



Multilingual Emergency Communications



2021 Update

Language should not be a barrier to accessing emergency help. This document explores best practices for developing and implementing multilingual services.

Multilingual emergency communications



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EXECUTIVE SUMMARY

Handling communications made to emergency call centres by people who do not speak the language of the country/region constitutes a major challenge for the implementation of the 112 service across the European Union.

In many countries, language may pose a barrier when people need to contact urgent help. It is therefore essential that emergency services address these gaps in access and ensure that all persons can get assistance when they need it.

There are several different procedures to consider when designing and implementing multilingual emergency communications. The aim of this document is to bring together the best practices and knowledge in this area.

The document analyses the methods available for ensuring that call-takers can communicate with people speaking other languages, including the advantages and disadvantages of each method. The document also contains a brief description of some projects that have been practically implemented in this area.



The strategic aim is that any person should be able to contact the emergency services without language creating a barrier. Emergency services organisations therefore need to consider the multitude of languages used by citizens and visitors.



The document explores the available procedures and solutions, including:

- Multilingual call-takers
- Third party services
- Forwarding communications to other emergency services
- Volunteer translator teams
- Examples of other solutions

1 | INTRODUCTION

Europe is constantly on the move, buzzing with a multitude of languages. EU emergency response systems are under mounting pressure to respond to the growing expectations related to the effectiveness and the accessibility of emergency services. The interface between those exposed to an immediate threat and in need of emergency services is an important front-line in this battle, while multilingual services are a key component in the available solution's portfolio. The strategic aim is that **any person needing to contact 112 should be able to access help without language being a barrier.**

The objective of this document is to assemble all currently available information about the issue of multilingual 112 services and outline some of the 'best practice' approaches to the systematic user-focused development and provision of these services.

2 | ABBREVIATIONS

EU – European Union

EMS – Emergency Medical Service

PSAP - Public Safety Answering Points

SLA – Service-level agreement



3 | LIST OF RELEVANT LEGISLATIONS

Name	Nature of the text	Reference	Date of entry into force	Deadline for implementation	Link
Radio Equipment Directive	Directive	2014/53/EU	11 Jun. 2014	12 Jun. 2018	LINK
General Data Protection Regulation (GDPR)	Regulation	2016/679/EU	24 May 2016	25 May 2018	LINK
European Electronic Communications Code	Directive	2018/1972/EU	20 Dec. 2018	21 Dec. 2020 (21 Jun. 2022 for article 110)	LINK
Delegated regulation on Radio equipment support access to the E112	Delegated Regulation	2019/320/EU	17 Mar. 2019	17 Mar. 2022	LINK
European Accessibility Act	Directive	2019/882/EU	27 Jun. 2019	28 Jun. 2022	LINK



4 | RESEARCH

There are 24 official languages in the EU¹. Add to this mobility, migration, and other relevant factors – for instance, in 2012, only 21% of Europeans evaluated their English knowledge as very good and 47% as good²– and the natural and steadily growing demand for multilingual services becomes clear. There is a need at all stages of emergency management, but especially on the front-line of interaction with people experiencing an emergency: at the Public Safety Answering Points (PSAPs) that process the emergency communications.

In 2013, 26 EU Member States reported being able to answer 112 communications in English, 13 reported being able to answer 112 calls in French and 12 reported being able to answer them in German³. However, some citizens still experience difficulties when contacting the emergency services with these or other languages. Persons with disabilities have limited means of contacting emergency services other than voice-based communications in a majority of EU Member States.

