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Directorate-General for Communications Networks, Content and Technology

Electronic Communications Networks and Services  
**Implementation of the Regulatory Framework**

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# COMMUNICATIONS COMMITTEE

## Working Document

**Subject: Implementation of the single European emergency number 112 –  
Results of the thirteenth data-gathering round**

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## EXECUTIVE SUMMARY

The data-gathering exercise based on Key Performance Indicators on the implementation of the European emergency number 112 was introduced with a view to implement performance measurements in order to get reliable data, which would allow the assessment and optimisation of the access to emergency services at national level.

### *Quality of data*

Member States were invited to follow the definitions of the measurements provided in the KPI reporting table. This year all Member States responded to the COCOM questionnaire. Several of the responses received, however, were not complete or indicated explicitly that certain data was not available.

The quality of the reported data allows a good overview of the 112 implementation in the EU. Member States which are not yet in the position to perform KPI measurements, are encouraged to follow best practice in this area to progressively introduce the necessary capabilities, thus further increasing the quality of their data.

### *Main findings*

- The share of emergency calls to the Single European Emergency Number “112” is rising, showing the increasing preference by Europeans to use this number in case of emergency. Calls to “112” increased 12% year-on-year, while the total number of emergency calls rose 6%. Calls to “112” represented 51% of the calls placed in case of an emergency. On the basis of an extrapolation of data reported by 8 countries, 2,300,000 emergency calls were placed by roaming end-users in the reporting period.
- Accuracy of caller location continued to improve in the reporting period. Advanced Mobile Location (AML), a handset-based caller location solution that relies on GNSS and Wi-Fi signals, took off in the Netherlands. Currently AML is fully deployed in Belgium, Estonia, Finland, Ireland, Lithuania, Malta, Slovenia, the Netherlands and the United Kingdom. The Commission contributes to this development by financing AML deployment in Germany, Denmark, France, Croatia, Hungary, Portugal and Sweden, thereby raising the number of AML countries to sixteen in the near future.
- The share of emergency calls placed through mobile phones is more than double of the calls placed in fixed networks. In the reporting period 72% of emergency calls were placed from a mobile phone. This confirms that a growing number of European citizens could benefit from handset-derived caller location, as mandated by the European Electronic Communications Code<sup>1</sup>.

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<sup>1</sup> Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (OJ L 321, 17.12.2018, p. 36).

- 23 Member States, Iceland and Norway, reported less than 10 seconds for the average answering time needed to get in contact with the emergency services.
- Of 27 Member States which reported the time needed to receive the caller location, the longest periods were reported in Austria (up to minutes). A number of countries reported on the time needed to receive handset based location: Estonia (10s), Finland (5s), France (30s), Ireland (10s), Lithuania (25s), Latvia (20s), Malta (8s), the Netherlands (20s), Slovenia (6s), Romania (8.6s), United Kingdom (15s), Iceland (10s) and Norway (4s).
- 24 Member States reported the implementation of alternative access to emergency services for end-users with disabilities through SMS. Meanwhile, some applications deployed can provide much better location information and additional features. In case of roaming end-users, there is room for improvement for cross-border use of these means of access to emergency services. SMS to short numbers are not routed to the host country PSAP, while the awareness of App- or Web-based solutions is insufficient due to a wide variety of these solutions across Member States. This state of affairs is in contrast with the availability of the call to the single European Emergency Number “112” for other end-users.
- Member States reported that in the next two years they are considering to deploy various public warning systems: location based SMS (in 8 MS), Cell Broadcast (in 7 MS) or Mobile Application (in 1 MS). Currently the technologies deployed are: sirens in 16 Member States; TV, radio or social media alerts in 14 Member States; specific applications in 5 Member States; SMS alert in 6 Member States and Cell Broadcast in 4 Member States.
- The Commission monitors regularly the compliance by Member States with obligations related to the functioning of 112. As a result of this monitoring, the Commission initiated infringement proceedings in July 2019 against several Member States and continues working towards full compliance, in order to ensure that EU citizens can fully benefit from it.

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## INTRODUCTION

This document provides an analysis of the replies submitted by Member States on the Key Performance Indicators (KPI) that reflect the implementation of emergency communications and the single European emergency number “112”. These performance indicators were agreed by emergency experts to reflect the efficiency and effectiveness of access to 112 calls. This is the thirteenth data gathering exercise following the previous exercises that are published on: <http://ec.europa.eu/digital-agenda/en/eu-actions-112>.

The document is based on the data-gathering exercise on the implementation of the European emergency number “112” that was introduced in 2007. The goal of this exercise is to receive reliable data which would allow the assessment and optimisation of the access to emergency service when dialling “112” and equivalent access for end-users with disabilities at national level.

The data gathering relies on specific questions that serve to assess the level of implementation of EU law requirements and the improvement of national Public Safety Answering Point Systems (hereinafter “PSAPs”). These questions reflect the legislation in force as well as the provisions of the European Electronic Communications Code<sup>2</sup> (hereinafter “the Code”). Under the revised EU legislative framework the Commission is bound to submit, within two years of the entry into force of the Code, and every two years thereafter, a report to the European Parliament and to the Council on the effectiveness of the implementation of the single European emergency number “112”.

This document is based on the KPI reporting table which was submitted to Member States on 28 June 2019 (COCOM19-08) with a deadline for response on 31 October 2019. In order to provide the most recent data for the Key Performance Indicators, the reporting period was set for the quantitative data for 1 July 2018 – 30 June 2019.

The document follows the structure of the KPI reporting table. The KPIs reflect the provisions of Article 26 of the Universal Service Directive and Article 110 of the Code concerning access to 112 for end-users with disabilities, provision of caller location and the accuracy and reliability of caller location information.

The document covers information submitted by all Member States. As agreed, the COCOM observers from Candidate and EEA Countries were also invited to submit replies to the questionnaire. Member States are called on to develop their measuring tools for monitoring these indicators in order to provide accurate data on the functioning of their 112 systems.

This document was published on 11 February 2020 (more information on the Commission’s ‘112’ website: [www.112.eu](http://www.112.eu)). On the ‘112’ website country-specific information is also published.

