen (at the moment English and Spanish), the name of the user is also shown. Below are icons for 'inbox', 'sent', 'new mail', 'contacts' (all in green) and 'exit' (in red). No more than 5 mails are shown per screen. The user can have them read aloud (icons at the left). Once a mail has been selected, it also becomes possible to have the message simplified or translated in pictos, Picto and Picto2 referring to two different sets of pictos.

Fig. The Kolumba app: viewing a message.

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The Able to Include strict User Centric co-creation and co-development approach has ensured that we built tools that after the end of the project won't be shelved because the intended users are not prepared to make use of them. In the case of Able to Include, the users are happy with the resulting tools, although they still have requests that could not be met during the project. Sometimes this was

for legal reasons (like logos of companies), sometimes for practical reasons (pictures of all football players in a specific competition), sometimes for technical reasons (a voice speaking in the local dialect).

But even considering this, the users involved in the project are very happy with and proud of the tools that they helped to develop. They felt appreciated. Their presentations during the final meeting in Brussels (February 10, 2017) speak volumes![6]

Fig. The Able to Include technology developers visited the end users to hear about their wishes and needs.

Fig. User tests in Belgium.

The apps mentioned above all make use of the Able to Include Accessibility Layer Open API services: simplification of received messages, pictograms and text to speech (local versions).

Evaluation

Evaluation of the tools was a large part of project work in the last 2 years of the project. Apart from the satisfaction of the users (not unimportant!) other aspects were taken into account as well. The

[6] See http://able-to-include.com/able-to-include-final-event/

users, and in several cases their caregivers as well, filled out questionnaires or had structured interviews with researchers. The questions concerned, amongst others, the increase of quality of life, self-confidence, ability to do things independently, and social (e-)inclusion. In general, the conclusion is positive. For example, it turned out that some users learned to read and write better, and no longer always needed to rely on pictographs. In the past, they even didn't try.

Overall the evaluation concluded:

- Three separate applications: AbleSocial, AbleChat and AbleMail were successfully used by people with IDD.
- The involvement of the end users in the development process was greatly appreciated by both the technical developers as well the by the end users. The end users felt appreciated: their concerns were heard and developers took their opinions into account, which contributed greatly to their feeling of self-worth.
- There were positive impacts on the participation, inclusion and quality of life of persons with IDD
- Being part of a social group is important, as is having access to the same technology as their peers, family and friends. This is something the Able to Include project and services have achieved.

Impact of Able to Include

A major component of the Able to Include project is the **Accessibility Layer**, a service to be used on tablets, smartphones or PCs addressing the needs of users with IDD in several contexts, three of which were tested in the pilots (social media, mobility, e-mail). Both the use of the Apps themselves and the participation in the project had beneficial effects on the quality of life of the end users, people with a IDD. Caregivers and family members take into account more long term possibilities when the Apps and Services would be implemented in the daily life of the end users.

AbleSocial, AbleChat and AbleMail are only a few examples of ways to make ICT tools accessible for people with IDD, using an Accessibility Layer. For everyone, with or without a disability, being part of a social group is important, as is having access to the same technology as their peers, family and friends. Every App and service contributes to social interaction, in leisure time, on the road or in a working context.

The Able to Include Accessibility Layer is a very innovative and high impact example of Assistive Technology (AT) for people with IDD. The results of the Able to Include project and their exploitation consist of 4 services:

(1) Accessibility Layer Open API Cloud-based Service,
(2) Simplext service,
(3) PictoText services,
(4) Text2Speech services,

and 3 Apps:

(1) Able Social Media Accessibility Layer App,
(2) AbleChat MobilityApp

(3) Kolumba/AbleMail Labour Integration App.