In order to guarantee accessible service to all people in emergencies, and to improve response speed and efficiency of service, it is crucial to deliver multilingual call-handling. While the benefit to users is obvious, there are also system-based arguments in favour of the development of this type of service, one of the most important of which is the cost-benefit ratio.⁴



¹ https://europa.eu/european-union/about-eu/eu-languages_en

² https://data.europa.eu/data/datasets/s1049_77_1_ebs386?locale=en

³ <https://ec.europa.eu/digital-single-market/en/news/implementation-european-emergency-number-112-%E2%80%93-results-sixth-data-gathering-round>

⁴ <https://ec.europa.eu/digital-single-market/en/news/implementation-european-emergency-number-112-%E2%80%93-results-fourth-data-gathering-round>

Sign language users

According to the European Parliament, one in one thousand persons in the EU, approximately 500,000 people, communicates in one of the 31 national or regional sign languages as their first language.⁵ As well as deaf persons, for whom a sign language may be their mother tongue, sign language speakers include the hearing impaired, their friends and family, and others who use sign language as a second or third language.⁶

A highly important consideration is to ensure the accessibility of 112 services for deaf and hard of hearing citizens, who use alternative communication means to contact emergency services. It should also be considered that many of the population will experience hearing loss. A large number of deaf citizens use means other than voice to communicate. The current systems deployed all over the EU at PSAP level are predominantly voice-centric (focused on communication via voice). This means persons with disabilities are discriminated against while accessing emergency services. The general aim shall be to enable access to 112 and existing national emergency numbers for persons with disabilities in an equivalent manner to that enjoyed by other end-users. Persons with disabilities shall be able to use their everyday communication means to reach emergency services.⁷ EENA's document *Emergency Services Accessibility for Persons with Disabilities*⁸ explores the solutions available to ensure access.



⁵ [https://www.europarl.europa.eu/RegData/etudes/ATAG/2018/625196/EPRS_ATA\(2018\)625196_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2018/625196/EPRS_ATA(2018)625196_EN.pdf)

⁶ http://ec.europa.eu/languages/languages-of-europe/sign-languages_en.htm

⁷ <https://eena.org/knowledge-hub/documents/emergency-services-accessibility-for-persons-with-disabilities-2021-update/>

⁸ <https://eena.org/knowledge-hub/documents/emergency-services-accessibility-for-persons-with-disabilities-2021-update/>



5 | PROCEDURE AND SOLUTIONS

In most countries, robust practices have evolved to enable access to appropriately equipped services in the event of fire, medical or other emergency or the presence of police being required. In order to provide effective equality of access, all these services including 112 need to address significant gaps in access to emergency services for people who use different communication means, by proposing and implementing effective solutions, addressing the needs of users.⁹

In order to explore the key issues associated with emergency services access in the context of procedures and solutions, specific areas that require attention include: the definition of user needs; reflecting on the personal situation of specific target groups and the context of emergency services provisions, including their structures, procedures and relevant legal requirements. A particular aspect to be considered is the availability of alternative means of communication including options available for multilingual communication, interoperability and the identification of obstacles to the achievement of accessibility of services for all potential users. In the context of service providers, an analysis of the essential features of these services, their staffing and their training resources should be conducted.

In case of emergency, contacting 112 and getting an appropriate service depends on several factors, namely:

1. Knowing which emergency number to contact;
2. Availability of a telecommunication network connection;
3. Obligation and possibility to receive an answer to the emergency communications;
4. Obligation that the emergency communications will be handled appropriately. This issue covers the availability of multilingual support, caller location, the protocol of interaction with the person who contacted, the expedition of help, the obligation for a maximum response time of the emergency services and the profile of helpers and means which will be made available;
5. Obligation for the implementation of quality standards and for the systematic development and periodic evaluation of the overall emergency call handling service chain¹⁰.

