EU-LGBTI II

A long way to go for LGBTI equality

Technical report

FRA EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS

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Luxembourg: Publications Office of the European Union, 2020

Print	ISBN 978-92-9474-845-4	doi:10.2811/447153	TK-04-20-045-EN-C
PDF	ISBN 978-92-9474-844-7	doi:10.2811/104519	TK-04-20-045-EN-N

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Country codes

Country code	Country
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czechia
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland

Country code	Country
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MK	North Macedonia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
RS	Serbia
SE	Sweden
SK	Slovakia
SI	Slovenia
UK	United Kingdom

Abbreviations

EU	European Union
FRA	European Union Agency for Fundamental Rights
LGBTI	lesbian, gay, bisexual, trans and intersex people
MS	Member State
NSCP	national survey contact point
SPSS	Statistical Package for the Social Sciences
UI	user interface

Contents

Figures and tables

1 Introduction

The EU LGBTI II survey is a large-scale web-administered survey of the experiences and views of lesbian, gay, bisexual, transgender and intersex (LGBTI) individuals, using an anonymous online questionnaire. The survey was conducted between 27 May and 22 July 2019 via the platform www.lgbtisurvey.eu and collected valid responses from 139 799 participants from the European Union (EU) Member States, North Macedonia and Serbia. The survey provides comparative evidence on how LGBTI people in the EU experience discrimination, violence and harassment in various areas of life, including employment, education, healthcare, housing and other services.

LGBTI people have been historically subject to stigma and discrimination. Even nowadays many people feel the need to conceal being LGBTI to avoid discrimination, hate or even violence.

In 2012, the European Union Agency for Fundamental Rights (FRA) launched a large-scale online survey in the EU and Croatia to collect data on LGBT people's experiences of discrimination, violence and harassment following a request from the European Commission to collect comparable survey data across all EU Member States and Croatia. A total of 93 079 respondents participated in the survey, providing an indication of the extent of the challenges that LGBT people face across the EU. More information on the first wave of the survey can be found online (https://fra.europa.eu/en/publication/2014/eu-lgbt-survey-european-union-lesbian-gay-bisexual-and-transgender-survey-main).

The European Commission asked FRA to replicate the collection of data on LGBTI people and implement the second round of the LGBT(I) ([1]) survey in 2019.

([1]) Intersex respondents were surveyed for the first time in the 2019 LGBTI survey.

The aims of the survey were (1) to obtain data that would allow a better understanding of how LGBTI people experience the enjoyment of fundamental rights and would provide policymakers and key stakeholders with research evidence that could be used to assess the implementation and impact of law and policy and to address gaps in the protection of rights; (2) to detect trends by identifying changes over time with respect to the results of the first LGBT survey (2012); (3) to further develop research methodologies for online survey tools; (4) to deliver to stakeholders, civil society and the wider public research evidence and data that could be valuable in raising awareness of fundamental rights and could contribute to promoting LGBTI equality and improving the situation on the ground.

The survey asked a range of questions about LGBTI people's experiences of the following issues:

- a perceived increase or decrease in intolerance, prejudice and violence against LGBTI people;
- discrimination at work and when looking for work and in several other areas of life;
- a safe environment;
- physical or sexual victimisation;
- harassment;
- the social context of being LGBTI;
- background information (age, education, income, civil status);
- issues related to the lives of trans and intersex people.

The questionnaire for the LGBTI II survey builds upon the questionnaire developed for the first wave of the survey but includes a number of improvements and revisions. Most notably, a section concerning intersex people was added and around 50 % of the 2012 questionnaire was revised and new questions were added.

The target population of the EU LGBTI II survey was defined as:

- people who identify themselves under the umbrella terms lesbian, gay, bisexual, transgender or intersex (allowing for sub-categories in the trans group, such as trans woman, trans man, non-binary, cross-dressing woman, cross-dressing man, genderqueer, gender-fluid, agender or polygender);
- people who are at least 15 years old.
- people who have lived in their current country for at least 1 year and whose current country is an EU Member State, Serbia or North Macedonia (regardless of residency or citizenship).

Compared with the 2012 wave the coverage of the second wave of the LGBTI survey was extended by including:

- intersex people;
- respondents aged 15–17 years;
- respondents living in North Macedonia and Serbia.

To streamline the use of terms used throughout the survey for LGBTI-related issues, the main concepts are described below, as found in the ILGA Europe glossary ([2]).

- **LGBTI** is an acronym that stands for lesbian, gay, bisexual, trans and intersex. These terms are used to describe a person's sexual orientation or/and gender identity/expression and/or sex characteristics.
- **Sexual orientation** refers to a person's capacity for profound emotional, affectional and sexual attraction to, and intimate and sexual relations with, individuals of a different gender or the same gender or more than one gender.
- **Gender identity** refers to a person's deeply felt internal and individual experience of gender, which may or may not correspond with the sex assigned at birth, including the personal sense of the body (which may involve, if freely chosen, modifications of bodily appearance or function by medical, surgical or other means) and other expressions of gender, including dress, speech and mannerisms.

To develop the survey, FRA convened stakeholder and expert meetings in Vienna in June 2018. The meeting served to inform and consult with relevant stakeholders and experts at an early stage of the survey's development, as well as to lay the ground for cooperation during the later stages of survey promotion, data collection and dissemination of results. The participants in the consultation included representatives from EU, European, global and intergovernmental bodies and human rights institutions, European LGBTI networks and umbrella organisations, Member State, European and global academic and independent experts in the field, and civil society organisations. The meeting participants contributed by providing valuable input and by identifying together the lessons learnt from the 2012 survey and suggestions to be considered in the second wave, as well as optimal ways and tools to reach out as widely as possible to the LGBTI population and the most under-represented groups, e.g. by age and LGBTI subgroup, across the numerous survey countries.

FRA designed the survey with the aim of achieving a diverse sample of respondents from the target population across all 30 survey countries. Following an EU-wide open call for tenders, FRA commissioned a consortium of Agilis SA and Homoevolution, based in Greece, to implement the survey, following FRA's technical specifications. This involved the survey contractors planning and carrying out the survey preparation, survey promotion, data collection, and data processing and analysis activities under FRA's guidance and coordination as follows:

- conducting background research and consultations to provide estimates of the relative sizes of each LGBTI category given that the true percentage of the LGBTI population is unknown; such preparatory work for the survey, carried out by the Agilis research team in coordination with FRA, involved mapping previous studies of the prevalence of LGBTI people in the population;
- setting up and coordinating a national survey contact points (NSCP) team with the task of developing and successfully implementing the survey promotion and communication activities, reaching out to more than 900 national-level LGBTI organisations and to LGBTI people in 30 countries and enhancing the awareness of the survey among all groups, including those who are most under-represented in online surveys, such as LGBTI people of older age and lower income and groups that are rarely

([2]) ILGA Europe is the European arm of the International Lesbian, Gay, Bisexual, Trans and Intersex Association. The glossary is available online.

open about being LGBTI – by Homoevolution and the NSCP team and with the support of stakeholders and LGBTI organisations and networks at EU and national level;

- drawing up a survey promotion plan and executing survey promotion campaigns at EU and national levels, including the production of promotional videos, banners and communication materials – by Homoevolution
- reviewing the translations of the questionnaire and the additional translations of revised parts of the questionnaire and translations into languages not used in the 2012 survey – by the consortium;
- translating information and communication materials – by the consortium;
- transforming the questionnaire into an online survey tool and hosting the survey – by Agilis;
- collecting data through the open online survey, monitoring the smooth implementation of the data collection via customised tools, assessing progress and identifying any eventual malicious attempts to falsify the survey – by Agilis;
- processing and delivering the dataset by Agilis; an external FRA contracted expert (Dr Ernest Albert, University of Vienna) assisted FRA's survey team and Agilis in developing and applying an optimal cleaning and weighting approach and in processing the dataset;
- tabulating selected indicators and technical reporting – by Agilis.

The survey consortium managed the data collection work under the general oversight of a FRA manager and expert team, who monitored compliance according to strict quality control procedures and also had the final say in key stages of the project, including approval of the final version of the questionnaire before it was used to programme the online survey tool. The contractor consortium carried out these tasks from November 2018 to November 2019. The network of national survey contact points of experts and communication professionals for each survey country, set up by the consortium, supported the survey's promotion and implementation.

FRA agreed with the contractor a quality assurance plan at the beginning of the project. This outlined the procedures that would be used to monitor quality at all stages of the survey's life cycle and detailed how their achievement would be documented. The quality assurance procedures relevant for various activities are described in this technical report in the sections concerning each activity.

In November 2019, FRA received the final dataset and tabulation of selected indicators from the contractor, which allowed the Agency to start analysing the data.

This technical report describes in detail the data collection process and outcomes beyond the results of the survey, which are presented in the main results report. ([3])

This technical report presents in detail all the stages of the survey and the relevant information needed to assess the quality and reliability of the data, as well as considerations for interpreting the survey results.

The following chapters of the report cover the procedures used in the development and administration of the survey.

The next chapter of this report describes and assesses the various stages of developing the methodological design of the survey, estimating the target population and the sample targets (Chapter 2), followed by a description of the development of the questionnaire and the translation process (Chapter 3).

The development of the online survey tool, the website and infrastructure used, and the measures taken to ensure data protection, privacy and security are described in Chapter 4.

The survey tools were tested before the main stage fieldwork to collect feedback on the usability of the online survey tool and all fieldwork materials, as well as the linguistic choices made. Chapter 5 reports on this usability testing of the questionnaire.

Chapter 6 describes the awareness-raising campaign and its goals and the development of communication plans that helped achieve a high number – nearly 140 000 – of LGBTI respondents in 30 countries.

Chapter 7 describes the main stage fieldwork of data collection and gives details of the sample achieved as well as fieldwork progress, quality control procedures, recruitment efficiency and issues faced during data collection.

Chapter 8 describes the data processing and approaches taken to control for inconsistent or fraudulent responses and attempts to falsify the results of the survey, as well as cleaning, validating and weighting the survey data before analysis, conducted by FRA.

([3]) See FRA (2020).

2 Design of the survey

The LGBTI II survey was an online opt-in survey. That is to say, unlike surveys using probability random samples, respondents were self-selected, as they volunteered to participate in the survey.

This design was adopted because it would not have been possible to achieve a representative random sample of LGBTI people across the EU in the absence of sampling frames and reliable, detailed information about the target population in terms of its size, characteristics and composition in the survey countries.

Using the traditional sampling techniques would also have been challenging because of the low prevalence of the target group in the population. Furthermore, considering different data collection modes, research has shown that conventional face-to-face surveys suffer from a higher level of social desirability bias than web-based surveys, especially when asking sensitive questions ([4]). Because of social stigma, some LGBTI respondents may choose to conceal being LGBTI in conventional face-to-face interviews. The social desirability bias ([5]) is expected to be lower in web-based surveys, which are perceived as anonymous and confidential. To avoid such bias, the LGBTI II survey was designed to ensure confidentiality and anonymity.

Given the survey's design, LGBTI II survey data are based on a narrower population than the whole LGBTI population of the 30 surveyed countries. The survey population consists of people who:

- can be reached through the online means used, i.e. those who have access to the internet; and
- became aware of the survey, e.g. by visiting a website/app promoting the survey; and
- chose to complete the survey.

This raises a number of issues for consideration:

- despite the fact that internet penetration has increased across the EU ([6]), the remaining internet non-users are not usually a random subsample of the general population, as elderly, less educated and low-income subgroups are more likely to be internet non-users ([7]);
- due to self-selection, there is no control over the selection process, as it is not possible to determine whether targeted respondents complete the survey because they may have different levels of motivation and interest in participating;
- the propensity to respond of the different LGBTI groups (i.e. the probability of the LGBTI groups participating in the survey) may vary across countries and sociodemographic strata because of cultural and social norms.

To reduce a possible bias, survey dissemination was targeted as broadly as possible. A combination of

([4]) See Heerweg (2009).
([5]) Social desirability bias is the phenomenon describing the tendency of survey respondents to answer interview questions in a way that is socially acceptable and received favourably or at least not negatively by others. In this way, respondents tend not to respond honestly but in a way that they can appear more likeable to the interviewer or avoid negative reactions.
([6]) According to Eurostat 2018 data, the level of internet access to households exceeded 80 % in all countries surveyed except for Bulgaria (72 %), Greece (76 %), Lithuania (78 %), Portugal (79 %), North Macedonia (79 %) and Serbia (73 %), where the percentage was slightly lower.
([7]) Eurostat official statistics, survey on ICT (information communications and technology) usage in households and by individuals.

recruitment channels across the participating countries was used to target separately all LGBTI groups and to reach out to respondents irrespective of their link with or affiliation to LGBTI civil society organisations, communities or associations, while offline activities were undertaken to recruit 'hard-to-reach' subgroups of the target population (e.g. elderly or intersex people).