These are illustrated in the following diagram:

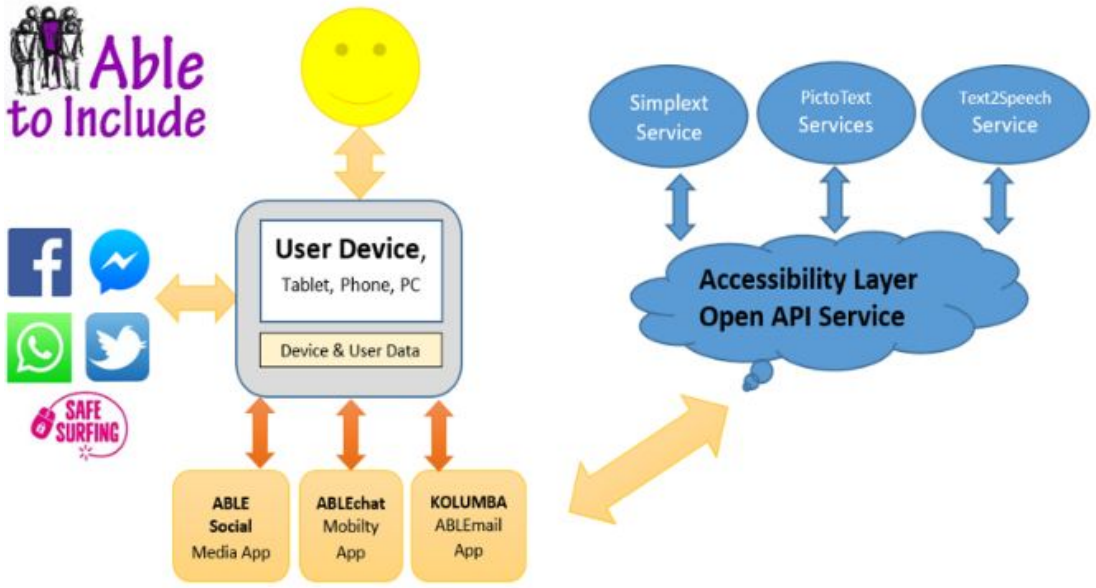

Fig. The Able to Include Accessibility Layer.

The socio-economic impacts and opportunities of the Able to Include services address both **eInclusion** and **eAccessiblity**. Against the background of demographic change and population ageing in Europe and the world, these two issues are of special relevance. Particularly in the context of the EU Digital Single Market (DSM). An inclusive DSM offers opportunities for all citizens, but only if they are equipped with the right digital skills. Otherwise the DSM will just further marginalized groups such as people with IDD.

The internet has become an essential medium to access and provide information and services. It is therefore more important than ever to make sure that *everyone* can perceive and understand websites and mobile apps, and interact with them properly. The number of people with mild to moderate IDD represent about 1.0% of the population or about 5M people in EU. A common approach to ensure web accessibility will contribute to an inclusive digital society and to unlocking the benefits of the Digital Single Market for all European citizens. But Able to Include has an uniquely innovative solution for people with IDD.

A secondary but important target for Able to Include is software developers that will be enabled to use the Accessibility Layer and software development kit (SDK) in existing and new software and apps.

The policies and initiatives over the coming years clearly indicate a very significant eAccessiblity policy development and active opportunity for the Able to Include Accessibility Layer Services and Apps, for people with IDD, a group that does not yet figure adequately in the developing policies. This represents a major opportunity and huge potential for the Accessibility Layer services and Apps.

A sustainability and exploitation analysis concluded that the current business model is provision of the Able to Include API cloud service, SDK and current APIs free of charge, driven by MAC and perhaps later on by an independent entity representing a community of developers, depending on the take up and extension of the Accessibility Layers and Able to Include Services to other applications and assistive adaptations.

Contacts with open innovation community

We identified a number of organisations and individuals who have shown interest in continuing with the work done during the project. This is a good basis to ensure the sustainability of the initiative in the short and mid term after the project ended.