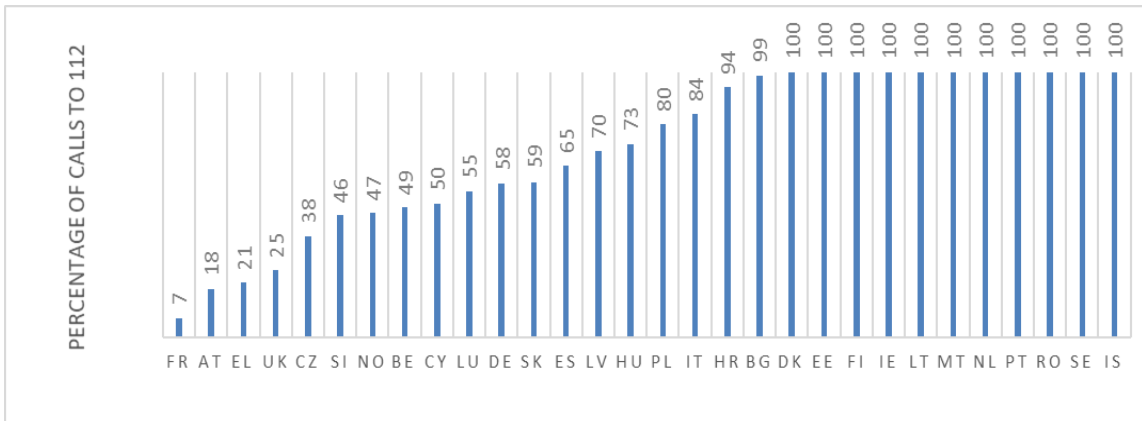
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<sup>2</sup> Directive (EU) 2018/1972 of the European parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (OJ L 321, 17.12.2018, p. 36).

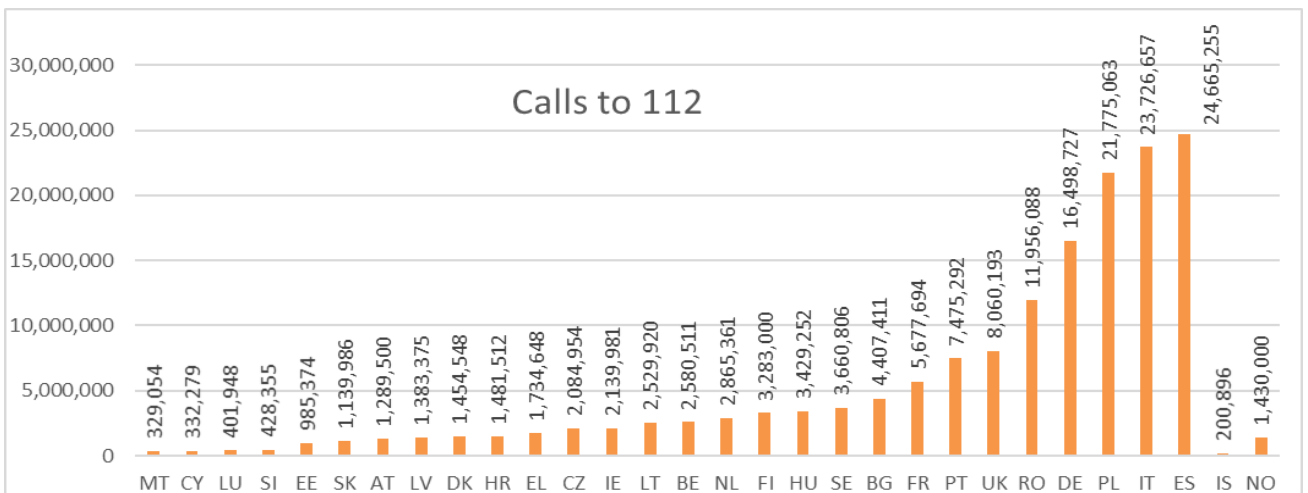
# TWELFTH REPORT ON THE IMPLEMENTATION OF 112

## 1. CALLS TO 112

Calls in the EU to the Single European Emergency Number “112” increased 12% since the year before reaching 157.776.744. Meanwhile the total number of emergency calls rose 6% to 311.008.523. Calls to “112” represented 51% of all calls placed in case of an emergency.