Continuous real-time monitoring of the progress of data collection was used to determine which recruitment channels and strategies should be prioritised to attract more respondents from under-represented strata (the strata were defined as a combination of LGBTI group, country and age group – see Section 2.1 for more details) and to reach the target sample sizes, which had been set on the basis of population estimates.

Finally, to compensate for undercoverage of certain groups, in spite of the survey dissemination efforts, or remaining imbalances in the sample due to self-selection of respondents, FRA invested considerable effort in applying correction techniques, such as adjustment through weighting (see Section 8.3).

2.1. Target population estimation

At the survey design stage we estimated the sizes of the target population and sub-populations with a two-fold aim:

- to provide guidance for the recruitment process to help achieve a balanced sample;
- to provide the basis for a post-stratification weighting after the actual data collection.

Because the true percentage of the LGBTI population is unknown, the preparatory work for the survey involved mapping previous studies of the prevalence of LGBTI people in the population. This provided estimates of the relative sizes of each LGBTI category.

2.1.1 Stratification criteria

The first step included the determination of the stratification variables to be used as a basis throughout the whole process ('pre-stratification' of the sampling process and post-stratification weighting). Experience from the implementation of the first wave of the LGBT survey indicated that younger people and some LGBT groups (e.g. gay men) are likely to be over-represented in the survey. For this reason the stratification criteria capture these two factors, i.e. LGBTI group and age group. Three age bands were used – 15–34, 35–54 and 55+ years old – to capture younger, middle aged and older people.

2.1.2 Literature review

To inform the LGBTI population estimates, the team carried out a literature review based on a list of 300 studies ([8]) mapping the size of the target population, which was drawn up for a World Bank project ([9]). As no relevant study was identified covering intersex people, a different approach was adopted for the estimation of their proportion (see below).

When screening the available studies, the following set of inclusion criteria was used to determine the studies that would be used to estimate the relative sizes of the LGBTI categories:

- *Countries of interest*. Only studies undertaken in countries participating in the FRA survey were included, because the understanding of being or identifying as LGBTI may be subject to different social and cultural norms in other countries.
- *Subgroups of population*. The literature review considered only studies regarding lesbian, gay, trans and bisexual people. This excluded, for example, sexual behaviour studies (about men having sex with men, women having sex with women, etc.), since sexual behaviour is not necessarily congruent with self-identification and these surveys estimate the size of a different population.
- *Quality of the existing studies*. The literature review excluded (1) older studies dating back to 2000 or earlier; and (2) studies with small samples sizes ($n < 1\,000$).

After applying these criteria nine studies were deemed suitable to estimate the target population. The list of the studies is provided in Annex A.

2.1.3 Estimates of LGBT per age group

The United Kingdom annual population survey – APS (2017) – was used to obtain the estimates of the sizes of LGBT groups disaggregated by age (15–34, 35–54 and 55+ years old). This was the only large-scale survey that was identified as recent, regular and reliable ([10]) and which provided disaggregation by age and LGBT categories. The other studies identified were complementarily used to adjust the total LGBT percentages provided by the APS (2017). The estimates of the target

([8]) The list of surveys was documented in a structured Excel inventory, which was provided to the contractor.
([9]) Work undertaken by Andrew R. Flores, Assistant Professor of Political Science, Mills College, Oakland, CA, to serve the needs of a World Bank project. See World Bank (2018).
([10]) As defined in the *European Statistics Code of Practice*, principle 12: accuracy and reliability (https://ec.europa.eu/eurostat/documents/4031688/8971242/KS-02-18-142-EN-N.pdf/e7f85f07-91db-4312-8118-f729c75878c7).

population in the age bands were determined by the following three steps:

1. Official population statistics per age group were retrieved for the United Kingdom's population in 2017 from Eurostat's dissemination database ([11]).

2. The percentages provided by the APS (2017) were multiplied by the population of the corresponding age and aggregated to derive the number of the LGBT people in the United Kingdom per age group used in the LGBTI II survey.

3. Estimations of the proportions of the population that identify as lesbian and as bisexual women were derived as the ratio of the lesbian and bisexual female population per age group to the female population in the same age group. Analogically, estimations for gay and bisexual men were related to the population of men. An estimation of the proportion of trans people was related to the total population.

The estimates of the proportion of each LGBT group per age category are shown in Table 1.

Two corrections were applied to these estimates:

- The estimated proportion of LGB people in the population in a survey was multiplied by a factor of 1.6 if the survey data were collected through face-to-face interviews. Research ([12]) shows that the proportion of respondents who identify as LGB is about 1.6 times higher in self-administered surveys compared with face-to-face or telephone interviews. This factor was applied to estimates from four out of the remaining eight surveys: Natsal-3 (2010–2012), Layte (2006), Sandfort et al. (2001) and Haversath et al. (2017).

- A correction factor per LGBT category was applied to the estimates for all age groups based on the APS (2017) to account for the results of other selected surveys. The correction factor was a ratio of the mean LGBT proportion across all identified surveys ([13]), weighted by their sample size, to the proportion given by the APS (2017). In this way the final adjusted estimates were derived (see Table 1).

Table 1 shows, for instance, that the estimated proportion of people aged 15-34 who self-identify as gay men is 4.01 % (i.e. 4.03 ´ 0.996) of the male population in the respective age class.

([11]) Eurostat population statistics (https://ec.europa.eu/eurostat/web/population-demography-migration-projections/data/database), code: demo_pjan. Data extracted September 2019.

([12]) OECD (2019), Chapter 1.1.1.

([13]) The averages of the estimates excluded obvious outliers on per case bases. Layte (2006) was excluded because of the low estimate given for lesbian women. For gay men, Sandfort et al. (2001) and IFOP (2017) did not give estimates for this category, and estimates by IFOP (2011) and IFOP (2014) were considered too high. Vanwesenbeeck et al. (2010) was excluded from the calculation of the weighted average of bisexual men and bisexual women due to high estimates. For trans people, APS (2017) and Natsal-3 (2012) were used for the estimates.

Table 1. Estimation of the proportion of LGBTI target population per age group / category based on studies

LGBTI category	Age group	Estimates from APS (2017) (%)	Weighted average (WA) from surveys (%)	Correction factor (CF = $APS_{\_Total}$/WA)	Adjusted final estimates (%) (APS x CF)
Gay	15–34	4.03	2.76	0.996	4.01
	35–54	2.82			2.81
	55+	1.55			1.55
	Total	2.77			2.76
Lesbian	15–34	2.29	1.46	1.0	2.29
	35–54	1.49			1.49
	55+	0.78			0.78
	Total	1.46			1.46
Bisexual men	15–34	1.81	1.15	1.14	2.05
	35–54	0.64			0.73
	55+	0.55			0.62
	Total	1.02			1.15
Bisexual women	15–34	3.18	1.62	1.06	3.38
	35–54	0.90			0.96
	55+	0.60			0.64
	Total	1.52			1.62
Trans	15–34	1.18	0.59	0.61	0.72
	35–54	0.88			0.54
	55+	0.82			0.51
	Total	0.96			0.59
Intersex	Total	0.10	-	-	0.10

Note: for intersex people, reference information broken down by age was not available.

2.1.4 Intersex

The literature review showed that concrete estimates of the (birth) prevalence of intersex people are difficult to make because there are no concrete parameters for defining intersex. The Intersex Initiative, a United States-based organisation, estimates that one in 1 500 (0.07 %) or 2 000 (0.05 %) children are born visibly intersex ([14]). Considering this and the lack of reliable information on the proportion of intersex people in the population, an estimate of 0.1 % was set following feedback from the team of experts ([15]). This proportion could not be further divided across age groups.

2.1.5 Country estimates

Based on the proportions derived per LGBTI category and age class we derived the target population size for each stratum (LGBTI category and age group) per country. The following formula was used

$$target_{i,j,m} = pop_{i,j,k} * est_{j,m}$$

where

target refers to the target population in country *i*, age category *j* and category *m*;

pop denotes the population according to Eurostat official population statistics for 2017 extracted from Eurostat's dissemination database ([16]);

est stands for the estimated proportion of the target population as presented in Table 1 (under column 'Adjusted final estimates');

([14]) Noticeably atypical in terms of genitalia.
([15]) Resulting from the consultation of the NSCP team with ILGA Europe.
([16]) Eurostat population statistics (https://ec.europa.eu/eurostat/web/population-demography-migration-projections/data/database).

i = 1, … , 30 denotes the country;

j = 15–34, 35–54, 55+ denotes the age category;

k = men, women, total, denoting the sex of the reference population; the reference population for lesbians and bisexual women is the female population, for gay and bisexual men it is the male population and for trans and intersex people it is the total population;

m = LGBTI category.

Because of a lack of reliable data, it was assumed that the distribution of LGBTI people across age categories does not differ between countries. However, the estimated population of LGBTI people relative to the total population of each country may differ due to variation in the relative sizes of the age cohorts in the general population. This approach therefore leads to estimates that are adapted to each country.

2.2. Sample size targets

Based on the estimated LGBTI population in the survey countries, a targeted optimal sample size was determined for each stratum (by age group and respondent category) and country. The following three-stage approach was used:

1. Firstly, a minimum (threshold) sample size was estimated for each survey country, as if a probability random sample was in place. Based on expert judgement the minimum sample size was increased by a factor of two to accommodate the non-probability nature of the survey ([17]). To create practically feasible sample sizes (that could be realistically realised especially in small countries), the survey countries were categorised into three groups according to their population size. For each group of countries, different target margins of error for the estimates were set (7.5 % for countries with small populations, 5.0 % for medium and 2.5 % for large), leading to different minimum samples. The resulting minimum country sample sizes were then stratified among LGBTI categories and age groups, according to the estimated LGBTI population structure of each country.

2. The remaining sample required to meet the overall target set (i.e. at least 100 000 responses) after applying step A was distributed to the countries in proportion to the estimated size of their LGBTI populations and then further distributed across respondent categories and age groups, as in stage 1, and added to the minimum threshold sample.

3. To avoid cells with a very small number of respondents, a minimum sample size of 30 per stratum and country was set. In the case of intersex people, a minimum sample of 30 was considered at country level (due to the very low estimated prevalence).

The advantage of this three-stage approach is that it ensures that a sample adequate for statistical purposes is achieved for each country, while taking into account the relative size of the LGBTI population. This strategy proactively reduces the need for weighting required to estimate results at the European level. The final optimal target sample size is presented in Table 2. These sample sizes were used as target sample sizes for adjusting the focus of the awareness raising activities and survey dissemination.

([17]) Expert judgment of the team based on experience from previous similar surveys in combination with evidence from similar research on the design of web respondent-driven surveys. See Hughes (2012), p. 333.