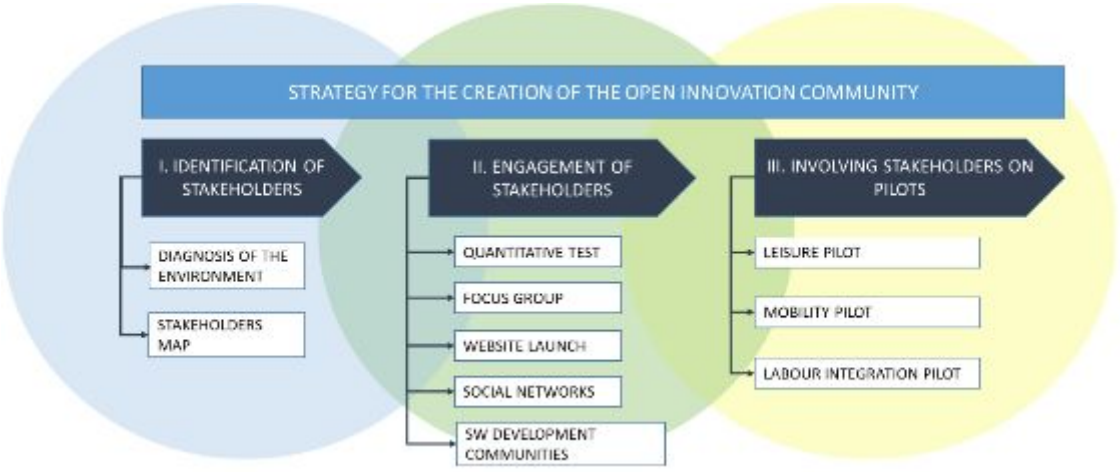

Fig. Strategy for the creation of the open innovation community.

The selection of Open Innovation as a working methodology and the decision to deliver the project's results as Open Source Software have been reflected in the final outcomes of the project. On the one hand, the project partners show interest in adopting Open Innovation methodologies as a mechanism to identify answers to their emerging needs. The experience of mixing different profiled groups towards a shared common objective has proven its large benefits.

On the other hand, the availability of the Able to Include results as Open Source Software (OSS) ensures that some organisations are in a position to sustain the project work after its completion. Several companies and organisations are willing to know in detail on the project results and to extend them with new functionalities or integrating them into future services.

Communication and dissemination[7]

As in previous years, the Able to Include website[8] has been constantly updated. It shows the latest state of affairs, including a rather extensive list of presentations and papers.

[7] For a list of papers and presentations, see below.
[8] http://able-to-include.com/ .

Apart from the (many) contacts the partners working with users had with user organizations, homes, associations of carers and the like, we are also proud that at academic events our work is also appreciated, not only by researchers working in the same domain, but also by others. On the one hand these researchers may realize that their work, when some adaptations are made, *in se* may be of interest for other communities as well, or, on the other hand, that our work and theirs can be combined in other to address such new communities.

So we did not only reach out to IDD-communities in Belgium, Spain and the UK, but also to these communities in other countries, in Europe, but there is also interest in India, Australia and the US. But we also got in touch with other communities stating that the Able to Include App and service could also be beneficial for them.

For example in Finland and India people are interested because many smaller languages are involved (Sami languages in Finland). In such a case it is easier to communicate in pictographs than creating several version in different languages.

Future domains of use

The recently agreed EU Web Accessibility Directive[9] and previous European Accessibility Act[10] provide an excellent opportunity for the widespread adoption of the Able to Include services and SDK/APIs, as Inclusion Europe have proposed that "*persons with intellectual disabilities need accessible information in order to be fully included in society. Therefore, the use of the Easy-to-Read format and pictographs, recognised by the European Standards to make information easy to read and understand needs to be mainstreamed throughout the Act in order to remove the remaining barriers persons with intellectual disabilities face while accessing to public goods and services*"[11]

The Able to Include Apps and Services can now be readily extended for use by senior people.[12] In terms of exploitation this is a big opportunity as it brings a many users that can afford to pay for such applications and services. With these revenues Able to Include will be able to push ahead the development of services for people with cognitive disabilities and eAccessibility requirements - be those due to IDD, autism, aphasia, dementia, age, accident or whatever origin. But also migrants as well as natives who are for some reason more or less illiterate can profit.