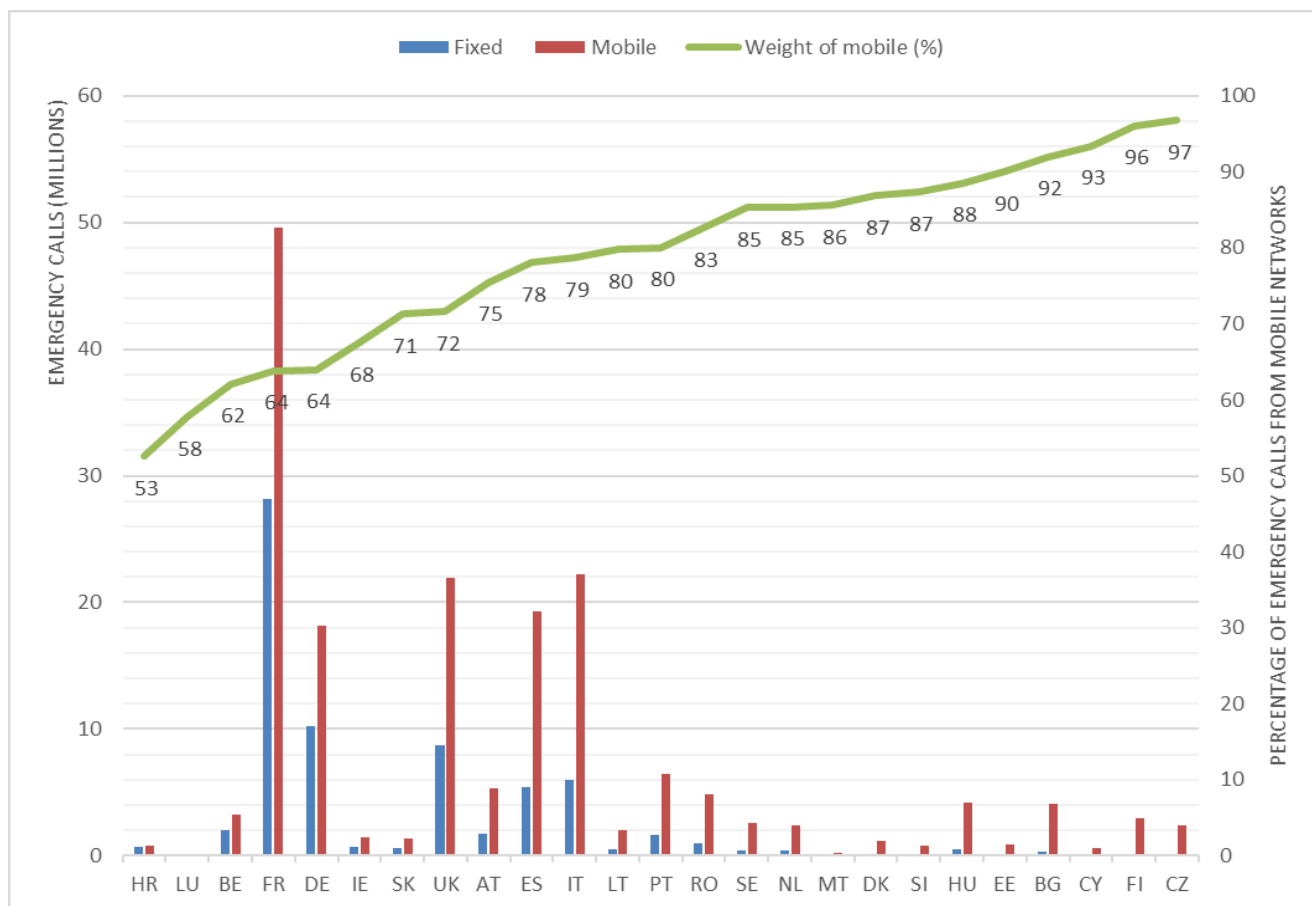


112 is the single emergency number in Denmark, Estonia, Finland, Malta, the Netherlands, Portugal, Romania and Sweden and, among the EEA countries, in Iceland. However, only 20% of the calls to 112 in the EU are placed in these countries. The large majority of calls to 112 are placed in Member States where national numbers are still in use. In these Member States the use of the Single European emergency number varies largely, from 7% in France to 99% in Bulgaria.



Calls from mobile phones largely outweighed the number of calls from fixed phones. 25 Member States reported the number of emergency calls that arrived from fixed and mobile

networks in the reporting period<sup>3</sup>. On the basis of the available data 72% of the calls were placed from a mobile phone. However, the use of mobile phones for emergency communication purposes varies significantly across Member States, from 53% in Croatia to 96% in Finland and 97% in Czechia.



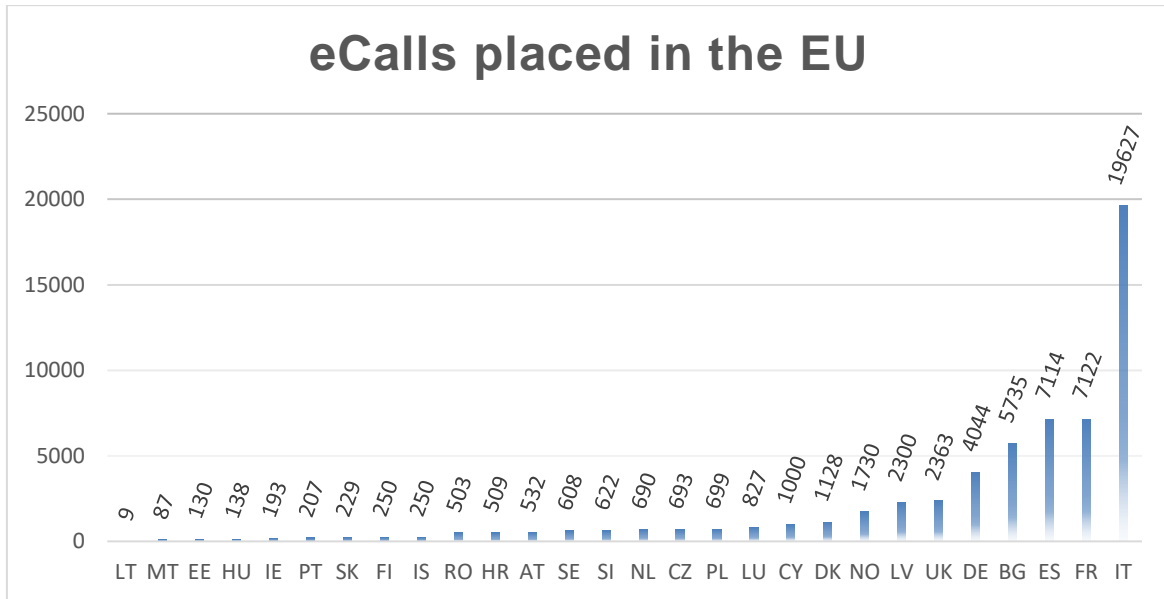
eCalls originated in cars capable of placing a 112 emergency call should be handled by national PSAPs in case of an accident. Member States had to ensure that their PSAP system is ready to receive eCalls as of 1 October 2017<sup>4</sup>. As of 31 March 2018 car manufacturers<sup>5</sup> should fit the 112-based eCall in-vehicle system in all new types of M1 (passengers cars) and N1 (light commercial vehicles). As the relevant regulation targets only new types of vehicles that need to go through a type-approval process – hence not all the newly built vehicles –, its effects should begin to be felt only as from 2020 as the

<sup>3</sup> No data reported from Finland, Greece and Poland.

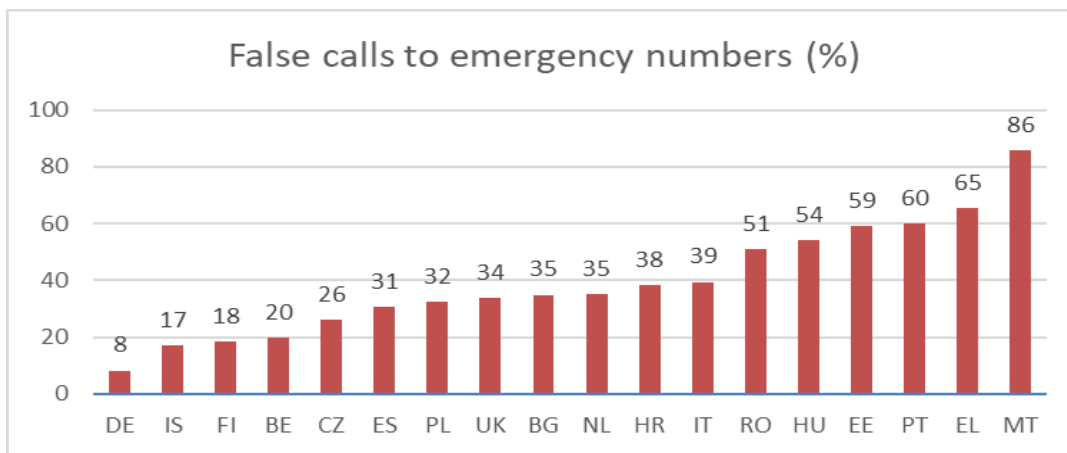
<sup>4</sup> Decision No 585/2014/EU, adopted on 3 June 2014, provides for the mandatory deployment, no later than 1 October 2017, of the necessary public safety answering points (PSAPs) infrastructure necessary to receive and handle 112 eCalls in the EU, in accordance with the specifications laid down by Delegated Regulation (EU) No 305/2013.