Table 2. Target optimal sample size required for each country and stratum (LGBTI category and age group)

Country	Sample	Gay				Lesbian				Bisexual men				Bisexual women				Trans				Intersex			
		15-34	35-54	55+	Total	15-34	35-54	55+	Total	15-34	35-54	55+	Total	15-34	35-54	55+	Total	15-34	35-54	55+	Total	15-34	35-54	55+	Total
AT	1.897	282	223	121	626	153	118	72	343	144	57	49	250	225	76	59	360	99	86	86	271	14	15	17	47
BE	2.184	322	250	145	717	180	130	85	395	165	65	58	288	265	84	70	419	114	95	102	311	16	17	20	54
BG	1.656	230	202	114	546	123	103	75	301	118	52	45	215	181	66	62	309	80	76	86	242	11	15	17	43
HR	1.291	187	146	87	420	102	77	57	236	96	37	35	168	151	50	47	248	66	56	65	187	9	10	13	32
CY	597	75	44	30	149	44	30	30	104	39	30	30	99	65	30	30	125	30	30	30	90	4	4	4	30
CZ	2.085	293	266	134	693	158	135	84	377	149	69	54	272	234	87	69	390	103	100	98	301	14	19	19	52
DK	1.493	225	167	101	493	124	87	56	267	115	43	40	198	182	56	46	284	80	64	70	214	11	12	14	37
EE	949	141	104	53	298	75	56	44	175	72	30	30	132	110	35	35	180	49	40	45	134	7	7	9	30
FI	1.450	217	155	105	477	117	79	63	259	111	40	42	193	172	51	51	274	76	59	75	210	11	11	15	37
FR	11.184	1.618	1.233	750	3.601	927	675	464	2.066	828	319	300	1.447	1.366	435	380	2.181	584	482	545	1.611	81	89	108	278
DE	13.499	1.927	1.566	983	4.476	1.018	815	587	2.420	986	406	394	1.786	1.501	527	480	2.508	669	598	701	1.968	92	110	138	341
EL	2.097	279	254	151	684	155	141	92	388	142	66	60	268	229	91	75	395	99	100	109	308	14	19	22	54
HU	2.004	287	242	122	651	156	128	88	372	146	63	49	258	229	83	71	383	101	93	96	290	14	18	19	50
IE	1.359	207	163	73	443	120	89	40	249	106	42	30	178	177	57	32	266	76	64	50	190	11	12	10	33
IT	10.521	1.350	1.334	780	3.464	737	718	479	1.934	690	346	313	1.349	1.085	464	392	1.941	476	518	565	1.559	66	96	112	274
LV	648	85	65	34	184	46	36	30	112	44	30	30	104	68	30	30	128	30	30	30	90	4	5	5	30
LT	1.134	169	121	65	355	92	69	53	214	87	31	30	148	135	44	44	223	60	48	56	164	9	9	10	30
LU	570	65	53	30	148	36	30	30	96	33	30	30	93	53	30	30	113	30	30	30	90	4	4	4	30
MT	556	65	43	30	138	34	30	30	94	33	30	30	93	51	30	30	111	30	30	30	90	3	3	4	30
NL	2.915	432	328	200	960	239	174	111	524	221	85	80	386	353	113	91	557	153	126	137	416	22	23	27	72
MK	704	101	70	32	203	56	36	30	122	52	30	30	112	81	30	30	141	36	30	30	96	5	5	4	30
PL	7.975	1.236	885	468	2.589	679	464	313	1.456	632	229	188	1.049	1.000	300	256	1.556	437	339	356	1.132	60	63	70	193
PT	2.045	269	242	142	653	154	141	93	388	138	63	57	258	226	91	75	392	97	98	106	301	13	18	21	53
RO	3.240	473	401	198	1.072	253	203	131	587	242	104	80	426	372	131	107	610	165	151	149	465	22	28	30	80
RS	1.654	239	187	116	542	129	99	72	300	122	48	47	217	191	64	59	314	84	72	84	240	11	13	17	41
SK	1.477	228	177	79	484	125	91	53	269	117	46	32	195	183	59	44	286	81	67	60	208	11	12	12	35
SI	660	82	77	42	201	44	38	30	112	42	30	30	102	65	30	30	125	30	30	30	90	4	5	6	30
ES	8.814	1.145	1.198	582	2.925	639	625	352	1.616	586	311	233	1.130	943	404	288	1.635	408	458	418	1.284	57	84	83	224
SE	2.016	312	221	137	670	167	113	76	356	160	57	55	272	246	73	63	382	109	84	94	287	15	16	19	49
UK	11.326	1.743	1.237	720	3.700	969	670	411	2.050	891	321	289	1.501	1.428	433	337	2.198	620	481	502	1.603	86	89	99	274
Total	**100.000**	**14.284**	**11.654**	**6.624**	**32.562**	**7.851**	**6.200**	**4.131**	**18.182**	**7.307**	**3.110**	**2.770**	**13.187**	**11.567**	**4.054**	**3.413**	**19.034**	**5.072**	**4.535**	**4.835**	**14.442**	**701**	**831**	**948**	**2.593**

3 The questionnaire

3.1. The structure and content

The EU LGBTI II survey questionnaire was based on the questionnaire for the 2012 EU LGBT survey and was developed by FRA, after consultation with key stakeholders, human rights institutions and European and global experts in the area of scientific research into sexual orientation, gender identity / expression and sex characteristics. The revisions to the 2012 questionnaire included:

- deletion of some of the previous questions;
- addition of new questions;
- minor modification to and improvement of the text/answer categories in some questions that already existed.

The questionnaire is structured in 12 sections. Each section consists of a set of questions related to a specific topic:

- A. introduction and screening, 16 questions;
- TR. questions specifically for trans respondents, 9 questions;
- IX. questions specifically for intersex respondents, 14 questions;
- B. public perception of increase or decrease in intolerance and violence, 5 questions;
- C. discrimination, 17 questions;
- D. safe environment, 4 questions;
- E. physical/sexual attack, 11 questions;
- F. harassment, 12 questions;
- G. social context, 2 questions;
- H. respondent background, 24 questions;
- I. knowledge about the survey, 4 questions;
- J. individual story, 2 questions.

The full questionnaire is available online (https://fra.europa.eu/sites/default/files/fra_uploads/fra-2020-questionnaire-eu-lgbti-ii-survey_en.pdf). All sections were mandatory apart from the last one, offering users an open field to share additional experiences as LGBTI people (section J). Furthermore, two sections (TR and IX) were made available online only for trans and intersex subgroups, respectively.

Each respondent was categorised into one of five categories (lesbian, gay, bisexual, trans or intersex) based on the screening questions in section A.

The questions were adapted to reflect the respondent's category when this was necessary. This in practice meant that, for example, a bisexual respondent would see question C1 in the following form: 'During the last 12 months, have you personally felt discriminated against because of being bisexual in any of the following situations?'.

Adding up the questions in all mandatory sections yielded 118 main questions with either a single response or multiple responses. Despite initial concern about its length, the average completion time for the online questionnaire was 18 minutes, given that most of the

questions were asked only if specific requirements were met (filter rules were fulfilled). The minimum length of questionnaire included approximately 50 questions – this refers to the survey for LGB people who were not routed into sections for trans and intersex individuals.

3.2. Translation process

The EU LGBTI II survey questionnaire was made available in 31 languages: Albanian, Bulgarian, Catalan, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Luxembourgish, Maltese, Macedonian, Polish, Portuguese, Romanian, Russian, Serbian, Serbian (Cyrillic), Slovak, Slovenian, Spanish, Swedish and Turkish. Respondents could choose any language from the pre-specified list and were also allowed to switch language during survey completion.

The translation process for the questionnaire and for all supporting material for the cross-cultural survey, like the EU LGBTI II survey, was of vital importance for the geographical comparability of the results of the survey. The English master survey questionnaire had to be translated into the different languages spoken in the European survey countries.

The main requirement for comparability was that the translated questionnaires and the English master one should follow functional, conceptual and categorical equivalence. That is to say that the words were different but the interpretation would be the same in the target country/culture, i.e. answers to the same questions in all language versions should reflect the same concepts with an analogous meaning, extension and relevance and be meaningful in each culture and language that translation occurred in. Respondents should understand the survey questions in the same way across languages, that is, they should understand the same concepts of interest the questions were exploring and they should express themselves in the same way, i.e. the same opinion should correspond to the same recorded answer across cultural/linguistic groups.

Throughout the whole translation process, Excel files were developed containing all questions in the questionnaire (each row contained the question, and answer options were included in separate rows). For each language, a separate Excel file was created containing the code of the question (first column), the question and answer categories in English (second column) and the national translation / reviewed translation (in the next separate columns). The Excel files were sent to the translation agency. Once the translation and review processes were completed, the files were also sent to the adjudicators for final review and approval, as described below.

As a general note, it should be highlighted that specific issues concerning the declension / female forms of some terms occurred in some languages because of the use of those terms in questions via piping. To make clear to the respondents that those terms are automatically inserted in the question (thus, the variation in the form of the term was not grammatically consistent in few languages), those terms were highlighted and enclosed in brackets.

3.2.1 Translation phases

The translation process was divided into four phases.

3.2.2 First phase: translation from the source language into the target languages

A network of professional translators, reviewers and adjudicators from the translation agency were engaged. A harmonised translation evaluation procedure was implemented in order that all translations could be performed in a systematic way based on forward translation, review, adjudication and finalisation.

Step 1. Independent translation

The process began with a detailed review of the questionnaire by the network of competent translators. Two independent translators with expertise in survey terminology undertook translation. The translators are excellent speakers of both the different European languages and English, that is, they have knowledge of English-speaking culture but their primary language is that of the target culture (i.e. they are bilingual).

Instructions were given to the translators as follows:

- Aim for conceptual equivalence of a word or phrase, rather than a word-for-word (literal) translation. The definition of the original item or question should be translated in the most relevant way.
- Be clear and concise. Fewer words are better (many clauses should be avoided).
- Use language perceived as non-offensive by the LGBTI community.
- Avoid jargon, colloquialism and idioms (e.g. terms that may not be easily understood).

- Consider issues of gender and age applicability; avoid any terms that might be considered offensive to the target population.

Step 2. Review of translation

Following step 1, the two versions produced by the independent translators were compared and differences were recorded for each question. With the assistance of a bilingual reviewer, provided by the translation agency, the two translators arrived at a consensus. At this stage, any problematic items were discussed and clarified with the goal of identifying and resolving any inadequate expressions/concepts and discrepancies between the translations. Some words or expressions were questioned and alternatives suggested. The reviewer was responsible for taking the final decision about the translation. The whole procedure was managed and supervised by Agilis.

3.2.3 Second phase: review of revised questionnaires

Because the 2012 questionnaire had major revisions and modifications and to speed up the process, FRA also provided, apart from the 2012 translated questionnaire (in 28 languages), translated questions from other FRA and European surveys that matched fully or in large part the revised questions. The 28 resulting questionnaires were sent to the reviewers used in the first phase to finalise the translations.

3.2.4 Third phase: adjudication

Following the first and second phases, all 30 translated and reviewed questionnaires were sent to adjudicators, who were different from the reviewers and were appointed by the translation agency, to decide whether the translations were ready to move to next phase. During this step, the adjudicator performed the final quality control and checked the translation against the original to verify that it appropriately represented the source language. Adjudication was a separate step from review and in some cases led to further modifications of the translation before it was signed off for the fourth phase.

3.2.5 Fourth phase: finalisation of translations by country and FRA experts

Following the third phase, the 30 translated questionnaires were reviewed by the country experts, coming from LGBT organisations, to ensure that language/country concepts, question formulation and wording used were appropriately reflected in the target language/country. The translated questionnaires were also delivered to FRA for further review and consultation by its network of experts.

During this phase, the translated versions of both the survey questionnaires and the survey materials were adapted to accommodate national differences in the case of different terms or expressions in German as used in Germany and in Austria, Dutch as used in the Netherlands and in Belgium, French as used in France and in Belgium, Swedish as used in Sweden and in Finland, and French and German as used in France and Germany and in Luxembourg. Following the comments that were received, in some cases, some of the earlier phases were repeated.

This process resulted in semantically comparable country-specific versions of the questionnaire ready to be developed into the online survey tool.

4

Online data collection tool and infrastructure

The technical implementation of the LGBTI II survey included (1) the online data collection tool, (2) a website, which was the landing page for the respondents and provided information to them about privacy and the confidentiality of data collection and offered answers to frequently asked questions, as well as access to the helpdesk, and (3) the dashboard, an online real-time monitoring tool providing information on the progress of the survey. The survey was accessible at https://lgbtisurvey.eu/ or https://www.lgbtisurvey.eu/.

The online survey was hosted on highly available servers in the Oracle Cloud infrastructure and consisted of an Oracle database server for the data storage, a load balancer distributing the workload to two Oracle Weblogic application servers and an Oracle back-up service. The data centres hosting the servers were located within the EU (Frankfurt).

For the online data collection for the LGBTI II survey, a custom web-based application was designed and developed specifically by the contractor to accommodate the needs of this survey. These needs concern enhanced functionality, such as complex branching rules, piping and multilingualism, and mechanisms to address speed, reliability, security and the respondent's privacy.

The online tool was a lightweight web-based application built using JavaScript and Java technologies and an Oracle relational database system for the data storage. Performance was one of the major concerns from the very beginning of designing the survey. First, at the database level, careful design decisions were taken to avoid operations that slow down the database server. At the user interface, having the options of Javascript and AJAX technology contributed to its performance, as this implied no refreshes of the web page and hence faster operation and a better user experience. Finally, the middle tier acted as a simple intermediate tier with limited responsibility, such as filtering and protecting HTTP (Hypertext Transfer Protocol) requests, and without complex logic, making the application run faster. Performance was also guaranteed at the physical level by powerful servers.

