

# Call for information on Welsh language technology: Summary of responses

## People who want to use their Welsh more

### What kind of technology needs to be developed to help people use more Welsh?

Respondents would like to see the Welsh Government work closely with other companies and organisations, to ensure that the Welsh language is seen and heard as much as possible. Specifically, work to develop conversational AI that can both understand and respond in Welsh.

Additionally, multiple respondents reported the need for suitable guidance on the responsible use of AI, and language technologies in general, in Welsh.

Another suggestion was improving Welsh language content. They suggested that the Welsh Government should work with major streaming services, such as Netflix and Amazon Prime, to make Welsh content more visible—potentially exploring how AI can play a part in this. There was emphasis on creating fresh Welsh content rather than focusing solely on translations or adaptations.

There were also specific calls to the BBC and S4C to consider sharing more of their content openly and contributing to open-source data in general.

### Are there gaps where Welsh language technology isn't available at all or where it needs improvement?

Where technology tools are created in the future, one respondent emphasised the need to diversify the organisations that develop them. Where tools already exist, public bodies in Wales should make more use of, and help improve, free and open-source equivalents wherever possible.

Multiple respondents asked for regular evaluation of these tools to ensure they remain up to date and easy to use, specifically Geiriadur yr Academi and Cysill, and computer-assisted translation tools in general.

Respondents called for a way to make it easier to collect data (both voice and text, and more informal Welsh data) and how this is crucial for developing machine translation in terms of style, tone of voice, and appropriate reader age, for example. Here, respondents once again asked for improved guidance on data sharing and collection, and appropriate conventions for subtitling, for example. They also called for improved transparency from, and between organisations in this area, suggesting that organisations could appoint Welsh language Champions to share best practice.

Other gaps were to improve awareness of available resources and tools; for organisations to work together to procure Welsh language systems and new developments wherever possible; and to consider creating a new organisation altogether to focus on Welsh language technology, content creation, research, and digital experiences.

## Are there barriers to using technology in Welsh? If so, what are they?

A fundamental barrier is poor or no connection to the internet and other services in some regions of Wales. Respondents emphasised how this causes people to see and hear less Welsh, especially amongst children and young people.

Respondents identified several other barriers, including the lack of Welsh language options in popular digital platforms and the need for better education and training on the use of, and of developing bilingual technology in general. Specifically, the absence of 'off the shelf' products and the difficulty in making digital and online training platforms available in Welsh, emphasising how the Welsh language needs to be factored in from the very start of the development process in order to guarantee a good bilingual experience. In the meantime, respondents called for a list of companies who specialise in either bilingual requirements or have been successful in developing Welsh language content or services.

They also noted that there was a lack of understanding about user experience, especially in children and young people, and those with specific needs, which could be tackled by more user research. Respondents also called for research into behavioural change, particularly when changing user habits around language choice online.

## People who want to use Welsh language technology in different situations

### What's needed to make it easier for people to use Welsh language technology in the workplace?

Respondents suggested that public sector staff and the general public should receive training to confidently use existing tools and resources. This was especially important for digital or technical staff who may need further encouragement to attend training or events focused on Welsh language requirements.

Where training is already available, especially when targeted at students, that employers outline how upskilling in this area could be useful in the workplace.

Insights from research indicated that the use of translation tools, although widely accepted in translation professions, are currently underutilised and would benefit from wider use.

## What's needed to make it easier for people to use digital services in Welsh?

There was strong support for a culture of open innovation, where Welsh language digital resources and data are made available without unnecessary restrictions. Respondents suggested that this would encourage collaboration and innovation in the development of Welsh language technology in general.

They specifically called for localisation of Apple products into Welsh, and translation functions to be made available on Whatsapp and Panopto. Another example was the use of Welsh language speech technology in public services, such as train/bus announcements and on ATM machines.

Respondents clearly stated that digital content needs to be perceivable, operable, understandable, and robust for all users.

## What's needed to make it easier for people to use Welsh language technology socially?

Respondents highlighted the importance of promoting the use of Welsh language technology in social contexts, including at the playground, at home, through cultural events and activities, and in communities in general. Other examples were fitness and dating apps, as well as gaming in the Welsh language.

One respondent shared their experience of maintaining their Welsh language skills while living abroad and the positive impact of participating in Welsh language events online, for example.

Another area for further work were social media platforms, specifically looking at how their interfaces and content are currently automatically translated—often incorrectly—as well as how their algorithms present Welsh language content.

## What's needed to make it easier for people to use technology in both Welsh and English (for example, being able to speak to a smart assistant in either language)?

While some AI tools can answer in Welsh if asked in English, it would be a significant improvement if they could recognise voice commands in Welsh. With this in mind, respondents called for further development of Macsen; the smart assistant developed by Bangor University.

## People with specific needs

### What would improve the experience of people with additional learning needs when using Welsh language technology?

Respondents stressed the need for Welsh language technology to be accessible to all, including people with disabilities, older people, and those with additional learning

needs. Specifically, tools that cater to these specific needs, such as screen readers and assistive communication devices to help blind and partially sighted people, for example. Respondents asked for these to be easily accessible and distributable, sustainable, open-source solutions that work across platforms and devices.

They highlighted the need for better voice recognition and synthesis, for example. There were calls for further development of Welsh language smart assistants and improvements in the accuracy of existing speech-to-text and text-to-speech systems. One important aspect was that these voices would work bilingually, capable of code switching, that is using Welsh and English within the same sentence, in the same voice.

For education purposes specifically, they called for software such as grammar checkers and speech-to-text to be made available via GoogleDocs to enable children and young people to use them in the classroom.

### What would improve the experience of people who want to use Welsh language technology for medical reasons, or if they have a physical impairment?

One specific example was that there is currently no official Welsh language AAC (augmentative and alternative communication) software that enables users to construct sentences from combining single symbols e.g. 'I – Want – To – Go'. As above, these developments would need to be available on a variety of platforms and key suppliers.

Respondents also noted the need for further research into how bilingual users can use technology in English and Welsh, and switch between the two. They suggested that this research be carried out through advisory groups including a diverse range of organisations.

### What would improve the experience of older people who want to use Welsh language technology?

Easy access was the main concern for older people wanting to use Welsh language technology. One respondent spoke highly of webinars and online meetups on Zoom as a great way to keep in touch and communicate with other Welsh speakers. However, logging onto those platforms themselves wasn't always an easy process, for example.