The Able to Include Partners believe that eAccessibility begins with open and transparent communication between providers and users. This information must be delivered in a way that is not only accessible to individuals but also meets their needs – 'anytime, anyhow, anywhere'. Most people are "on-demand" users of multimedia interactive services, and service providers need to accept this and deliver information and web-services in a convenient format. The consortium

[9] https://ec.europa.eu/digital-single-market/en/news/adoption-directive-accessibility-sector-bodies-websites-and-mobile-apps

[10] http://ec.europa.eu/social/main.jsp?catId=1202

[11] www.socialplatform.org/news/inclusion-europe-the-european-accessibility-act-great-potential-while-leaving-much-room-for-improvement

[12] For instance anecdotally, the head of the Geriatrics Department of a large hospital in Madrid, expressed great interest in the Kolumba AbleMail system for a number of his patients. While an 84 year old person, who sometimes has problems with her Gmail, would welcome a Dutch version of Kolumba !

believes that Able to Include, its Accessibility Layer Services and Apps will meet these needs and are an effective foundation-stone to a very strong eAccessibility and eInclusion agenda for people with IDD across Europe. Thus significantly contributing to an inclusive digital society and to unlocking the benefits of the Digital Single Market for all of Europe's citizens.

Beneficiaries and contacts

At the end of the project, the following parties were involved:

- Katholieke Universiteit Leuven, Belgium
  Contact person: Ineke Schuurman (ineke.schuurman@ccl.kuleuven.be)
  Coordinator
- Fundacion Prodis, Madrid, Spain
  Contact person: Marta Ripolles (martaripolles@fundacionprodis.org)
- Universidad Pompeu Fabra, Barcelona, Spain
  Contact person: Horacio Saggion (horacio.saggion@upf.edu)
- Building Bridges Training, Halesowen, United Kingdom
  Contact person: Liz Tilly (liz@building-bridges-training.org)
- Thomas More Kempen, Geel, Belgium
  Contact person: Jo Daems (jo.daems@thomasmore.be)
- The National Microelectronics Applications Centre ltd, Limerick, Ireland
  Contact person: John O'Flaherty (j.oflaherty@mac.ie)
- Inclusion Europe aisbl, Brussels, Belgium
  Contact person: Angelika Hild (a.hild@inclusion-europe.org)

The website of the project is to be found at http://able-to-include.com

Dissemination

Papers[13]

Leen Sevens, Jo Daems, Annelies De Vliegher, Ineke Schuurman, Vincent Vandeghinste and Frank Van Eynde (2017). "Building an Accessible Pictograph Interface for Users with Intellectual Disabilities" In: *Proceedings of the 2017 AAATE Congress*. Sheffield, UK.

Vincent Vandeghinste, Leen Sevens and Ineke Schuurman (2017). "E-Including the Illiterate". In: IEEE Potentials 36(1): 29-33.

Annelies De Vliegher, Jo Daems (2017). "Kwalitatief onderzoek bij personen met een verstandelijke beperking: een flexibele methodologische aanpak." In: Vlaams Ergotherapeutenverbond en Wilfried Van Handenhoven: Jaarboek ergotherapie 2016-2017. Chapter 7. Leuven: Acco. pages 129-138.

[13] All papers are peer-reviewed. Everything is presented in chronological order.

Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde (2017). "Simplified Text-to-Pictograph Translation for People with Intellectual Disabilities". In Proceedings of the 22nd International Conference of Natural Language and Information Systems (NLDB 2017), Liège, Belgium, June 21-23.

Horaco Saggion, Daniel Ferres, Leen Sevens, Ineke Schuurman, Marta Ripolles, and Olga Rodriguez (2017). "Able to Read My Mail: An Accessible e-Mail Client with Assistive Technology." In: Web For All (W4A) 2017 – The Future of Accessible Work, Perth (Australia), April 2-4. **Best Paper Award (Communication track)**

Jaime Medina Maestro, Horacio Saggion, Ineke Schuurman, Leen Sevens, John O'Flaherty, Annelies De Vliegher and Jo Daems (2016). "Towards Integrating People with Intellectual Disabilities in the Digital World". In: Proceedings of the 7th International Workshop on Intelligent Environments Supporting Healthcare and Well-being (WISHWell'16). London, UK.