As far as security is concerned, measures were taken at multiple levels:

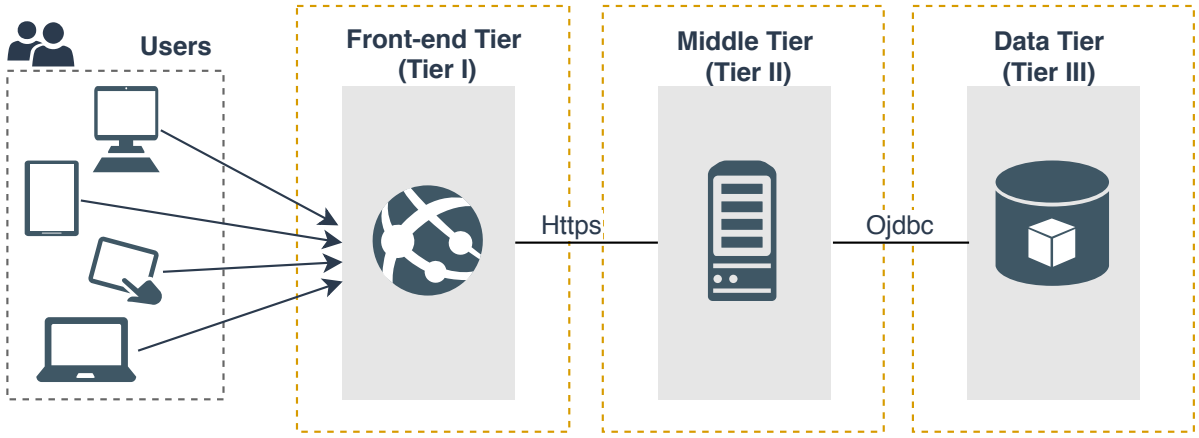
- at the HTTP level with the use of the SSL protocol, ensuring that the communication between respondents' devices and the application is encrypted;
- Cloudflare proxy system protecting against malicious attacks;
- at the application level, the incorporation of the invisible reCAPTCHA application protecting from bot attacks, as well as the inclusion of certain HTTP headers providing additional security.

At the infrastructure layer, the servers were configured with high-security firewalls ensuring that the survey data are protected from unauthorised access.

4.1. Software architecture

The software was designed with a three-tier architecture model, which is an industry-proven architecture used to support enterprise-level client server applications. The software architecture consisted of the layers illustrated in Figure 1.

Figure 1. Three-tier system architecture



4.1.1 Front-end tier

This is the tier that users interact with, composed of the user interface and containing all the presentation logic; the code is responsible for rendering questions based on their type (implementing a templating mechanism for each question type), getting user's responses from interface components and preparing the submission of survey data and paradata. The front-end is also responsible for the collection of paradata and device-type paradata that provide information regarding the kind of device used to complete the survey, such as the type of browser, layout engine, operating system, device type/model. This information is entirely extracted from the user–agent (UA) string, a self-identifying HTTP that header browsers send when accessing a web page. A typical UA string looks like this: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/79.0.3945.130 Safari/537.36. It does not include any potentially identifying data such as IP addresses, geographical references, cookies, etc.

Some of the application's business logic, such as the support of complex routing rules, based on a well-structured internal representation of rules, piping mechanism and multilingualism, is implemented in this layer.

The front-end is written mostly in JavaScript and HTML (Hypertext Markup Language) and built upon AngularJS, one of the most popular client-side frameworks for dynamic web applications.

As the interaction with users is performed in this tier, special attention is given to details. Thus the user interface is carefully designed to have the following characteristics.

- It is user-friendly, easy to use and performs well.
- It is responsive, so it can adapt to different viewports and work well across browsers on desktops, tablets and mobile phones. To ensure survey usability on small screens, such as mobile devices, certain careful design steps were taken:
  - avoided questions in tables because tables do not fit on smaller screens and require respondents to zoom and scroll horizontally just to read the text, e.g. matrix questions were split into sub-questions;
  - avoided making the respondents scroll horizontally as much as possible; in addition to decomposing and splitting,, this involved the display of multiple choice questions vertically as opposed to horizontally;
  - avoided drag and drop questions (e.g. for ranking) and developed specific functionality that enabled ranking without drag and drop;
  - optimised font size and navigation buttons for usability with smartphones;
  - customised prompts and error messages to be shown with the right font size, length and colour;
  - avoided popups (e.g. for error messages).
- It is compatible with three major versions of the most popular web browsers (e.g. Google Chrome, Mozilla Firefox, Opera, Safari, Internet Explorer, Microsoft Edge), as well as embedded browsers widely adopted by the majority of social network applications (Facebook, Twitter, Instagram, LinkedIn, Messenger, Pinterest, etc.). Although the application was developed to be cross-browser compatible and tested on a wide combination of devices, operating systems, browsers and browser versions, it was almost impossible to verify its proper functioning in all undocumented custom in-app browsers that lack the support of basic web standards. That was the case with PlanetRomeo. Early in the survey fieldwork, users reported that they were unable to answer questions offered as drop-down menus when accessing the online survey using the

native application of PlanetRomeo for Android devices. The issue was communicated to PlanetRomeo's support team and addressed within 24 hours by proper modification of the advertisement settings so that the online survey always opens on users' default browsers.

4.1.2 Middle tier

This tier consists of a J2EE web application, deployed on a WebLogic 12c application server and it implements the functional business logic of the application. It acts as an intermediate between the front-end and data tiers, facilitating their communication and offering a layer of abstraction.

The main responsibilities of the middle tier are to:

- handle and filter the HTTP requests received from the front-end tier and perform the requested operations;
- identify and block HTTP requests coming from illegitimate sources (i.e. bots);
- create and maintain log files containing information about the executed operations, as well as warnings and errors written by the application;
- invoke database storage procedures for data storage using a JDBC connector for their in-between communication; retrieval of any of the data stored in the database, including answers provided by respondents, is not allowed for security reasons and thus not implemented;
- manage a pool of active database connections, reducing the overall connection overhead required by the database instance;
- manage database transactions preserving the integrity of data and ensuring that the database is kept in a consistent state;
- take security measures by implementing HTTP security headers.

4.1.3 Data tier

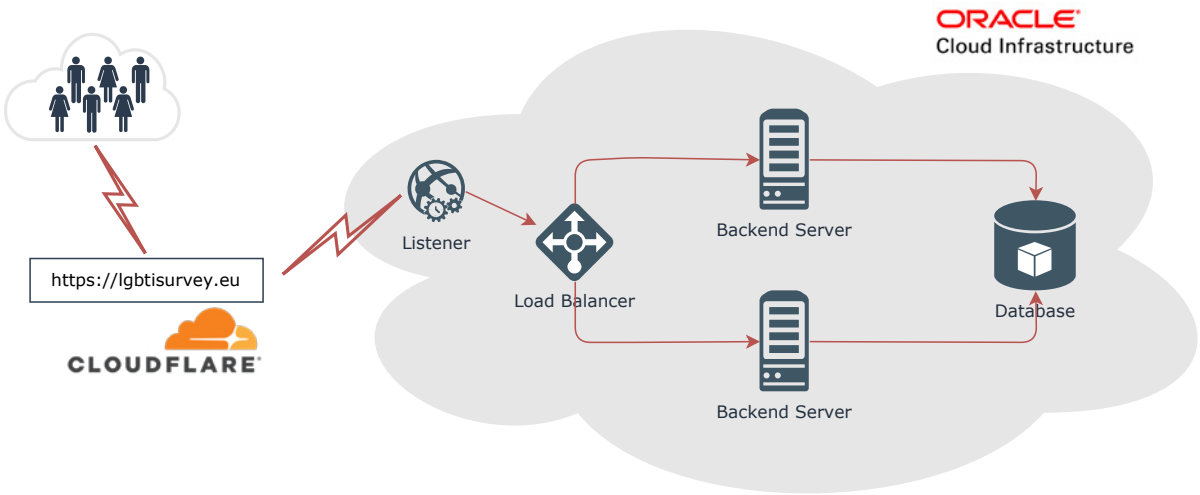
The data tier consists of an Oracle 12c relational database management system responsible mainly for data storage. The same database is used for the dashboard, an online monitoring system, developed by Agilis, to provide real-time statistics about the survey.

4.2. Physical architecture

Figure 2 depicts the physical architecture of the system. All system components are installed as cloud services on an Oracle Cloud infrastructure. This infrastructure provided security features at every layer of the cloud and services for monitoring the health, capacity and performance of the underlying components using metrics and notifications.

This architecture used the flexibility and scalability benefits of a cloud-based architecture in terms of allowing on-demand scaling up and down of resources if it was deemed required.

Figure 2. Physical architecture



4.3. Data protection, privacy and security

4.3.1 Data collection and respondents' privacy

Several data protection measures, as well as security controls, were in place to protect the survey data from unauthorised access, use or disclosure.

- No personal data identifying individuals were collected at any stage of the survey and all data collected were fully anonymised, making it impossible for anyone, including the data processors, to link an individual with survey questionnaire responses.
- The purpose of the processing of the survey data was to provide FRA with information concerning the opinions and experiences related to fundamental rights among people aged 15 years and over that self-identify as LGBTI individuals.
- The survey collected anonymous information for statistical and research purposes to assess the situation and contribute to the improvement of the protection of and respect for LGBTI people's rights.
- The survey data were stored on computer systems in a fully anonymised way with limited access by specified users only.
- For the management and assessment of the data collection, the survey collected anonymous **metadata** and **paradata** such as information concerning the type of browser and device used to complete the online survey (computer, smartphone, tablet, etc.), the referrer site and the time of submission. To preserve respondent's anonymity, names, addresses or IP addresses were not collected at any stage, while the collected paradata mentioned above cannot reveal the respondent's identity.
- Some technically necessary cookies had to be used for security purposes, e.g. by services that block fraudulent responses to the survey or cyberattacks to the survey's servers. These cookies did not store any personal or identifying information. These cookies could be deleted after the submission of the questionnaire using the appropriate browser options.
- This application could temporarily store responses on the user's device (local storage) to allow them to leave the questionnaire and return to it at a later time. This was possible only after receiving the user's explicit consent, but denial of this functionality did not prevent the user from filling in the questionnaire. At the end of the survey, the local storage was deleted automatically, leaving no trace on the user's device.
- Logging events at the back-end (application server, middle tier of the application and database) did not include any personal information or the IP address, as any requests made to the back-end were already anonymised.
- The respondent's session during the web survey was protected using the SSL protocol / HTTPS (secure HTTP), with no option to access the survey in an unprotected insecure mode.
- The Cloudflare system sitting in front of the infrastructure's servers, which protects the web survey from malicious activity like distributed denial-of-service attacks, malicious bots and other intrusions, masks the respondent's origin IP address for proxied DNS records so that attackers cannot bypass Cloudflare and directly attack the origin web server. This ensured the security and privacy of the back-end servers, thereby enabling the safety of the data.

4.3.2 Application-level security measures

Below are described some of the most important security measures taken at the application level to protect respondent's privacy and make the application resistant to malicious threats.

Invisible reCAPTCHA

Invisible reCAPTCHA is a pure JavaScript library incorporated into the survey application to detect abusive traffic and provide protection from many known attacks (e.g. brute force attacks) or bots that may be scraping web content. reCAPTCHA analyses users' behaviour and activity on a page based on specific metrics (e.g. mouse movements and typing patterns) and verifies whether an interaction is legitimate, without requiring any further user interaction.

Participants were not interrupted while filling in the survey, in order to solve a captcha challenge, as the invisible reCAPTCHA was running completely in the background and did not have any impact on users' flow. For each user intending to participate in the survey, the invisible reCAPTCHA assigned a score ranging from 0.0 (very likely a bot) to 1.0 (very likely a good interaction) and participation in survey was blocked for those with extremely low scores.

SSL security

The cryptographic SSL protocol was used to secure overall communication by transferring encrypted data using an X.509 Cloudflare digital certificate with up to 256 bit encryption strength. Cloudflare's certificate optimisation logic examines the browser's encryption capabilities and then issues the most modern certificate it can support.

HTTP security headers

HTTP security-related headers are a fundamental part of a website, defining whether a set of security precautions should be activated or not on web browsers. Security headers work as a firewall, providing another layer of security by mitigating attacks and a lot of common security vulnerabilities.

Below are some of the HTTP security headers incorporated into the survey application and the threats they prevent.

- **X-Frame-Options.** This header is used to safeguard an application's web pages and defend against clickjacking attacks by not allowing the framing of web content by third parties or malicious sites running under a different domain name.
- **X-XSS-Protection.** This header is used for protection against cross-site scripting attacks. When the XSS filtering is enabled and an attack is detected, browsers prevent the rendering of the requested page.
- **Strict-Transport-Security.** This header is used to prevent a type of attack known as man-in-the-middle (MITM) attack. The strict-transport-security header informs the browser that the site should be accessible only via HTTPS and all attempts to access it using HTTP should be automatically converted to HTTPS.
- **X-Content-Type-Options.** This header can prevent certain types of cross-site scripting bypasses, ensuring that the MIME types set by the application are respected by browsers.