<sup>5</sup> Regulation (EU) 2015/758 establishes the general requirements for the EC type-approval of vehicles in respect of the 112-based eCall in-vehicle systems, and of 112-based eCall in-vehicle systems, components and separate technical units.

number of new vehicles on the streets grows. The data reported by 26 Member States, Iceland and Norway, indicates that the eCall system is deployed. However, the data reported does not separate, in some cases, test calls from real-life emergencies.



17 Member States<sup>6</sup> and Iceland provided information on false calls<sup>7</sup>. The ratio of false calls to the total number of calls still appears to vary considerably among the Member States, reaching 86% in Malta.



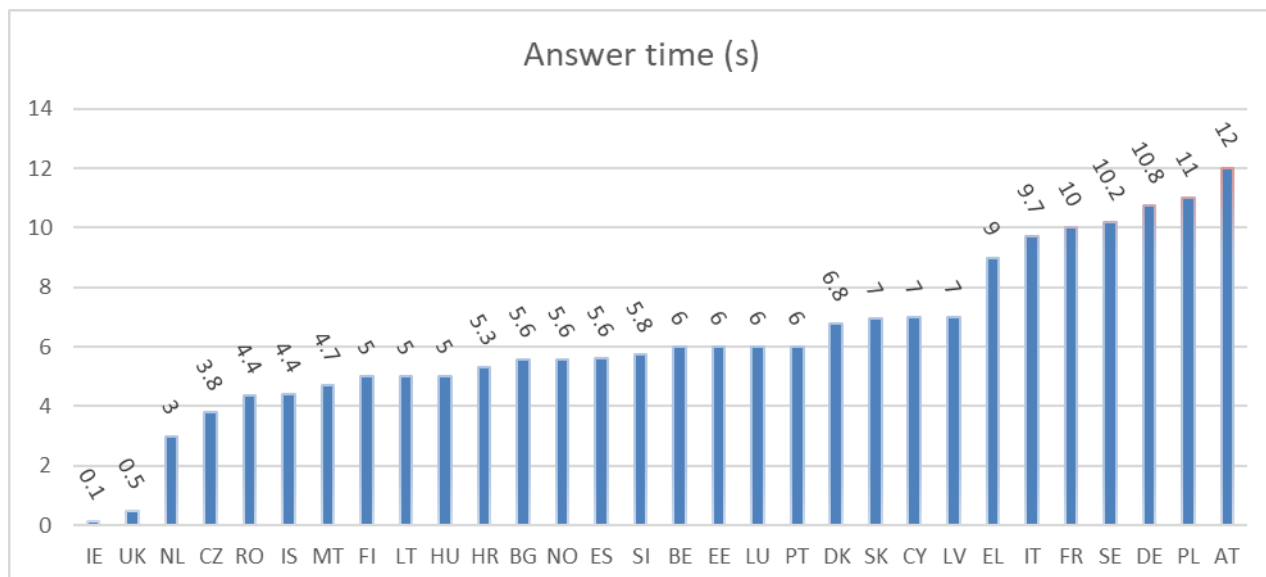
<sup>6</sup> BE, BG, CZ, DE, EE, EL, ES, FI, HR, HU, IT, MT, NL, PL, PT, RO, UK

<sup>7</sup> False calls are calls which are not followed up with intervention or assistance from the PSAP or the emergency services. Calls that report an emergency event which has already triggered intervention or assistance from the part of the PSAP, therefore not triggering separate intervention or assistance, will not be considered false calls. Abandoned calls, as defined in KPI no. 4 are excluded from the category of false calls.

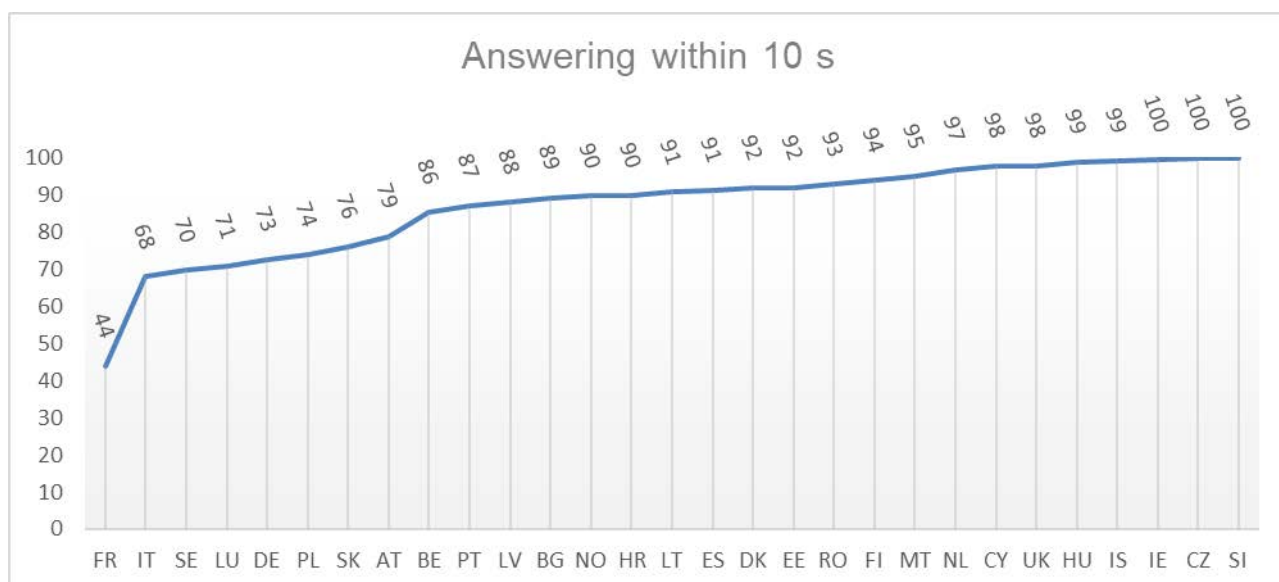


## 2. ANSWERING TIME<sup>8</sup>

People in distress are often in desperate need to get in contact with the emergency services operator. 23 Member States, Iceland and Norway, reported less than 10 seconds for the average answering time needed to get in contact with the emergency services.