⁹ <https://eena.org/our-work/eu-projects/reach-112/>

¹⁰ <https://eena.org/knowledge-hub/documents/emergency-call-handling-service-chain-description/>

Main issues for response services

- Accessibility of service in a form relevant to the user (for example, an alternative service/communication channel for users with disabilities who do not use voice-based communications or a service tailored to meet the needs of persons contacting 112 not speaking the national language/s)
- Response speed
- Scalability and forecasting
- Ensuring adequate information/data flow throughout the entire 112 service chain
- Cost
- Efficiency (tools for audit/quality control)

Main issues for users

- Accessibility of service and effective support in dealing with the emergency in a language they can understand

Benchmarking - issues to be considered

In order to offer multilingual 112 service, it is important to keep in mind the following aspects:

- Speed of service provision (in case of emergency, every second is critical)
- Scalability (during events, holidays)
- Number of languages in demand (can change very fast)
- Forecasting language needs (monitoring)
- Efficiency (e.g., ability for local agent to understand)
- Cost
- Privacy/Ethics

Procedure to handle multilingual communications

The process used in the treatment of a multilingual communication involves, in addition to the standard 112 service chain¹¹, the following tasks:

1. Identification of the contacted person's language, potentially with the support of software to assist the recognition of the language, such software is currently generally not available in the sector;

NOTE: Czech Republic indicates using linguistic support software¹² e.g., In Sweden and Finland, a third party interpreter provides help to identify the language if there is a need.

2. Processing the communications (e.g. by a multilingual call-taker, forwarding the communication to other emergency services or making contact with the interpreter);

¹¹ For reference see EENA Document – Emergency Call Handling Service Chain Description: <https://eena.org/knowledge-hub/documents/emergency-call-handling-service-chain-description/>

¹²<https://ec.europa.eu/digital-single-market/en/news/implementation-european-emergency-number-112-%E2%80%93-results-fourth-data-gathering-round>

3. Immediate translation of collected data (before it is processed based on standard operation procedures in the protocols respectively passed on to involved rescue service providers).

General overview of the solutions available:

1. Multilingual call-taker
2. External solutions – third party service
3. Forward the communications to other emergency services or make a 3-way conference call with national or foreign emergency services
4. Volunteer translator schemes
5. Examples of other solutions

It should be noted that these solutions can be combined.

5.1 | Multilingual call-taker

The multilingual 112 call-taker is able to speak several languages and handles the communications made in these languages.

The call-taking procedure:

1. The 112 call-taker receives a communication from a limited language speaker.
2. The 112 call-taker handles the communication in the (preferred) language of the caller.

Advantages

- In case of a local call-taker, local knowledge as well as understanding of contexts (social, geographical, etc.) can be an asset.
- Ability to cover local minority languages and/or dialects.
- Fastest solution: the call-taker answers in the preferred language directly and is able to process the information for further use in the desired form.

Potential disadvantages

- Cost implications of hiring bilingual staff who could earn more elsewhere in another industry.
- Difficulty to hire call-takers speaking many languages with the required language competency.
- Accuracy can be low if call-taker is not really fluent in the foreign language.
- Hard to cover large number of languages.
- Evaluation of level of understanding and training to maintain active level of language skills might be necessary.
- Bilingualism does not necessarily equal professional capacity in translating the language. Bilingual individuals are able to form their own thoughts and ideas and express them orally in two different languages, their native language and a second language,

sometimes well enough to pass for native speakers in their second language. However, some persons will have a native command of two languages but prove inept at translating even simple sentences and this has to be taken into account when preparing multilingual 112 call-takers for such a role.

Examples of practices:

Estonia:

- Besides knowledge of Estonian at C1 level, call-takers should have knowledge of Russian at B2 level. Some call-takers also have English language skills. The chief supervisor should speak and understand, besides Estonian and Russian, English, German, Finnish or French language.
- In the PSAP's IT system, language skills are marked and there is a list of all call-takers and supervisors which clearly states who speaks which languages. This helps to find a call-taker or supervisor with the language knowledge needed and if necessary, transfer a communication.

Finland:

- There are about 80 bilingual call-takers (out of 500) who know both Finnish and Swedish. Extra is paid to call-takers for the capability of using both national languages. Extra is paid for English skills as well.
- There are different call-taker profiles in the system: one that has a priority to handle communications in the nationwide Swedish queue and one hybrid Swedish-Finnish profile that handles communications mainly in the Finnish queue, but supports the Swedish queue, if needed.