4.4. Survey tool and website

4.4.1 Landing page – website

Upon entering the survey website, the visitor was greeted by the landing page. On this screen the user might (Figure 3):

- increase/decrease the font size (top left of page);
- turn on/off the high-contrast mode (top left of page; Figure 4);
- change the user interface language (top right of page);
- navigate to the main page by clicking on 'The survey' (page footer);
- read the privacy notes, frequently asked questions or get help (page footer);
- take the survey after clicking accept or deny on the cookie consent message.

Figure 3. Landing page

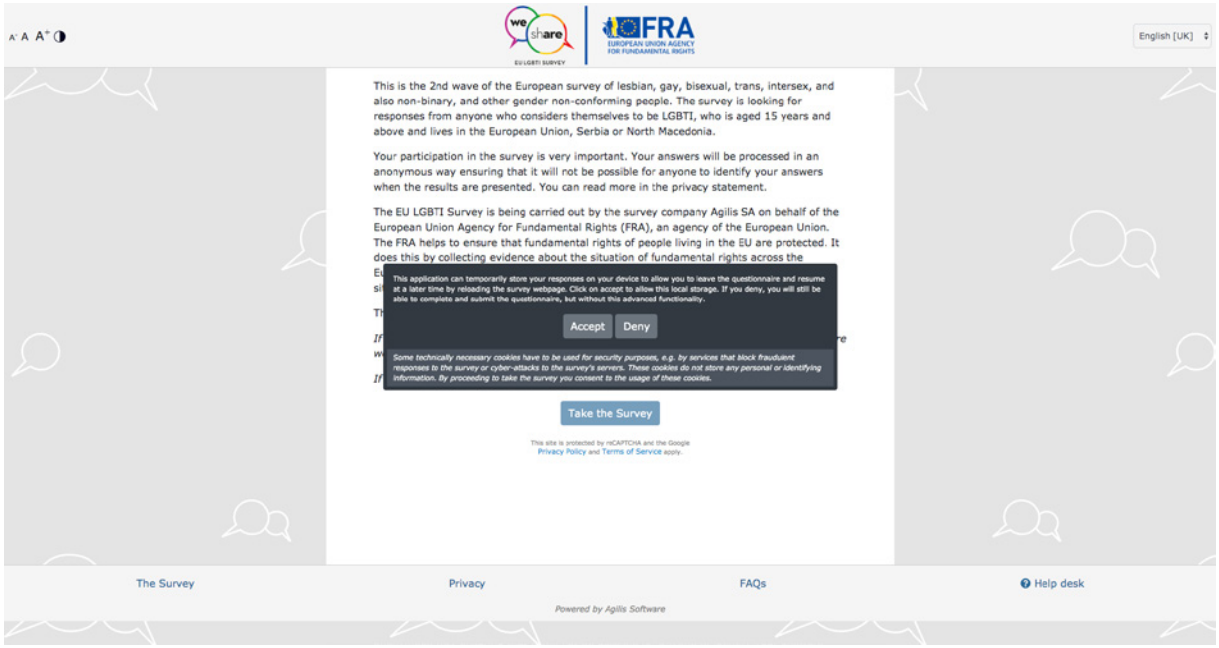


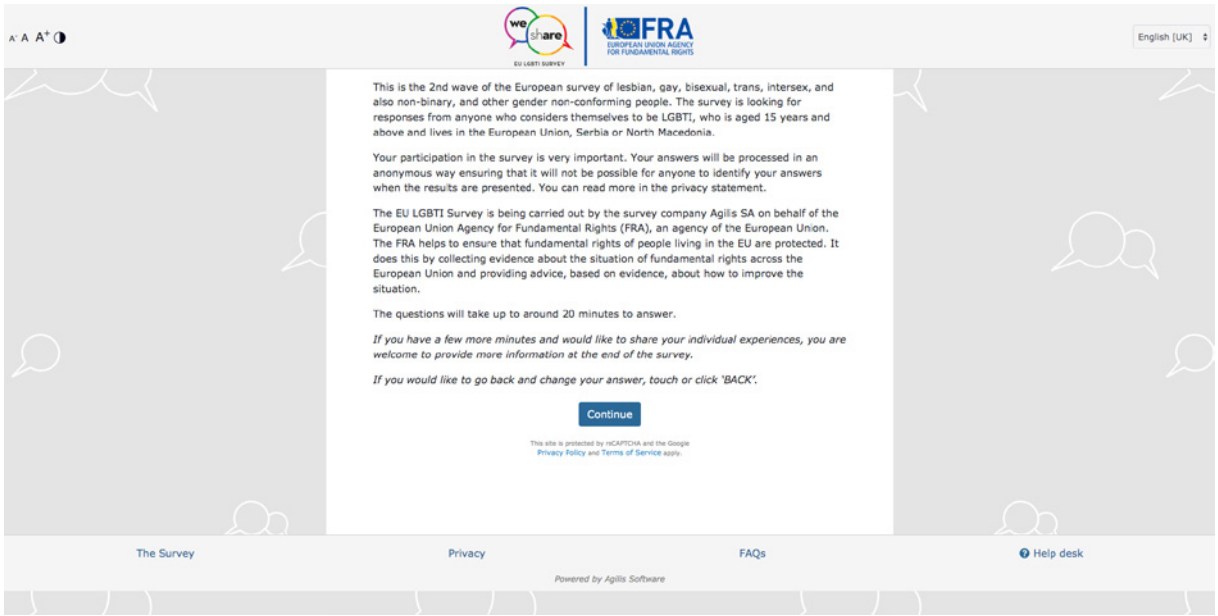
Figure 4. Landing page (high contrast)

Before taking the survey, the user had to accept or deny the use of cookies and local storage. Should the user have agreed to the use of these technologies, they were able to automatically save their responses locally to their device and continue taking the survey at a later time, regardless of the percentage of completion of the survey (Figure 5). Regardless of accepting or rejecting cookies, the user could still complete the survey without the added functionality of taking the survey in stages in the case of rejecting cookies. It is important to note that accepting the use of cookies and cookie-related technologies did not store any data whatsoever that could be used for personal identification.

Upon completing the survey and submitting the responses, all local data were deleted.

The introduction to the online tool and privacy statement that respondents saw is presented in Annex F.

Figure 5. Landing page after the user has partially completed the survey



4.4.2 The online survey

The online LGBTI II survey was conducted using a robust and fully customisable web-based application, specially developed by Agilis to cover the specific survey requirements:

- support many question types, complex branching rules and piping mechanisms;
- offer dynamic multilingualism;
- offer advanced features such as continuing the survey at a later time;
- implement usability strategies to facilitate participation (indication of the remaining time);
- follow the branding and visual identity of the survey.

The application was tested in realistic usage conditions and conforming to all usability, operational, technical infrastructure and security requirements (see Section 5.3 Simulation testing).

Figure 6. The survey tool

After clicking the 'Take the survey' button the user was transferred to the survey tool (Figure 6). Navigation between the questions was achieved by clicking the arrow buttons below the question. The user was always able to return to previous questions and change their answers if need be. However, they could not proceed to the next question without answering the current one. The options 'Don't know', 'Not applicable' and 'Prefer not to say' might appear after the user had pressed 'Next' without providing an answer, allowing the respondent to proceed to the next question.

Figure 7. An error is displayed informing the user that they should answer the question before proceeding to the next one. Above the error message, the survey's progress is displayed

Should the user try to proceed to the next question without providing an answer, an error message was displayed above the question to inform them that the question requires an answer and the extra options stated above were made available for selection (Figure 7).

At the top of the page (above the question and below the header), the user could track their progress on a rainbow-coloured progress bar, filling the screen from the left towards the right edge as the survey reached its completion.

At all times while taking the survey, the user had access to the following features: increase/decrease font size, enable/disable high-contrast mode, change user interface language and get help from the helpdesk.

Question types

The survey tool supported many different types of questions. See below a complete list of the question types with representative screenshots.

- drop-down select (Figure 8),
- single select (Figure 9),
- multiple select (Figure 10),
- multiple select with limit (up to three; Figure 11),
- multiple select with limit (up to three), ranked (Figure 12),
- matrix (multiple single select; Figure 13),
- rating scale (from 0 to 10; Figure 14),
- simple numeric (integers only),
- custom textual ('other option'),
- free text (Figure 15).

Figure 8. Dropdown select

Figure 9. Single select (with custom textual response)

Figure 10. Multiple select

Figure 11. Multiple select with limit (up to three)

Figure 12. Multiple select with limit (up to three), ranked. The user may change their response by clicking on the 'Reset selection button'

Figure 13. Matrix (multiple single select)

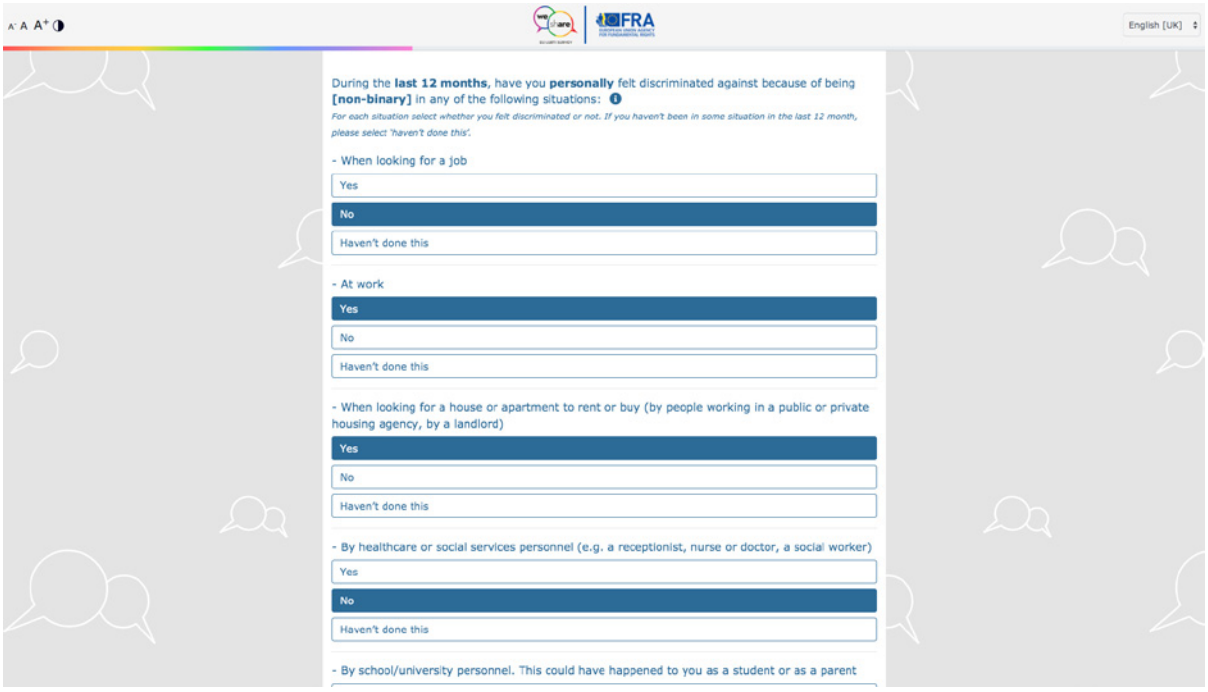


Figure 14. Rating scale (from 0 to 10)

Figure 15. Free text

Error messages

Depending on the user's actions and the type of question and whether the user was currently at the landing page or the survey tool, a number of errors might be displayed, translated into the selected user interface language. Those are as follows.

- **Something went wrong. Please try again to take the survey.** This error is displayed when the user clicks on the 'Take the survey' button on the landing page, but an error preventing that action occurs.
- **Something went wrong. Please try again to submit your responses.** This error is displayed on the final question of the survey, after the user has clicked on the submit button and the action has failed.
- **Please provide an answer.** This error is displayed when the user attempts to go the next question, without having answered the current one.
- **Please provide a number (in digits).** This error is displayed in simple numeric questions when the user inputs something other than an integer.
- **Please provide a whole number less than or equal to your age.** This error appears in cases where the user is asked to state an amount in years, e.g. how many years they have lived in their current country, and the answer is greater than their stated age.
- **No more than 3 options may be selected. Click or tap once to select an option; click or tap again to deselect it.** This error is displayed when the user tries to enter more than three responses to a question that accepts a maximum of three responses.