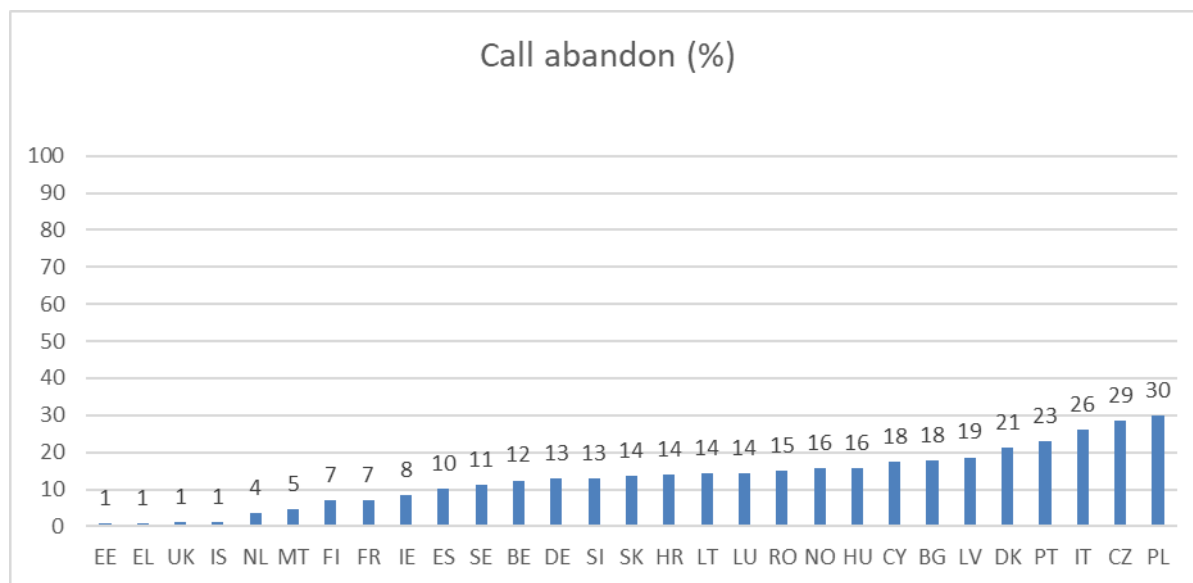
Meanwhile at least 90% of the calls are answered within 10 seconds in 15 Member States, Iceland and Norway. Greece did not provide relevant data.



<sup>8</sup> The time period between the moment the emergency call is presented to the stage 1 PSAP switch and the moment the call is being answered by a PSAP human operator.

### 3. CALL ABANDON RATE

The respondents were invited to report on the calls that are presented to the PSAP switches but terminate prior to an answer by a human operator. 25 Member States reported relevant information. Call abandons may be caused by network problems, call congestion, technical faults, handling capacity, caller disconnect (possibly dialling by mistake), etc. AT did not report this data. While involuntary calls and caller disconnect are not under the control of the PSAP system operators, the lack of handling capacity is pointing towards the failure to adequately answer and handle calls to 112 in the national PSAP system.



### 4. LACK OF AVAILABILITY OF CALLER LOCATION

Article 26(5) of the Universal Service Directive provides for the obligation of telecom operators to make caller location available as soon as the call reaches the authority handling the emergency call. However, there are cases where, due to technical problems in the networks or on the PSAP side, caller location information cannot be determined automatically or on request. As of 21 December 2020, Article 109 of the Electronic Communications Code will make mandatory the availability of the more accurate handset-derived location information to the most appropriate PSAP.

Only 18 Member States reported this data. In most Member States the lack of availability of caller location occurs in less than 5% of the calls. Higher rates of failure to provide caller location were reported for Spain (9%), Italy (10%), Poland (14.5%) and Latvia (23%).

The availability of handset derived location is improving, in particular of the Advanced Mobile Location (AML) solution. Availability of AML type of location for the total of emergency calls was reported by Estonia (30%), Ireland (41%) Lithuania (84%) and the UK (60%). In Romania the HTML 5 geolocation is available for 65% of that calls. In France the Geoloc type of web-based localisation was provided for less than 1% of the calls.

## 5. CALLER LOCATION ACCURACY AND RELIABILITY

Article 26(5), second sentence of the Universal Service Directive asks Member States to lay down caller location accuracy and reliability criteria. In addition to the network-based solutions that the current legislation is providing for, the Electronic Communications Code lays down in Article 109(6) the obligation for Member States to ensure that network- and handset-based location is provided to the most appropriate PSAP. Member States will have to continue to set caller location accuracy and reliability criteria, if necessary after consulting BEREC.

The Commission monitors regularly the compliance by Member States with these obligations. As a result of this monitoring, the Commission initiated infringement proceedings in July 2019 against Croatia and Greece for lack of caller location<sup>9</sup>.

In view of these legislative provisions that will have to be transposed into national legislation by 21 December 2020, Member States were asked to provide information on both network- and, where already available, handset-derived location solutions deployed. Where statistical data was available it was requested to provide the level of accuracy and reliability provided through network- and handset-based location solutions.

### Network-based location

In all Member States the location of the caller from *fixed networks* is given by the installation address, street/mailling/billing address of the calling party. This location technology is deemed reliable by the respondents.

All Member States reported that for calls from *mobile networks* the location is given by the Cell/sector ID providing a high reliability of the data transmitted to the PSAP operator. The accuracy reported ranges from 500 to 40000 meters, depending in the density of the network, i.e: urban or rural area.

More accurate mobile network-based location solutions used are Timing advance, Round trip time, Sector ID. These positioning methods substantially improve the accuracy of network-based location up to 50 meters in some cases.