Leen Sevens, John J. O' Flaherty, Ineke Schuurman, Vincent Vandeghinste and Frank Van Eynde (2016). "E-Inclusion of Functionally Illiterate Users by the use of Language Technology". In: Proceedings of the 2nd Conference on Engineering4Society. Heverlee, Belgium.

Leen Sevens, Gilles Jacobs, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde (2016). "Improving Text-to-Pictograph Translation Through Word Sense Disambiguation". In: Proceedings of the 5th Joint Conference on Lexical and Computational Semantics. Berlin, Germany.

Leen Sevens, Tom Vanallemeersch, Ineke Schuurman, Vincent Vandeghinste and Frank Van Eynde (2016). "Automated Spelling Correction for Dutch Internet Users with Intellectual Disabilities". In: Proceedings of 1st Workshop on Improving Social Inclusion using NLP: Tools and Resources (ISI-NLP, LREC workshop). Portorož, Slovenia, pp. 11-19.

Jo Daems, Nele Bosch, Steben Solberg, Jan Dekelver and Marina Kultsova, (2016). AbleChat: Development of a chat app w
ith pictograms for people with Intellectual Disabilities. In 2016 In: Proceedings of the 2nd conference on Engineering4Society. Heverlee, Belgium.) ISBN number: 9789460189968

An Neven, Yves Vanrompay, Katrien Declercq, Davy Janssens, Geert Wets, Jan Dekelver, Jo Daems and Tom Bellemans (2016). Viamigo: a monitoring tool to support independent travelling of persons with intellectual disabilities. Transportation Research Record: Journal of the Transportation Research Board, No. 2650. DOI 10.3141/2650-04.

Horacio Saggion, Stefan Bott, Luz Rello (2016). Simplifying words in context. Experiments with two lexical resources in Spanish. Computer Speech & Language 35: 200-218 (2016)

Daniel Ferrés, Montserrat Marimon, Horacio Saggion, Ahmed AbuRa'ed (2016) YATS: Yet Another Text Simplifier. NLDB 2016: 335-342.

Francesco Ronzano, Ahmed AbuRa'ed, Luis Espinosa Anke, Horacio Saggion (2016). TALN at

SemEval-2016 Task 11: Modelling Complex Words by Contextual, Lexical and Semantic Features. SemEval@NAACL-HLT 2016: 1011-1016. Second best system of the evaluation.

Sanja Stajner, Maja Popovic, Horacio Saggion, Lucia Specia, and Mark Fishel (2016). Shared task on quality assessment for text simplifcation. In Proceedings of the Workshop & Shared Task on Quality Assessment for Text Simplification (QATS), Portoroz, Slovenia, 2016.

Liz Tilly (2016). Issues relating to using a co-productive approach in an accessible technology project. In: Improving Social Inclusion using NLP: Tools and resources; LREC Workshop. Portorož, Slovenia

Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde (2015). "Natural Language Generation from Pictographs". In: Proceedings of 15th European Workshop on Natural Language Generation (ENLG 2015). Brighton, UK.

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Vincent Vandeghinste and Ineke Schuurman (2014). "Linking Pictographs to Synsets: Sclera2Cornetto". LREC 2014. Reykjavik, Iceland. [Paper] / [Poster]

Vincent Vandeghinste and Ineke Schuurman (2014) – "Able-to-Include: Improving Accessibility for people with Intellectual Disabilities" . In: Proceedings of European Association of Machine Translation 2014, 2014 (Dubrovnik, Croatia)

Presentations (oral, poster, demo)

Upcoming

November 8, 2017 – Falling Walls Lab (Berlin, Germany): Leen Sevens – "Breaking the Wall of Illiteracy" (Competition)