Piping

At certain points, some values that were specific to each user were used throughout the questionnaire. Those values were the user respondent category and the user country and were displayed in brackets ([]) in the question or answer texts (Figures 16 and 17).

Figure 16. Country value piping ('Austria' in this example)

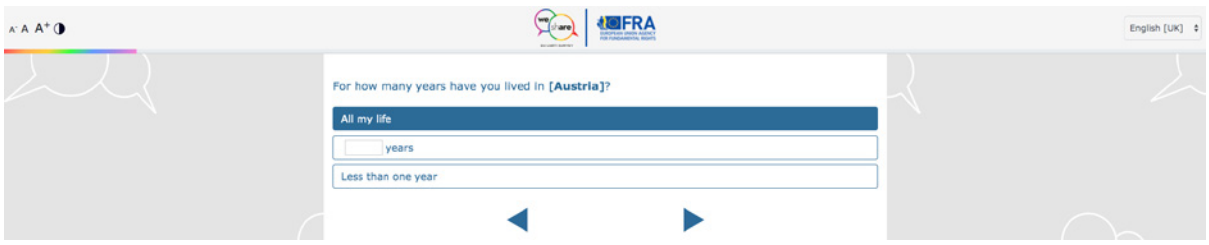
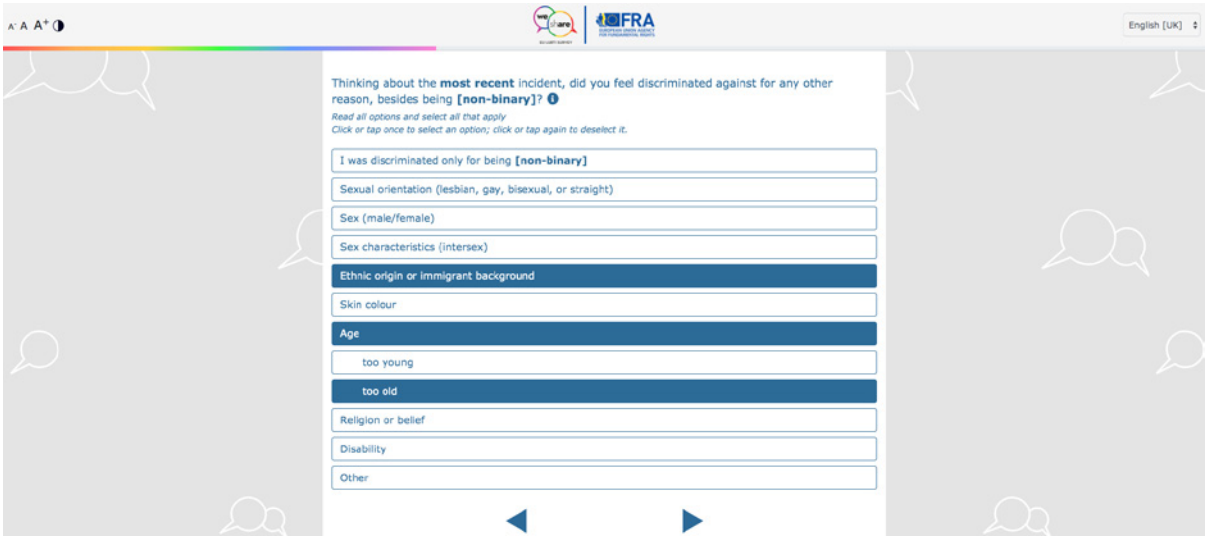


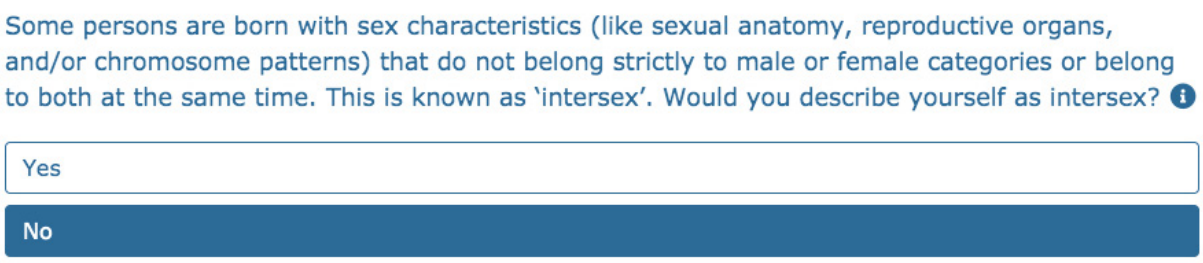
Figure 17. User category value piping ('non-binary' in this example)



Branching

Depending on the answers that the user provided, some parts of the survey became relevant and some other parts became irrelevant and were displayed or not accordingly. For example, if the user answered yes to the question in Figure 18, they would be redirected to the part of the questionnaire focusing on intersex issues. Otherwise, that part would be skipped entirely for that user.

Figure 18. Branching



Additional information

In certain sections of the questionnaire, or in specific questions, respondents might have required further information before being able to provide an answer. In those cases, the user had the option to click on the 'i' button to show/hide that extra information under the question in italics (Figure 19).

Figure 19. Display additional information (circled in red). Additional information shown in italics

User criteria filtering

Should a user not have met the requirements for the survey (because they were underage, not living in the EU or not an LGBTI person), they were filtered out and redirected to the 'Thank you' page (Figure 20).

Figure 20. Filter out – underage users

4.5. Helpdesk

A helpdesk facility was set up to support respondents with any questions or problems that they might have had with the survey. The JIRA Service Desk platform of Atlassian was opted as the best solution. To assist the respondents, the helpdesk was accessible via email, i.e. respondents could click on the 'Helpdesk' link located in the footer of the survey tool / website and write an email to the helpdesk support team using their default client application (e.g. Outlook). All emails were automatically recorded in the helpdesk system and an automatic email notification was sent to the support team.

The helpdesk platform offered a user-friendly web user interface, which allowed the support agents to handle the incoming requests efficiently, prioritise them and respond in a timely manner (responded at most within 24 hours, depending on the nature of the request).

The support team involved both information technology experts who addressed technical issues as well as domain experts ready to address requests related to the content of the survey questionnaire.

The helpdesk system recorded a number of technical issues, which in their vast majority concerned accessing the survey through the embedded browser of the PlanetRomeo app, which led to issues with the use of drop-down menus in mobile phones (see the actions undertaken to fix this issue in Section 4.1).

4.6. Online dashboard

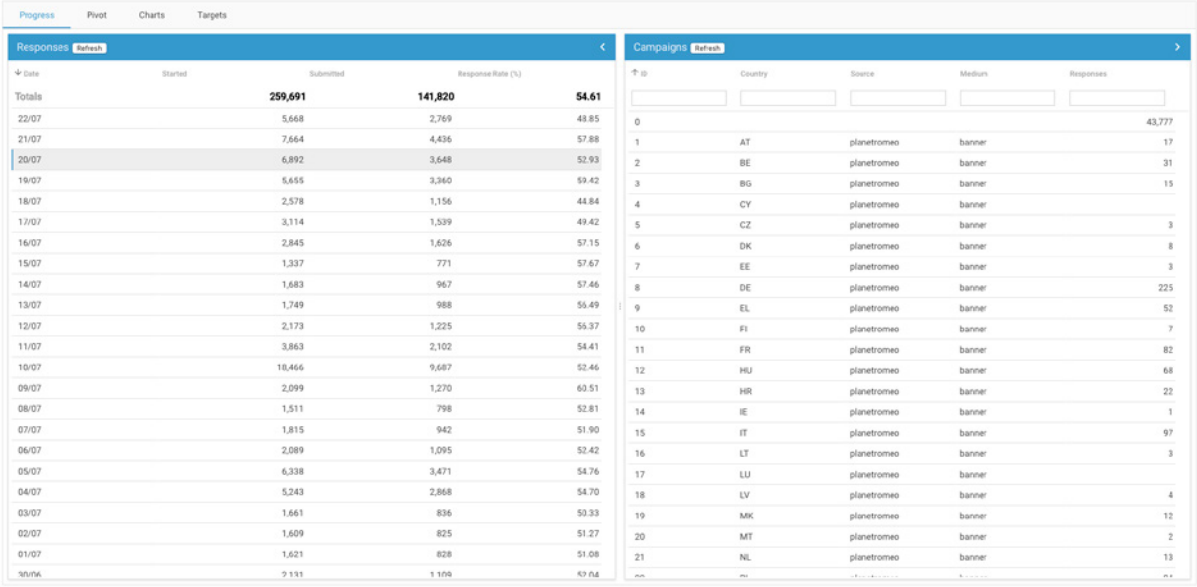
4.6.1 Dashboard overview

The LGBTI dashboard was an ad hoc solution that allowed FRA to monitor the progress of the LGBTI survey on a day-by-day basis. It comprised of a set of screens and graphs that give a comprehensive picture of the current status of the survey on many different levels. The information was broken down into four sections, each section providing a different level of detail and information. Those sections were:

- progress
- pivot
- charts
- targets.

Progress

Figure 21. Progress section



The progress section was divided into two panels (Figure 21). On the left side of the screen there was the responses panel and on the right the campaigns panel.

Responses panel

The responses panel displayed the total number of questionnaires that were started per day, the number of submitted questionnaires per day and the ratio of completed questionnaires / started questionnaires. In the top-most line of the table (Figure 21), those numbers were summed to provide an aggregated view of the survey's progress.

Campaigns panel

The campaigns panel displayed a list of all available campaigns, and the total number of respondents that each campaign has contributed. It could be sorted according to country, source, medium and total respondents per campaign.

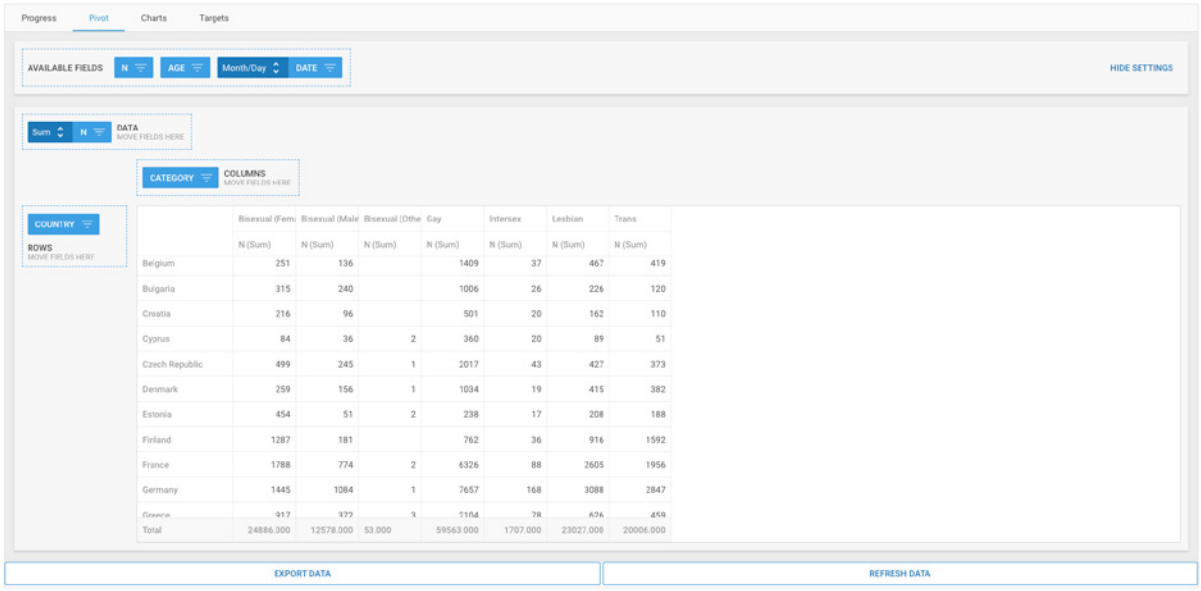
Both panels could be manually refreshed to depict a most recent view of the survey results by clicking on the refresh button located next to the panel title.

4.6.2 Pivot

The pivot view provided a tabular representation of the available data. The user might drag any field from the available fields section to the columns, rows or data section and customise this view. For example, Figure 22 shows a table that displays the number of respondents by country and respondent category. At the bottom of this view, the user had access to two additional functionalities:

- export data – to download the current view as an Excel file;
- refresh data – to provide a more up-to-date view of the current state of the survey.