### Handset-based location solutions

In terms of handset-based location solutions Member States reported two types of implementation:

#### a) Advanced Mobile Location (AML) solution

AML, first deployed in the United Kingdom, can improve accuracy levels to up to 4000 times providing accuracy under 100 m. The solution does not ignore the Cell-Id information but rather supplements it with either GNSS information or Wi-Fi information derived from the handset. In order to bring GNSS location, in particular provided by EU's Galileo satellite system, in the service of EU citizens, in November 2018 the European Commission signed and launched the deployment project of handset-based Advanced

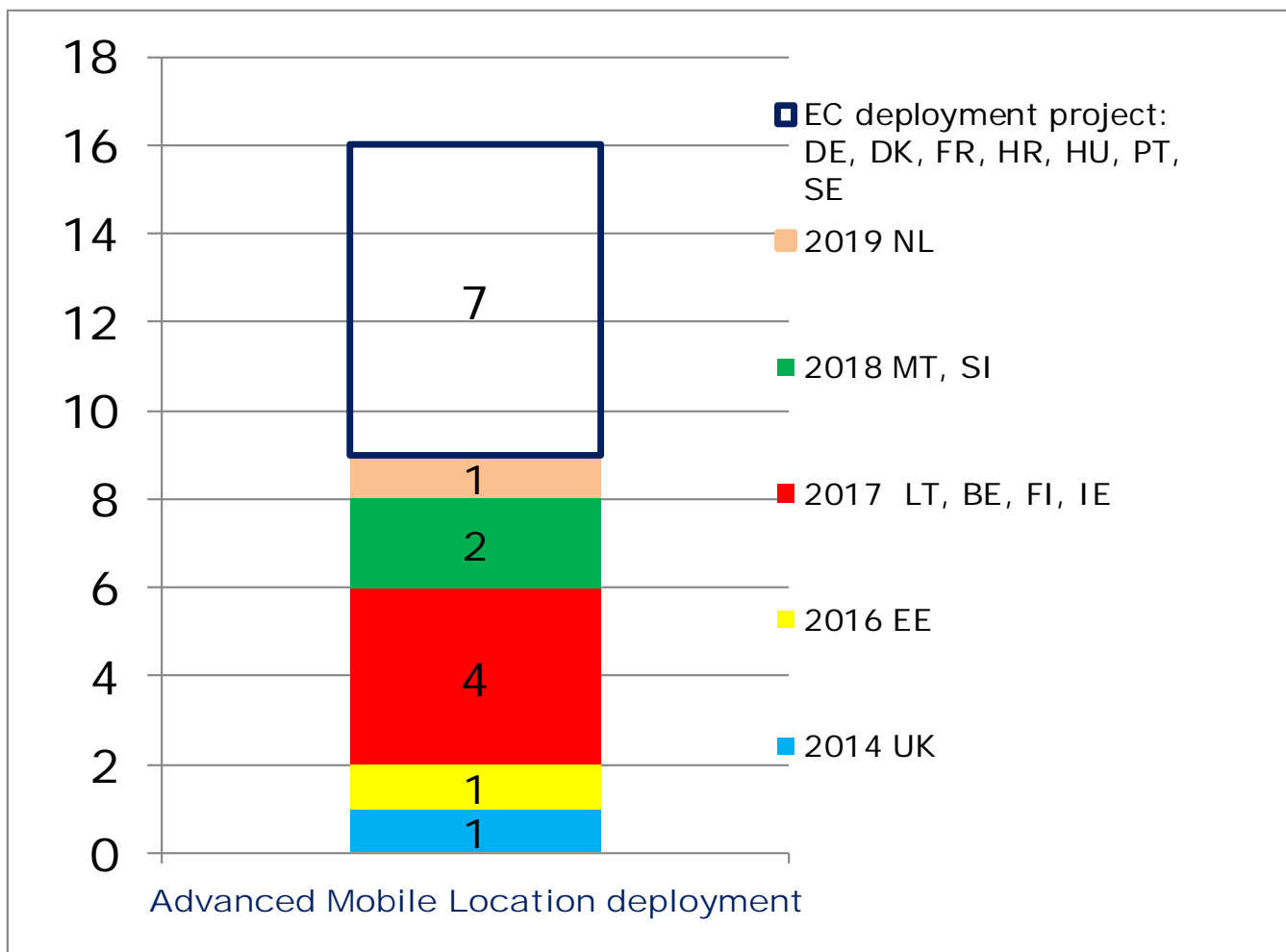
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<sup>9</sup> [https://ec.europa.eu/commission/presscorner/detail/en/INF\\_19\\_4251](https://ec.europa.eu/commission/presscorner/detail/en/INF_19_4251)

Mobile Location<sup>10</sup> known as the HELP112 II. The winning consortium includes 7 countries as direct partners of the joint bid, namely Croatia, Denmark, France, Germany, Hungary, Portugal, and Sweden. The handset-based location solutions already deployed in Member States are used as a complement to network-based location data. Croatia, Denmark, Sweden, and Germany already deployed AML under the project.

In March 2019 the Netherlands deployed AML raising the number of EU AML countries to 16. In January 2020 Romania partially deployed AML aiming at full deployment in the next months.

It is expected that by end of 2020 a wide majority of Member States would have fully deployed AML handset-based location technology:



b) Implementation of an emergency application for more accurate caller location

Emergency applications may be deployed to ensure more accurate handset based location using the GNSS or Wi-Fi capability of the smartphone.

<sup>10</sup> When an emergency call is made with a smartphone that is AML enabled, the phone automatically activates its location capability (GNSS or Wi-Fi) during 20 seconds to establish its position and sends this information via a text message to the emergency services. The radius is of 50 meters or less for 85% of the calls. This is a life-saving improvement when compared with Cell ID location that can have a radius of tens of kilometres in rural areas.

Emergency applications are being deployed at a Member State or regional level for the purpose of delivering more accurate caller location than that provided through network-based solutions.

These applications require prior action by the citizen – as opposed to AML – as it has to be downloaded. The transmission of location data is possible only when an active data connection is available. These applications can provide a much more accurate GNSS/Wi-Fi location than network-based location solutions.

Member States that reported the deployment of an emergency application for more accurate caller location are: Belgium (112.be launched in July 2017), Denmark ("112app"), Italy ("Where Are U" in Lombardia and Rome, "FlagMii" in Piemonte), Finland (112 Suomi) and Latvia ("My safety" App). Web-based services are deployed in Malta and Sweden.

## **6. AVERAGE TIME NEEDED FOR RECEIVING THE CALLER LOCATION BY THE 112 OPERATOR**

Article 26(5) of the Universal Service Directive as amended by the "Citizens' Rights" Directive requires instant provision of the caller location to the authority handling emergency calls.

Due to the implementation of the "push" system or the automatic "pull" system, near instant times (up to 10 seconds) were reported for the provision on *network based caller location* by Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Denmark, Estonia, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Slovakia, Sweden, the United Kingdom, Iceland and Norway.

Austria reported that it could take minutes until caller location is received by the PSAP handling the 112 calls.

Due to its inherent architecture, handset-based location technologies rely on the speed of the handsets to derive relevant location parameters from GNSS or Wi-Fi signals. A number of Member State reported on the time needed to receive *handset-based location*: Estonia (10s), Finland (5s), France (30s), Ireland (10s), Lithuania (25s), Latvia (20s), Malta (8s), the Netherlands (20s), Slovenia (6s), Romania (8.6), United Kingdom (15s), Iceland (10) and Norway (4).