September 11-15 - AAATE (Sheffield, UK): Leen Sevens, Jo Daems, Annelies De Vliegher, Ineke Schuurman, Vincent Vandeghinste and Frank Van Eynde - "Building an Accessible Pictograph Interface for Users with Intellectual Disabilities" (Presentation)

June 21-23, 2017 – NLDB 2017 (Liège, Belgium): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Simplified Text-to-Pictograph Translation for People with Intellectual Disabilities" (Presentation)

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May 31, 2017 – Leen Sevens about Pictograph Translation Technology on Durtti (interview)

May 22, 2017 – Pioniersprijs Humanities and Social Sciences 2017 (Leuven): Vincent Vandeghinste, Leen Sevens and Ineke Schuurman – "E-inclusion through Pictographs" (presentation) [honorable mention]

May 3-5, 2017 – NNDR #14 (Örebro, Sweden): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Make it Simple, But Significant: Improved Text-to-Pictograph Translation for People with Intellectual Disabilities" (Presentation)

May 3-5, 2017 – NNDR #14 (Örebro, Sweden): Leen Sevens, Ineke Schuurman, Annelies De Vliegher, Jo Daems – "Unity is Strength: How User Feedback Influences Technical Decisions in the Able to Include Project" (Poster)

May 3-5, 2017 – NNDR #14 (Örebro, Sweden): Jo Daems, Nele Bosch, Annelies De Vliegher. "The influence of accessible technology on the quality of life of persons with an intellectual disability" (Presentation)

May 3-5, 2017 – NNDR (Örebrö, Sweden) Liz Tilly. 'The role of co-production in an accessible technology project'. (Workshop presentation)

March 15, 2017 – Falling Walls Lab Leuven (Leuven, Belgium): Leen Sevens – "Breaking the Wall of Illiteracy" (Competition)

March 8, 2017 – CLARe 2017 (Berlin, Germany) Ineke Schuurman, Leen Sevens and Vincent Vandeghinste – " You're never too old for e-Inclusion, are you?" (Presentation)

March 6, 2017 – Encounters in Language and Aging research. International Conference 'Corpora for Language and Aging Research' (CLARe): Ineke Schuurman, Leen Sevens and Vincent Vandeghinste – "You're never too old for E-Inclusion, are you?" (poster)

February 24, 2017 – Séminaires du CENTAL (Louvain-la-Neuve, Belgium): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Text-to-Pictograph Translation and Vice Versa for People with Intellectual Disabilities" (Seminar)

February 23, 2017 – DTIC / UPF Integrative Research Seminar (Barcelona, Spain): Horacio Saggion – "Overwhelmed by Information? Summarization, Simplification and information extraction at your fingertips" (Presentation)

February 10, 2017 – CLIN27 (Leuven, Belgium): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Syntactic Simplification for Improved Text-to-Pictograph Translation" (Presentation)

February 10, 2017 – Op.Recht.Mechelen: Justitie en Management (Mechelen, Belgium): Leen Sevens – "De Meerwaarde van Pictogrammen en Klare Taal in een Juridische Context" (Presentation

and panel discussion)

February 10, 2017. – CLIN27 (Leuven, Belgium). Nele Bosch, Jo Daems, Annelies De Vliegher. "Testing language technology tools with persons with an intellectual disability: a collaboration between researchers, developers and target users".

February 9, 2017. – CCL25 (Leuven, Belgium). Jo Daems. "AbleChat, a chat app with pictograms for people with intellectual disabilities". (Presentation)

December 1, 2016 – Com@modemdag. (Geel, Belgium). Nele Bosch, Annelies De Vliegher, Jo Daems, Steven Solberg. "Able to Include projecten: AbleChat en AbleSocial." (Presentation).