Figure 22. Pivot section

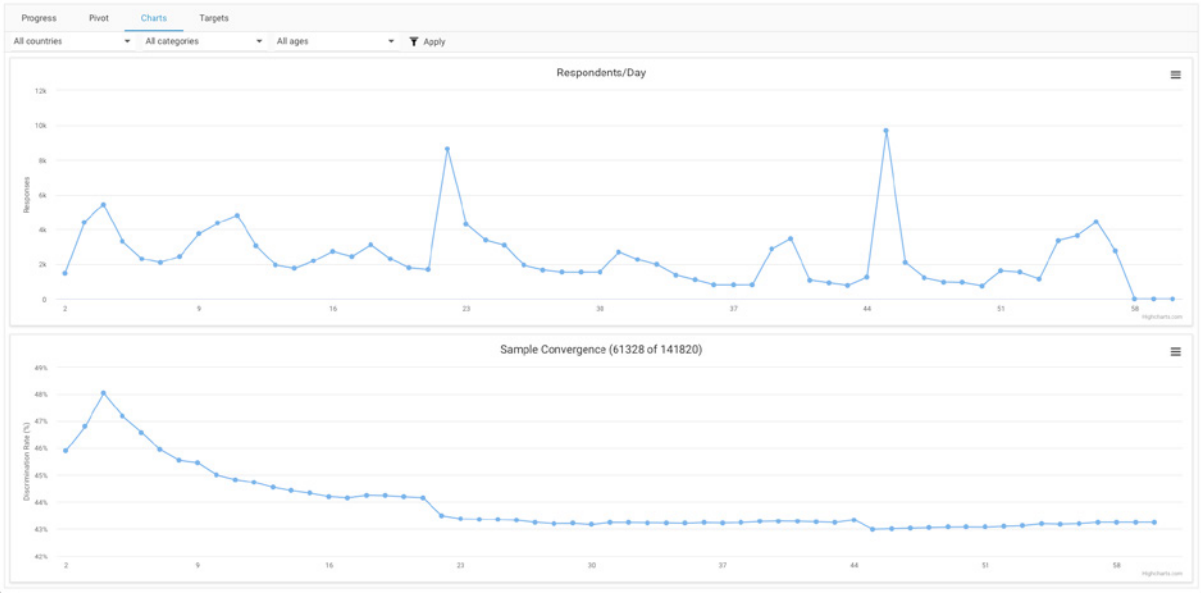


	Bisexual (Fem.	Bisexual (Male	Bisexual (Othe	Gay	Intersex	Lesbian	Trans
	N (Sum)	N (Sum)	N (Sum)	N (Sum)	N (Sum)	N (Sum)	N (Sum)
Belgium	251	136		1409	37	467	419
Bulgaria	315	240		1006	26	226	120
Croatia	216	96		501	20	162	110
Cyprus	84	36	2	360	20	89	51
Czech Republic	499	245	1	2017	43	427	373
Denmark	259	156	1	1034	19	415	382
Estonia	454	51	2	238	17	208	188
Finland	1287	181		762	36	916	1592
France	1788	774	2	6326	88	2605	1956
Germany	1445	1084	1	7657	168	3088	2847
Total	24886.000	12578.000	53.000	59563.000	1707.000	23027.000	20006.000

4.6.3 Charts

The charts view consisted of two charts, the responses per day chart and the sample convergence chart.

Figure 23. Charts section



Respondents/day

On this chart (Figure 23), the user may view a graphic representation of the completed questionnaires day by day. Each point in the chart represents a day.

Sample convergence

In Figure 23, the user may view the sample convergence based on a sample 'key' question (in this case, discrimination), i.e. the ratio of respondents who have been discriminated against to the total number of respondents. Note that this chart provides aggregated results and not those for each day individually. Each point in the chart represents the sum of all previous

days plus the current day. Sample convergence is the effect in which the value of a specific selected variable converges to a specific value while data are collected. At the beginning of data collection this value fluctuates heavily when the amount of data is still small, while the magnitude of the fluctuation decreases when more data points are accumulated. Sample convergence is used as a heuristic method to determine the adequacy of sample size in non-probabilistic sampling designs.

Both views support the following filtering criteria:

- country
- respondent category
- respondent age group.

In addition, both charts can be exported as images or as PDF, CSV or Excel files.

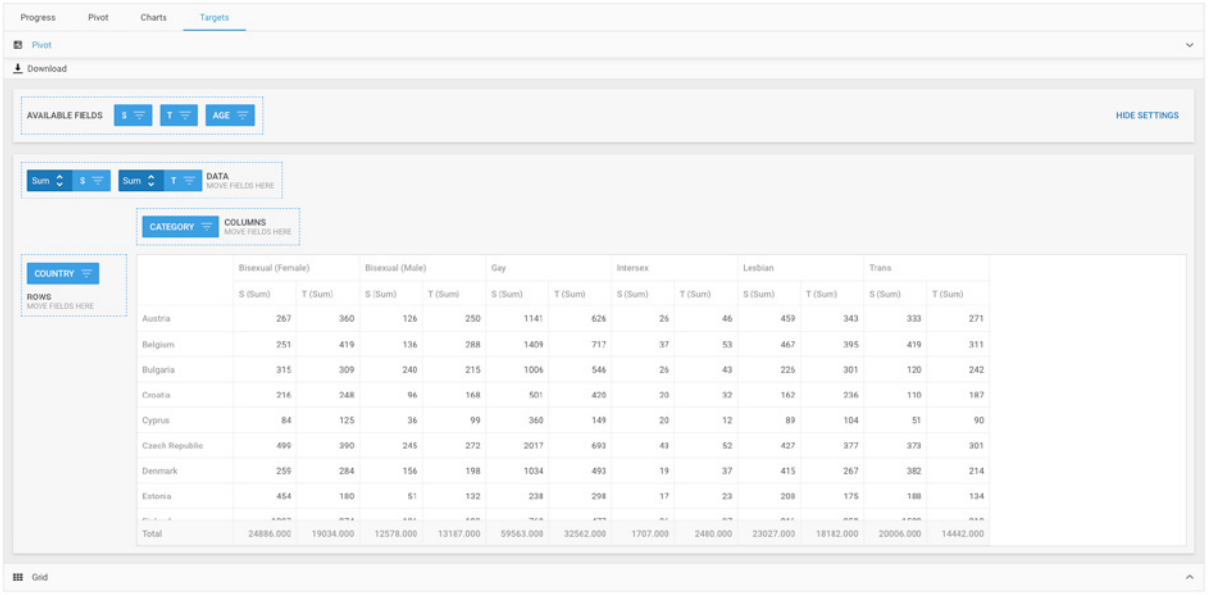
4.6.4 Targets

The targets view consisted of two interchangeable panes available by clicking on the corresponding title (Pivot, Grid).

Pivot view

This view (Figure 24) was similar to the previously described section with the difference that it included the target of completed questionnaires that had been set for each country respondent category and age group.

Figure 24. Targets section, pivot view



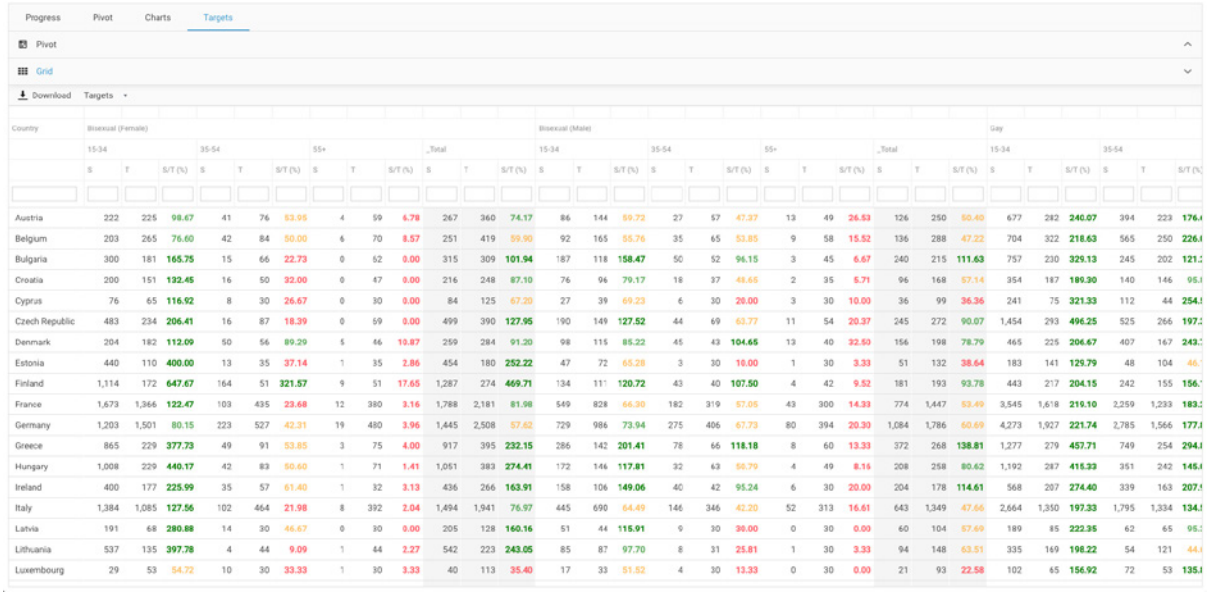
Grid view

The grid view (Figure 25) was a simple tabular view displaying a breakdown of the submitted questionnaires, target number of questionnaires and submitted/target ratio per category, age group and country.

This view used colour coding to depict whether the target sample had been reached or not and to what degree that had been achieved (red for less than 40, orange for 40–70, light green for over 70 and up to 100 and green for over 100).

The user could swap the targets value for the threshold values by selecting 'Thresholds' from the drop-down menu at the top of the pane as well as download the information as an Excel file.

Figure 25. Targets section, grid view



5

Usability testing of the questionnaire and the online tool

The testing phase started after the finalisation of the questionnaire, its translation and its implementation in the software survey tool in order to:

- validate the system (i.e. survey tool and database) in terms of satisfying the technical and functional requirements as well as its technical reliability;
- test the software survey tool's usability;
- test the questionnaire's conceptual and cognitive aspects;
- test the efficiency of the overall system in the final deployment on the operational technical infrastructure.

The aim of the above tasks was to identify areas in which correction, improvement, modification and fine-tuning were necessary in both the technical and the conceptual aspects, as well as to ensure that no major obstacle or risk were identified and the survey could be safely launched. Moreover, the results of this phase provided valuable input for future improvements of the survey, even in cases where no corrective action had been deemed necessary.

After the finalisation of the questionnaire and the respective translations and their loading on to the survey tool, testing of usability, usage analysis and cognitive testing were conducted with test users, which led to minor corrections and technical improvements.

Before the launch of the survey, and after the deployment on the operational 'production' technical infrastructure, the integrated operational system (i.e. servers, database, survey tool, etc.) was tested through extensive simulation testing and load/stress testing.

5.1. Software development testing

Unit and integration testing according to established software engineering best practices was executed at several stages during the software development's life cycle. This included:

- unit testing for software modules (i.e. database, middle-tier components, front-end tool); unit testing consisted of checking software output for pre-specified input corresponding to normal and error conditions;
- integration testing for the entire system, consisting of running end-to-end cases (i.e. from the user interface (UI) to the database);
- test cases referring to specific user requirements (especially logic for branching and piping).

Test cases were specifically elaborated to test the implementation of questionnaire logic (such as branching, piping, rules for allowable options).

5.2. Tool usability testing, usage analysis and cognitive user survey

5.2.1 Methodology

The aims of this testing phase were:

1. to test and validate the online tool's UI usability and intuitiveness to identify potential problems or improvements in the UI's design;

2. to analyse the actual response to the questionnaire to identify questions with a high level of friction ([18]), which potentially pose difficulties in understanding them or in deciding what response to give;

3. to acquire direct feedback from users, especially on cognitive issues as well as on their experience, through a user survey;

4. to provide an in-depth insight for the creation of an interview roadmap to be used in live supervised sessions in the next phase.

The mouseflow.com service was used for this phase (Figure 26). This service is widely used for large-scale usability and cognitive testing of online surveys, as it simulates on the web the typical facilities provided by usability testing laboratories in traditional surveys. More details and demonstrations of the tool can be found online (http://www.mouseflow.com).