## **7. ACCESS TO EMERGENCY SERVICES WHILE EU ROAMING**

All Member States reported the availability of access to 112 and caller location in case of roaming calls.

Croatia, Ireland, Lithuania, Luxemburg, Romania, Sweden, the United Kingdom and Iceland, provided information on the number of calls placed by roaming end-users to 112. On the basis of this data it may be extrapolated that almost 2,300,000 emergency calls were placed by roaming end-users in the reporting period.

## **8. ACCESS TO EMERGENCY SERVICES FOR USERS WITH DISABILITIES**

The current regulatory framework provides for the obligations of Member States to ensure that end-users with disabilities enjoy equivalent access to emergency services. Member

States were invited to provide information on their measures, which ensure that end-users with disabilities enjoy tailored solutions for equal access to emergency services taking into account aspects such as availability, type of access, number of accesses or user location.

The recently adopted European Electronic Communications Code mandates measures for users with disabilities that maximise interoperability, avoid pre-registration, where feasible, for access to alternative means of emergency communications, and inform everybody about the availability of the existing means of equivalent access to emergency communications services when travelling to another EU country.

The principle of equivalence implies that end-users with disabilities should be able to access emergency services through electronic communications services in a way functionally equivalent to the access to emergency services ensured to other end-users through electronic communications services by way of calling the "112" number.

Against this legal background, Member States have to implement accessibility solutions that replicate (are equivalent to) the two-way communications ensured in the case of a voice call to 112, through text- or video-based solutions available at all times and places in their territory to disabled users of fixed and mobile devices, including travellers, and incorporating effective caller location. As a result of the regular monitoring of compliance with these rules, the Commission initiated infringement proceedings in July 2019 against Czechia, Germany and Spain for lack of equivalent access for users with disabilities<sup>11</sup>.

The technical accessibility solutions deployed by Member States to enable the access of end-users with disabilities to emergency services reported are quite varied. Some Member States have deployed a portfolio of technologies aiming to optimise the effective accessibility to emergency services, e.g. specific fixed solutions complemented by mobile SMS or app-based solutions.

The technology that is most deployed is SMS. Deployed in 24 Member States<sup>12</sup>, SMS allows a two-way, text-based interaction between the person alerting the emergency services and the PSAP response service. The end-user sending an SMS may be located by identifying the mobile antenna coverage of the cell where he or she is initiating the communication. This may typically range from 500 m to 40 km depending on the density of the network, and corresponds to the cellular network-based location technology most commonly used by mobile network operators to locate callers to 112 response services. In some Member States accurate handset-based AML localisation is available on Android phones.

State of the art solutions available today can provide much better location and other features than SMS. Emergency application platforms are increasingly deployed that rely on initiating legacy calls or SMS communications, but send a much more accurate handset-based location based on GNSS positioning data (5-100 m) through the data channel, complementing the Cell ID location. Web-based services and advanced emergency applications may also complement the legacy solutions with real-time text and video

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<sup>11</sup> [https://ec.europa.eu/commission/presscorner/detail/en/INF\\_19\\_4251](https://ec.europa.eu/commission/presscorner/detail/en/INF_19_4251)

<sup>12</sup> AT, BE, CY, CZ, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, LU, LV, MT, PL, PT, RO, SE, SI, SK, UK

communications. However, certain app solutions do not meet minimum standards, e.g. if they only allow limited uni-directional signals to be sent by users, without further interaction with the PSAP.

Relay services for end-users with disabilities may also relay a request to access emergency services. In such cases, user location is not yet implemented in Member States but this should be technically feasible.

Specialised devices at fixed locations can ensure a two-way, interactive communications with the PSAP operator. The location of these devices is determined by the installation address. Such solutions can ensure equivalence of access at the places where they are located but are, however, insufficient by themselves to meet the requirement of ubiquitous access to emergency services for end-users with disabilities. These may have to be complemented with solutions that cater for mobile end-users with disabilities.

However, while fax is deployed in a number of Member States, it does not ensure the swift two-way communications that is required in case of emergency, in contrast with the effectiveness of a 112 call. Similarly, an e-mail, which is also mentioned as an accessibility solution in some circumstances, does not allow the provision of automatic user location to the PSAP.

In case of roaming end-users, there is room for improvement for cross-border use of these means of access to emergency services. SMS to short numbers are not routed to the host country PSAP while the awareness of App- or Web-based solutions is insufficient due to a wide variety of these solutions across Member States. This state of affairs is in contrast with the availability of the call to the single European Emergency Number “112” for other end-users.

The table below is an overview of the alternative means of access for end-users with disabilities currently deployed in the EU.

	Means of access	Interactive	All territory	24 / 7	User location	Registration	Free	Number of comms.
AT	SMS to 0800-133133	No	Yes	Yes	Yes	No	Yes	192
	Fax to 0800-133133	No	Yes	Yes	Yes	No	Yes	
	gehörlosennotruf@polizei.gv.at	Yes	Yes	Yes	No	No	Yes	
BE	SMS to short number	Yes	Yes	Yes	Yes	No	Yes	N/A
	112.be application	Yes	Yes	Yes	Yes	No	Yes	N/A
	Fax to 112 or 101	Yes	Yes	Yes	Yes	No	Yes	N/A
BG	112 Bulgaria application	Yes	Yes	Yes	Yes	Yes	Yes	105
	Web based URL: <a href="https://112.mvr.bg">https://112.mvr.bg</a>	Yes	Yes	Yes	Yes	Yes	Yes	N/A
CY	fax to 1408 or 1409	No	Yes	Yes	No	N/A	No	N/A
	Application	-	Yes	Yes	Yes	Yes	Yes	N/A
	SMS to 99510408 general accessibility relay service	No	Yes	Yes	No	No	No	N/A