September 16, 2016 – Engineering4Society (Heverlee, Belgium): Nele Bosch, Steven Solberg, Jo Daems, Jan Dekelver, Marina Kultsova. (2016). "AbleChat: Development of a chat app with pictograms for people with Intellectual Disabilities". (Presentation)

September 16, 2016 – Engineering4Society (Heverlee, Belgium): Leen Sevens, Ineke Schuurman, John O'Flaherty, Vincent Vandeghinste and Frank Van Eynde – "E-Inclusion of Functionally Illiterate Users by the use of Language Technology" (Presentation)

September 14, 2016 – WIDeN, (University of Wolverhampton, UK), Building Bridges Training group and Liz Tilly. 'Involvement in the Able to Include project' (conference presentation)

September 12-13, 2016 – WISHWell'16 (London, UK): Jaime Medina Maestro, Horacio Saggion, Ineke Schuurman, Leen Sevens, John O'Flaherty, Annelies De Vliegher and Jo Daems – "Towards Integrating People with Intellectual Disabilities in the Digital World" (Presentation)

September 6-8, 2016 – Lancaster Disability Studies Conference (Lancaster, UK): Leen Sevens, Ineke Schuurman, John O'Flaherty, Vincent Vandeghinste and Frank Van Eynde – "Pictographs to the Rescue! Social Media for Functionally Illiterate Users" (Presentation)

September 6, 2016 – Lancaster Disability Studies Conference (Lancaster UK) Able to Include; The role of technology in enabling inclusion and citizenship. (Workshop presentation)

September 6, 2016 – Lancaster Disability Studies Conference (Lancaster UK) Nele Bosch, Jo Daems, Steven Solberg. "Able to Include: AbleChat: a pictogram based chat application for people with IDD" (Presentation)

September 6, 2016 – Lancaster Disability Studies Conference (Lancaster UK) Annelies De Vliegher, Jo Daems. "Able to Include: Able to Include, people with IDD using Facebook." (Presentation)

August 11-12, 2016 – *SEM (Berlin, Germany): Leen Sevens, Gilles Jacobs, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Improving Text-to-Pictograph Translation Through Word Sense Disambiguation" (Poster)

May 23, 2016 – Improving Social Inclusion using NLP: Tools and resources; LREC Workshop

(Portorož, Slovenia), Liz Tilly. Issues relating to using a co-productive approach in an accessible technology project. (Workshop presentation)

May 23, 2016 – ISI-NLP (LREC workshop) (Portorož, Slovenia): Leen Sevens, Tom Vanallemeersch, Ineke Schuurman, Vincent Vandeghinste and Frank Van Eynde – "Automated Spelling Correction for Dutch Internet Users with Intellectual Disabilities" (Presentation)

May 12, 2016 – PLIN Day (Louvain-la-Neuve, Belgium): Leen Sevens, Ineke Schuurman, John O'Flaherty, Vincent Vandeghinste and Frank Van Eynde – "Pictograph Translation Technologies for Improving E-Inclusion" (Poster)

December 18, 2015 – CLIN26 (Amsterdam, the Netherlands): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Natural Language Generation from Pictographs" (Presentation)

December 18, 2015 – CLIN26 (Amsterdam, the Netherlands): Gilles Jacobs, Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Word Sense Disambiguation in Text-to-Pictograph Translation" (Presentation)

December, 1, 2015. Congres Begeleid werken 'Arbeid en Zorg op maat'. (Hasselt, Belgium) Jo Daems, Jan Dekelver. "Pictochat, een chat app voor de smartphone". (Presentation and demo)

November, 19, 2015. Healthcare Inspiration Forum. Het interactieve forum voor technologie, zorg en welzijn. (Kortrijk, Belgium) . Nele Bosch, Jo Daems. "Pictochat, een chat app voor de smartphone". (Presentation and demo)

October 22, 2015 – ICT 2015 (Lisbon, Portugal): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Picto Demo for Able-to-Include" (Presentation)

October 8, 2015 – The Big Draw (Leuven, Belgium): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Introduction to Pictograph Translation Technologies" (Presentation)

September 16, 2015 – WIDeN, (University of Wolverhampton, UK), Building Bridges Training group and Liz Tilly. 'Involvement in the Able to Include project' (conference presentation)

September 11, 2015 – Dag van de Doctorandi (Leuven, Belgium): Leen Sevens – "Pictographic Communication Technologies for Browsing the Web" (Presentation)