Sweden:

- Multilingual call-takers answer communications in Swedish and English.

Lithuania:

- There is a multilingual pool of call-takers in one shift, that is capable of covering Lithuanian (LT), Polish (PL), English (EN) and Russian (RU) languages in every shift. This means that some call-takers in the shift speak LT, RU and PL, but don't speak EN, or speak LT and EN only. Spoken languages are taken into account when planning shifts.
- The language skills of call-takers aren't visually available to them. Instead, these skills are personally assigned to each call-taker in the PBX (Private Branch Exchange). In case of a need of internal call transfer, the call-taker that doesn't speak a certain language, for instance English, pushes the button and redirects the communication to the English language internal number. The system then finds an available call-taker in English and routes the communication to that call-taker.

Czechia:

- In the Ostrava PSAP covering the Moravian-Silesian region (one of the 13 regions in Czechia), call-takers (at least those of the firefighters) can see a list of all call-takers in

the country and that list clearly says who speaks what language. If needed, a conference call can be set up.

Ireland:

- Stage 1 call-takers can handle communications in both the English and Irish languages.

Iceland:

- All call-takers are capable of communicating in Icelandic and English, and one Scandinavian language.

5.2 | External solutions - third party service

External solutions also have to be based on well-established procedures, embedded in service chains of all potential partners involved, in order to be effective. The general framework can be defined based on a contract between the PSAP and an external service provider, defining: the procedures, requirements on accessibility, availability and quality of services; rules for the protection of information and data shared, and other aspects key to the service provision.

The call-taking procedure:

1. The 112 call-taker receives a communication from a limited language speaker
2. The 112 call-taker places the communication on hold
3. The 112 call-taker dials the interpretation service
4. An interpreted three-way conference starts between the caller and the 112 call-taker

Advantages

- Local call-taker speaks directly with the limited language speaker thanks to over-the-phone interpretation.
- SLA's in place to ensure timeliness, language availability, etc.
- 24/7/365 availability.
- Many languages can be supported (up to 170).
- Accuracy of foreign language interpretation is high-quality in the case of professional interpreters.
- Easier to manage with EU-wide recommendations.



Potential disadvantages

- Generally requires precise recognition of language, but most experienced call-takers are able to indicate the language. If not, the language line operators are often able to illicit the dialect or region if needed.
- Additional costs.
- Takes a few seconds to add the interpreter to the call (but balanced against the delay during which it is not possible to understand the caller).
- Privacy/ethics issues since the emergency communication passes through external organisations – dealt within the SLA and the anonymity of the caller to the interpreter.

Examples of practices:

Sweden:

- There is a contract with a third party interpreter service that provides interpretation in around 200 languages.
- In 2020, this service was used in 12,375 calls to 112 and interpretations were done in 79 languages.

Finland:

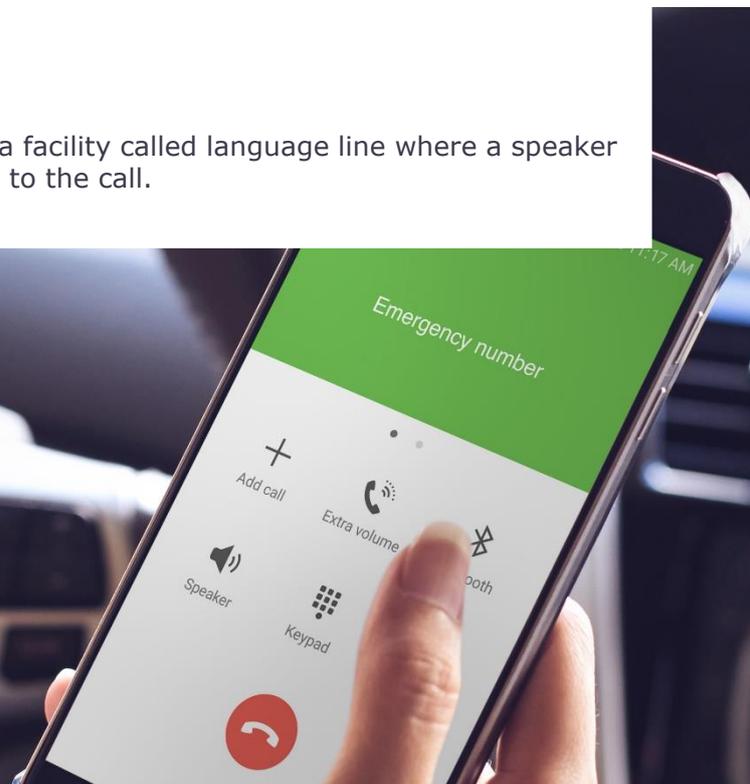
- There is a contract with a third party interpreter service with a third party service provider.
- In 2020, there were 212 uses of interpreters in 3-way conference calls.

Iceland:

- There is a contract with a third party interpreter service that provides interpretation in around 100 languages.

UK:

- At the Stage 2 PSAP, there is an access to a facility called language line where a speaker of the required language can be connected to the call.



5.3 | Forward the communications to other emergency services

Forwarding a communication to another emergency service is a solution that has to be based on well-established procedures, embedded in service chains of all potential partners involved, in order to be effective. Some of the tools that can serve this purpose include an agreement, signed between PSAPs, able to provide services in specific languages, an established protocol of when and where to transfer communications, as well as systematically making human resources available (prepared) for answering communications from abroad.

The call-taking procedure:

1. The 112 call-taker receives a communication from a limited language speaker.
2. The 112 call-taker forwards the communication to another emergency service (in the same or in another country).
3. The 112 call-taker from the other emergency service manages the communication.
4. The 112 call-taker from the other emergency service transfers the information to the original 112 call-taker.

Advantages

- If a call-taker in a given language is available, there won't be any extra cost and the provision of appropriate response is more likely.

Potential disadvantages

- It might be difficult to obtain the desired quality of communication processing by another institution/service which may not obtain the information required to elicit the appropriate response.
- It may be slow to forward the communication to another call-taker, then to transfer and distribute information through other emergency services involved.
- The call-taker is tied up with the communication for prolonged periods of time.
- Forwarding emergency communications to another country is currently not realistic, in many cases due to institutional and procedural differences, especially the absence of interoperability of systems and knowledge of which PSAP deals with which area within Europe. The context of a communication can be critical to understanding the emergency and this might cause a problem in forwarded emergency communications.
- The definition of an emergency differs from region to region and country to country.
- Need for agreements with a lot of countries/organisations to achieve multilingual answering and definition of standard operation procedures in order to establish interoperability and coverage of the entire service chain.
- Ability to transfer metadata accompanying the communication (caller location info etc.) in the process of forwarding is dependent on the interoperability of systems, which is currently limited.

Examples of practices:

Finland:

- Sign language interpretation with the help of the Social Benefit Agency.

Ireland:

- The Stage 1 process routes non-English or Irish communications to the Police.

Lithuania

- Sometimes police dispatchers and ambulance dispatchers call 112 for help in interpretation.

UK:

- There is a single Stage 1 PSAP for Fire, Ambulance, Police and Coast Guard. If they receive a communication where they are uncertain what the caller needs, they are passed on to the Police, however this is very unusual.

5.4 | Volunteer translator schemes

Volunteer schemes represent a unique potential, especially when other resources are limited. To set up a volunteer programme, it is necessary to dedicate special attention to the preparation and management of volunteers (creating a “back-office” responsible for planning their involvement, education and support, solving problems arising in the course of realisation of their service etc.) In some countries (e.g., Slovakia), there are laws defining general frameworks for permanent or semi-permanent volunteering structures, that address their preparation, insurance, compensation of costs related to the provided services etc., which have to be respected when setting up a volunteer scheme.