	Means of access	Inter activ e	All territory	24 / 7	User location	Registr ation	Free	Number of comms.
CZ	relay service through specialised devices	Yes	Yes	Yes	No	N/A	Yes	N/A
	SMS to long number (regional)	Yes	No	Yes	No	Yes	No	N/A
	<a href="https://www.zachrankaapp.cz/en">https://www.zachrankaapp.cz/en</a>	Yes	Yes	Yes	Yes	No	Yes	N/A
	<a href="https://www.tichalinka.cz/">https://www.tichalinka.cz/</a>	Yes	Yes	Yes	No	No	Yes	N/A
	<a href="https://www.o2linkapronesly.sici.cz/">https://www.o2linkapronesly.sici.cz/</a>	Yes	Yes	No	No	Yes	Yes	N/A
DE	Fax to 112 or 100	No	Yes	Yes	N/A	Yes	Yes	N/A
	Relay service	Yes	Yes	Yes	No	Yes	Yes	228
DK	SMS to long number	Yes	Yes	Yes	No	Yes	Yes	N/A
	Emergency application	No	Yes	Yes	Yes	No	Yes	N/A
EE	SMS to 112	Yes	Yes	Yes	Yes	Yes	Yes	13
EL	SMS to 112	Yes	Yes	Yes	No	No	Yes	N/A
	Fax to short number	No	Yes	Yes	Yes	N/A	Yes	N/A
ES	Relay services to 112	Yes	No	Yes	Yes	Yes	Yes	2500
	SMS to long numbers	Yes	No	Yes	No	No	Yes	135
	Relay services to long numbers	Yes	No	Yes	No	No	Yes	570
	Emergency apps	Yes	No	Yes	Yes	Yes	Yes	1800
	General accessibility relay service <a href="https://svisual.org/indexSSL.html">https://svisual.org/indexSSL.html</a>	Yes	Yes	Yes	No	No	Yes	100
	Emergency application <a href="https://alertcops.ses.mir.es/mialertcops/">https://alertcops.ses.mir.es/mialertcops/</a>	Yes	Yes	Yes	Yes	Yes	Yes	50
FI	SMS to 112	Yes	Yes	Yes	Yes	Yes	Yes	N/A
	Emergency application 112 Suomi	No	Yes	Yes	Yes	No	Yes	N/A
FR	SMS to 114	Yes	Yes	Yes	No	No	Yes	9,746
	Fax to 114	Yes	Yes	Yes	No	No	Yes	204
	Email	N/A	Yes	Yes	No	No	N/A	N/A
	Emergency application	Yes	Yes	Yes	No	No	Yes	5397
	Web-based application	Yes	Yes	Yes	Yes	No	Yes	
HR	SMS to 112	Yes	Yes	Yes	Yes	No	Yes	10
	Fax to 112	No	Yes	Yes	Yes	No	Yes	0
HU	SMS to 112	Yes	Yes	Yes	No	No	Yes	163
	112-SOS application	Yes	Yes	Yes	Yes	Yes	Yes	N/A
IE	SMS to 112	Yes	Yes	Yes	Yes	Yes	Yes	369



	Means of access	Inter activ e	All territory	24 / 7	User location	Registr ation	Free	Number of comms.
	Specialised emergency relay service	Yes	Yes	Yes	Yes	No	Yes	N/A
	General accessibility relay service	Yes	Yes	Yes	No	Yes	Yes	N/A
IT	SMS - long number	No	No	Yes	No	No	No	N/A
	Flag Mii app	Yes	Yes	Yes	Yes	No	Yes	N/A
	Where ARE U App	No	No	Yes	Yes	Yes	Yes	N/A
	email	No	No	Yes	Yes	No	No	N/A
	Police emergency application	Yes	No	Yes	Yes	Yes	Yes	
LT	SMS to 112	Yes	Yes	Yes	No	No	No	43,158
LU	SMS to 112 and 113	Yes	Yes	Yes	Yes	No	Yes	N/A
LV	SMS to 112	Yes	Yes	Yes	No	No	Yes	345
	Emergency application	Yes	Yes	Yes	Yes	No	Yes	N/A
MT	112.mt application	Yes	Yes	Yes	No	Yes	Yes	N/A
	SMS to long number	Yes	Yes	Yes	Yes	No	No	8
	112.mt web service	Yes	Yes	Yes	Yes	Yes	Yes	N/A
NL	Emergency application	Yes	Yes	Yes	No	Yes	Yes	N/A
	Web-based emergency access	Yes	Yes	Yes	No	Yes	Yes	N/A
	Relay services	Yes	Yes	Yes	No	Yes	Yes	N/A
PL	SMS to Police	Yes	No	No	No	Yes	Yes	N/A
	112 Application	Yes	Yes	Yes	Yes	Yes	Yes	N/A
PT	SMS to long number	Yes	Yes	Yes	No	No	No	N/A
	Emergency application	Yes	Yes	Yes	Yes	No	Yes	N/A
RO	SMS to 113	Yes	Yes	Yes	Yes	Yes	Yes	59
SE	SMS to 112	Yes	Yes	Yes	No	Yes	Yes	61
	112 Application	Yes	Yes	Yes	Yes	No	Yes	N/A
	General relay service	Yes	Yes	Yes	No	No	Yes	N/A
SI	SMS to 112	Yes	Yes	Yes	Yes	No	Yes	19,838
	Web-based emergency access	Yes	Yes	Yes	No	No	Yes	N/A
SK	SMS to 112	Yes	Yes	Yes	Yes	No	Yes	26,880
	Medical emergency application	Yes	Yes	Yes	Yes	Yes	Yes	N/A
UK	Text relay app	Yes	Yes	Yes	Yes	No	Yes	15159
	SMS to 112/999	Yes	Yes	Yes	Yes	Yes	Yes	
	Text relay on textphones	Yes	Yes	Yes	Yes	No	Yes	
IS	SMS to 112	Yes	Yes	Yes	Yes	No	Yes	1000
	112 application	Yes	Yes	Yes	Yes	No	Yes	50

	Means of access	Interactive	All territory	24 / 7	User location	Registration	Free	Number of comms.
NO	SMS 112	Yes	Yes	Yes	Yes	No	Yes	N/A

## 9. PUBLIC WARNING SYSTEMS

All Member States reported a deployed public warning system except for Malta.

The following public warning systems are deployed in EU Member States:

- Sirens in 16 Member States: AT, BG, CY, CZ, DE, DK, FI, FR, HR, HU, LT, LV, NL, PL, SI, SK.
- TV, Radio or social media alerts in 14 Member States: AT, CY, DE, EE, FI, HR, IE, LV, LT, NL, PL, SE, RO, SK
- Specific application in 5 Member States: AT, DE, DK, ES, HU
- SMS alert in 6 Member States: BE, ES, LU, PL, PT, SE
- Cell Broadcast in 4 Member States: EL, LT, NL, RO

Member states reported that in the next two years are considering to deploy Location based SMS (in 8 MS), Cell Broadcast (in 7 MS) or Mobile Application (in 1 MS).