September 11, 2015 – ENLG 2015 (Brighton, UK): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Natural Language Generation from Pictographs" (Poster)

September 11, 2015 – SLPAT15 (Dresden, Germany): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Extending a Dutch Text-to-Pictograph Converter to English and Spanish" (Presentation)

July, 6, 2015. 6th Conference on Information, Intelligence, Systems and Application (IISA2015) in (Corfu, Greece). Jan Dekelver, Jo Daems, Nele Bosch, Lore Vandeperre, Annelies De Vliegher. "Viamigo: a digital travel assistant for people with intellectual disabilities" http://iisa2015.unipi.gr/. (Presentation)

June 21, 2015 – LOT Summer School (Leuven, Belgium): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Text-To-Pictograph Translation for Six Language Pairs" (Poster) [Poster] Best Research Poster prize

June, 18-19th, 2015 (Leuven, Belgium). Conference Engineering4society. Annelies De Vliegher, Jo Daems. "Able-To-Include: focus groups with people with IDD and their coaches". http://www.engineering4society.org. (Presentation)

June, 3, 2015. Congres Onlinehulp voor welzijn en gezondheid (Mechelen, Belgium). Jo Daems, Jan Dekelver. "Viamigo and Pictochat". (Presentation and demo)

June 2, 2015 – Dag van het Onderzoek (Brussels, Belgium): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Text-To-Pictograph Translation for Six Language Pairs" (Poster)

May 8, 2015 – NNDR #13 (Bergen, Norway): Leen Sevens, Ineke Schuurman, Vincent Vandeghinste and Frank Van Eynde – "Automatic Translation with Pictographs to Serve People with IDD" (Presentation)

May 7, 2015 – NNDR (Bergen, Norway) Liz Tilly. 'Able to Include; The role of technology in enabling inclusion and citizenship'. (Workshop presentation)

February 6, 2015 – CLIN25 (Antwerp, Belgium): Leen Sevens, Vincent Vandeghinste, Ineke Schuurman and Frank Van Eynde – "Text-To-Pictograph Translation for Six Language Pairs" (Presentation and Demo)

December 3, 2014 – KU Leuven (Leuven, Belgium): Leen Sevens – "ABLE-TO-INCLUDE: Automatic Translation from Pictographs to Text and Vice Versa" (Presentation)

October 16-17, 2014 – Ciudades que caminan – walking cities (Pontevedra, Spain): Agustin González-Quel – "Smart Walking Cities for everyone" (Presentation)

October 2, 2014 – Symposium Support Fund Delacroix (Brussels, Belgium): Vincent Vandeghinste – "Automatic Translation of Text into Pictographs." (Presentation)

September 24, 2014 – Coling 2014 (Dublin, Ireland): Leen Sevens, Vincent Vandeghinste and Frank Van Eynde – "Improving the Precision of Synset Links Between Cornetto and Princeton WordNet" (Poster)

June 17, 2014 – EAMT 2014 (Dubrovnik, Croatia): Vincent Vandeghinste and Ineke Schuurman – "Able-to-Include: Improving Accessibility for people with Intellectual Disabilities" (Poster)

May, 2014 – LREC 2014 (Reykjavik, Iceland): Vincent Vandeghinste and Ineke Schuurman – "Linking Pictographs to Synsets: Sclera2Cornetto" (Poster)

Symposium
Simplificación de textos para personas con dificultades lectoras. Organized by I, Fajardo, H. Saggion & O. Moreda. Salamanca, 19 /03/2015.

Tutorial
Horacio Saggion. An Introduction to Automatic Text Simplification. RANLP 2015.

Workshop
Improving social Inclusion using NLP: Tools and Resources
Pre-conference workshop of LREC 2016, Portoroz, Slovenia, May 23 2016. organized by Ineke Schuurman, Vincent Vandeghinste (both KU Leuven) and Horacio Saggion (Universitat Pompeu Fabra, Barcelona)