In order to run an effective volunteer program in any context, including the use of volunteers in 112 translation schemes, it is crucial to design a comprehensive volunteer program tailored to the needs of the organisation to be supported, determining the needs to be addressed, defining volunteer tasks, addressing issues of preparation, evaluation, motivation of volunteers, as well as issues related to the involvement in the service, including issues related to availability, planning, supervision and protection of shared information and data¹³.

¹³ Implementing & Managing An Effective Volunteer Program, 2003, J. Christopher Watkins & Janet Buckley, Training & Technical Assistance Services

The call-taking procedure:

1. The 112 call-taker receives a communication from a limited language speaker.
2. The 112 call-taker place the communication on hold.
3. The 112 call-taker dials the interpretation service based on volunteers.
4. An interpreted three-way conference starts between the caller and the 112 call-taker.

Advantages

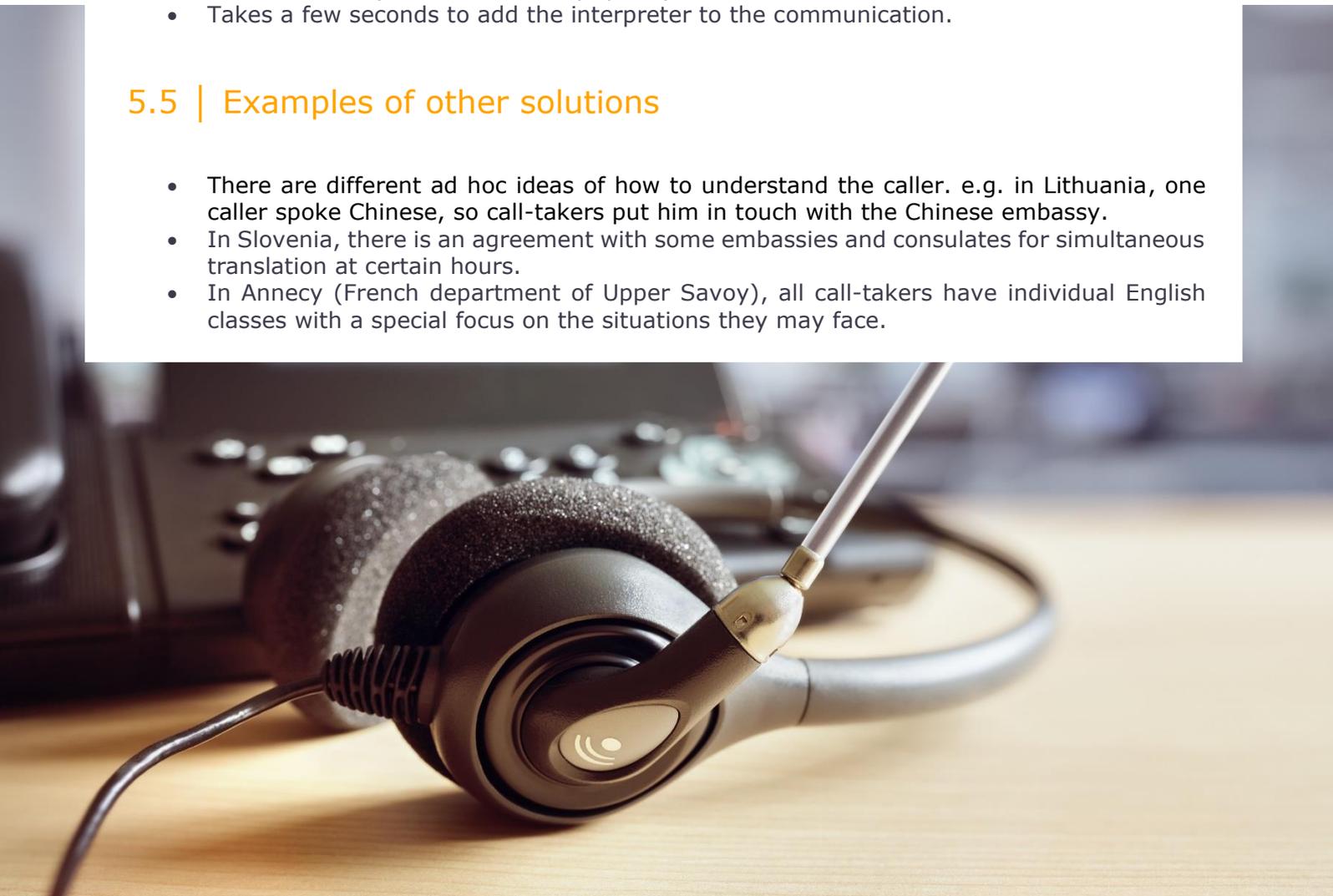
- The local call-taker speaks directly with the limited language speaker thanks to over-the-phone interpretation.
- Many languages can be supported, including minority languages and local dialects.
- High motivation, socio-cultural sensitivity.

Potential disadvantages

- Privacy/ethics issues.
- Availability.
- Difficulty to find volunteers with sufficient level of proficiency.
- "Limited liability" for the accuracy/quality of service.
- Takes a few seconds to add the interpreter to the communication.

5.5 | Examples of other solutions

- There are different ad hoc ideas of how to understand the caller. e.g. in Lithuania, one caller spoke Chinese, so call-takers put him in touch with the Chinese embassy.
- In Slovenia, there is an agreement with some embassies and consulates for simultaneous translation at certain hours.
- In Annecy (French department of Upper Savoy), all call-takers have individual English classes with a special focus on the situations they may face.

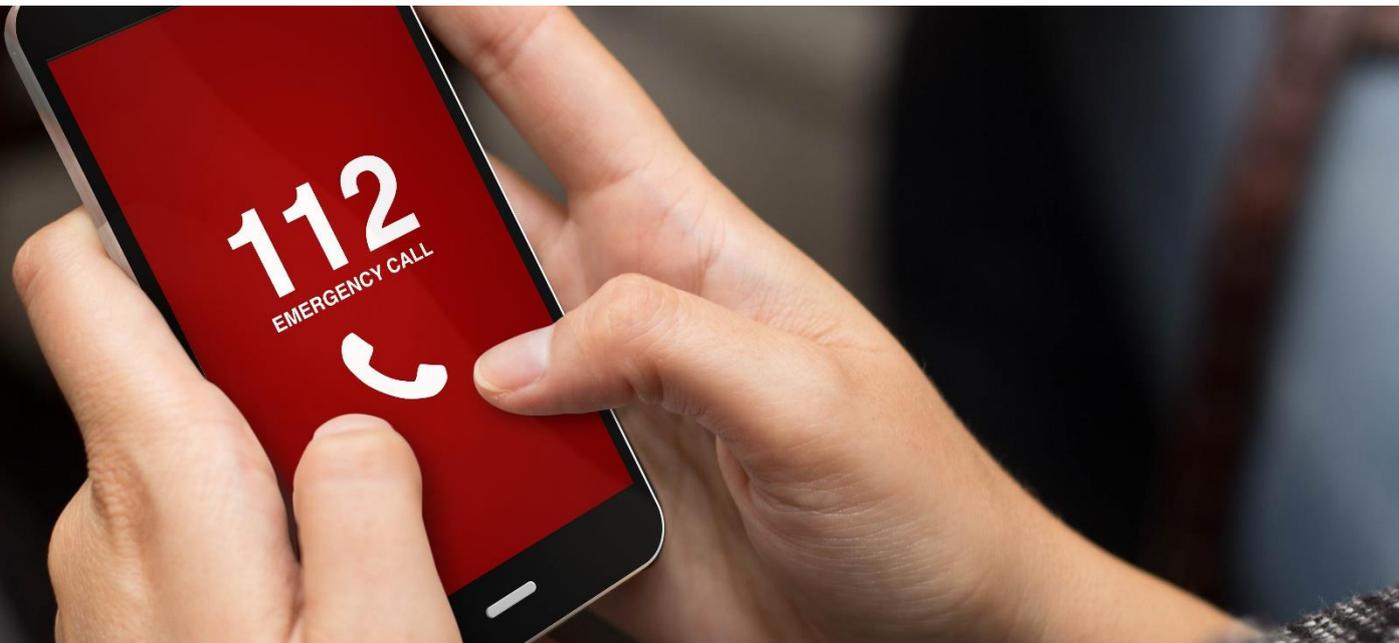


6 | TECHNOLOGY

Technology solutions that can help:

- Implementation and management of conference calls (for example, enabling the inclusion of a translation service provider), by using a common feature of the tool of phone integrated communication platform;
- Relay structures supporting access to (external) translation services;
- Databases with structured information supporting operators and online phrasebooks;
- Tools supporting the identification of language (e.g. country flag in Bulgaria) and translation;
- Multilingual protocols included in integration platforms (central software solution);
- Virtual language learning tools for operators, supporting their language skills development;
- Phrasebooks and electronic translation tools.

Technology solutions for the provision of services ensuring accessibility of 112 services to people with disabilities, including functional requirements, are discussed in detail in the EENA document on Emergency Services Accessibility for persons with disabilities.¹⁴



¹⁴<https://eena.org/knowledge-hub/documents/emergency-services-accessibility-for-persons-with-disabilities-2021-update/>



7 | RECOMMENDATIONS

Emergency communications to 112 should be answered in several languages, taking into account the main languages spoken by the inhabitants and/or the tourists visiting the region covered by the 112 Centre.

Monitoring of the languages spoken in the region (inhabitants/tourists) should be conducted regularly as a precondition for effective forecasting of needs and structuring of services. Additional solutions should also be available to respond to people using other languages and/or unable to use voice communication.

In order to guarantee the necessary quality of service and depending on the chosen solution, it is also important to:

- Establish clear procedures for handling multilingual communications ensuring that any process used in this context is defined within an internal procedural document. In any communication, where the language used is not understood by the call-taker, a translation process as opposed to an interpretation process is used, when needed.
- Ensure that, in case of external translation services, a formal SLA is documented between parties with regards to service expectations, timeliness, access, scalability, expected access to other languages, cost and privacy as a minimum.
- Ensure that ad hoc interpreters are not used due to skill decay, unfamiliarity with 112 terminology (EMS, Police, Fire) and awareness of the need for an exact translation of the stated question and the provided answer instead of an "interpretation" of the question and answer.

- Establish a way to quickly and accurately locate the multilingual communications to ensure that the first responders can be sent to the location of the caller – regardless of whether or not the caller can be understood.

Particular attention is to be paid to service provision in holiday periods during which tourists are most numerous and statistics show peaks, for example in road accidents.

Call-takers from ethnic (linguistic) minorities, who tend to be bi-lingual can be a very valuable human resource and hiring of multi-lingual staff, if possible, is also a recommendable policy.

Language training can support the acquisition of active language skills by the PSAP and rescue services staff, focused on emergency management related vocabulary and communication, as well as specific skills in the identification of oral language. All of these are relevant to the development of language training projects and programmes in the segment of emergency management. Further considerations include:

- Exploration of opportunities in the area of outsourced translation services as an option;
- Definition of a policy for multilingual alerting at PSAPs and integration of multilingual alerting into the communications strategy in case of large-scale emergencies;
- Personalised (multilingual) Emergency Response Protocols.