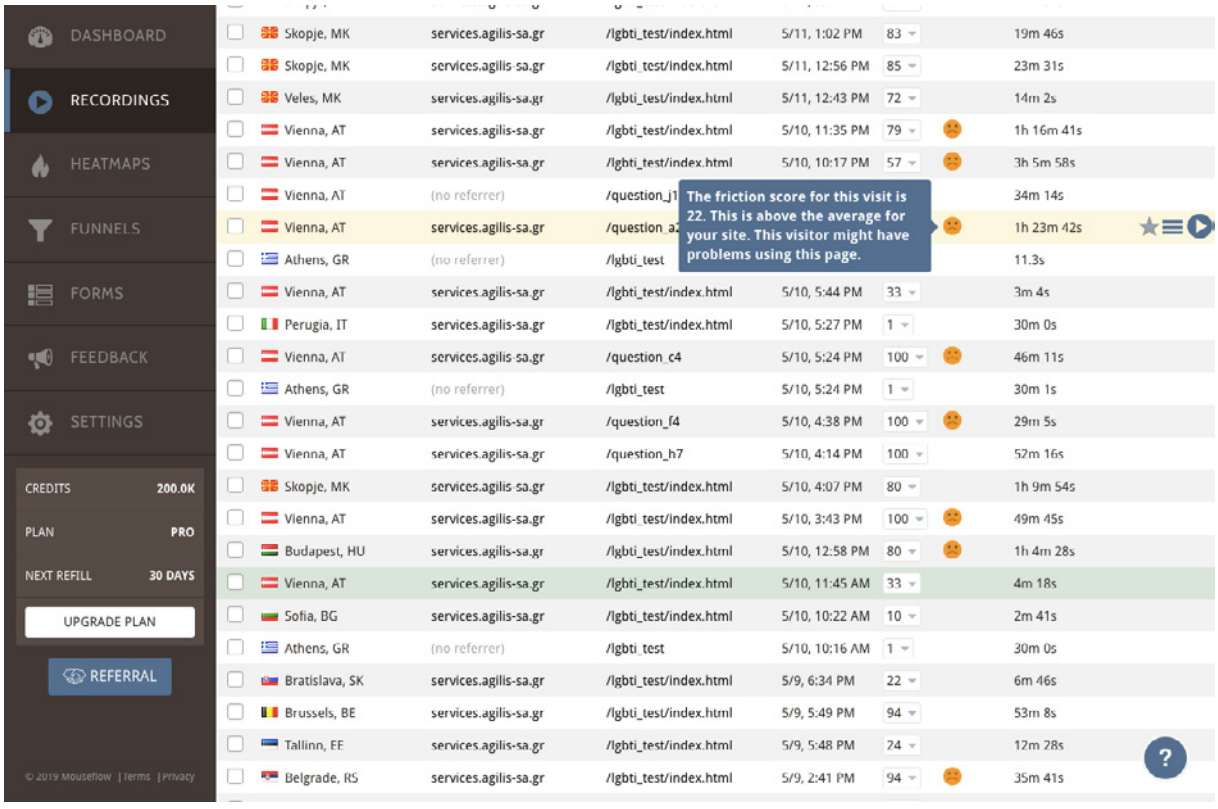
The service, through the inclusion of specific code in the survey tool, is able to monitor the tool's usage by test users and analyse the data collected to:

- provide detailed usage statistics (times, engagement levels, friction indicators, etc.);
- provide 'heatmaps', i.e. graphical representations of each screen's usage in terms of clicks, mouse movement and user attention, for visual analysis;
- keep anonymised recordings of each user session, including mouse movements, scrolling, etc., which can be viewed and analysed to detect usage patterns, problematic points, etc.;
- acquire direct feedback by automatically presenting the user with questions at specific points in each usage scenario.

This testing phase was implemented as follows.

1. A special version of the tool was created (to include the Mouseflow code directives allowing the usability check via the mouseflow.com tool) and deployed to be accessible via the web. This version also included a starting page with instructions for the testers.

Figure 26. Example screenshot of Mouseflow testing tool



([18]) Friction is an indicator of users' difficulty or frustration, calculated by a proprietary algorithm and based on the detection of users' behaviour in terms of mouse usage speed and rate, clicking rates, patterns of moving or clicking, etc.

2. A panel of 135 volunteer test users was recruited by the NSCPs team during the week before the launching of the testing activity and throughout the testing period (i.e. from 22 April to 10 May). In this recruitment process, care was taken to ensure that the panel was balanced and representative in terms of user characteristics, i.e. LGBTI group, age, level of familiarity with web surveys, language, etc. Specific guidelines and directions were given in writing to the NSCPs concerning these selection criteria and the NSCPs identified and contacted potential volunteers using their own contact networks in their LGBTI communities. Moreover, the test users were briefed by NSCPs on the aims of the test and what was expected from them. The panel was also enriched by the distribution of the test site link among FRA experts (an estimated 7–12 FRA test users). The structure of the panel is presented in Annex D.

3. The guidelines provided to test users asked them to fill in the questionnaire exactly as they would do if they were a real respondent. Test users were informed that the aim of this testing was to check (a) the linguistic quality of the questionnaire, i.e. that the translation of the questionnaire in their native language is clear, comprehensible and unambiguous but also non-offensive, (b) the cognitive quality of the questionnaire, i.e. that questions are easy to understand and answer and there are no logical ambiguities or inconsistencies, and (c) the usability of the questionnaire software. Thus, the methodology has foreseen that the contractor supervised the typical usage of the questionnaire software to avoid distortion of usability statistics.

4. The testing application was kept online during the period from 26 April to 10 May 2019 and follow-up actions were taken where necessary to ensure timely participation.

5. The test results were analysed as follows:

a) the overall usage statistics were used to identify questions with more than expected friction, i.e. more than average usage and engagement times; only 'net' time was measured by the tool, excluding time spent on feedback questions;

b) heatmaps of all questions, for clicks, mouse movement and user attention, were visually inspected to identify potential problems, as well as usage patterns (such as frequent use of the information button or the 'Back' button);

c) for specific user sessions, for which high overall friction levels of use and duration of engagement were observed, session recordings were replayed, inspected and analysed by experts in detail to identify problematic areas and gain insight;

d) direct user feedback on questions at specific points in each usage scenario was compiled and analysed.

e) database records (i.e. completed questionnaires) registered in the database were checked for consistency, i.e. that they are according to the various logical rules already defined for responses.

Figure 27. Example mouse click/tap heatmap

Mouse click/tap heatmaps (Figure 27) are graphical depictions of screen use for each distinct screen (i.e. question) aggregated among all test users. The colour of the map indicates the frequency of clicking/tapping on each region of the screen.

Mouse/finger movement heatmaps (Figure 28) are graphical depictions of mouse or finger movement for each distinct screen (i.e. question) aggregated among all test users. The colour of the map indicates the frequency of movement on each region of the screen.

Attention heatmaps (Figure 29) are graphical depictions of user engagement for each distinct screen (i.e. question) aggregated among all test users. The colour of the map indicates the average level of engagement of users for the specific screen.

Figure 28. Example of mouse/finger movement heatmap

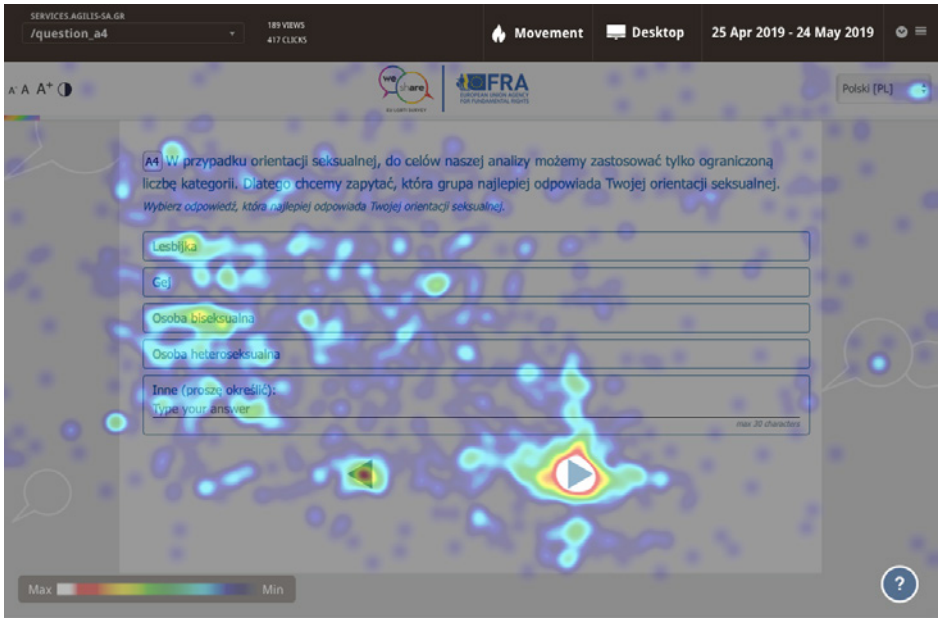
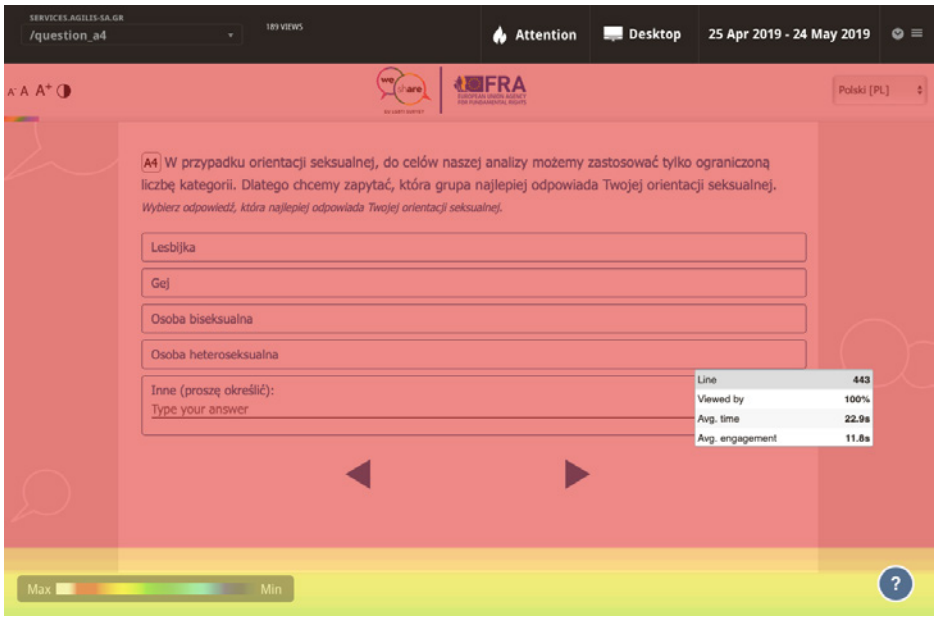


Figure 29. Example of attention heatmap



All language versions of the questionnaire were tested by at least one tester, with the exception of Romanian and Russian (where, despite efforts, it was not possible to recruit test user volunteers with these linguistic backgrounds within the limited time available for testing). Across the different languages, all gender identities were represented, although some testers did not specify their identity or reported one other than the LGBTI groups provided.

At country level, the languages more frequently tested were Dutch, Polish and Danish, whereas Czech, Swedish, Maltese, Luxembourgish, Slovenian and Macedonian were less frequently tested. Most testers belonged to the younger and middle age groups (i.e. 15–24 and 25–34). Despite that, there was also representation from the older age groups (55–64, 65+) for some languages (Danish, Spanish - Catalan, Italian and Finnish).

Moreover, a balanced distribution – from a qualitative point of view – in terms of device type (desktop vs mobile UIs), browser, operating system and screen resolution was achieved.

5.2.2 Direct user feedback

Apart from the typical user survey questions (i.e. demographics, overall user experience and feedback) the test survey included a number of 'probes', displayed to the user at predefined points in the questionnaire. The probes asked questions aiming to clarify the test user's conception of specific questionnaire questions. Testers were free to provide feedback in the language of their choice. Probes were placed in selected questions that were judged by experts to present one or more of the following potential problems. As in some cases more than one question followed the same concept, and it was practically not feasible to place probes in each one, the question judged as being more representative of the potential cognitive problem was selected:

1. probes for questions that experts flagged as potentially difficult to understand or ambiguous or ill-defined, or those creating difficulties in deciding how to answer;

2. probes for questions that require recollection of events from memory, posing difficulties in recollecting the exact events or details about them, or where the respondent had difficulties in deciding whether specific events are actually relevant to the question asked;

3. probes for questions whose wording may be problematic, offensive to some, or inappropriate and probes for terms that need cognitive checking for understanding across respondents (e.g. checking that the incident that each respondent had in mind when responding to a question concerning their experiences is conceptually equivalent across test users from different backgrounds).

General assessment

User interface. Overall, of the 55 test user respondents, 78 % found the UI easy and intuitive, while 94.5 % found no problem in selecting from multiple options. 76.3 % rated the tool's usability as 'High', and 18.1 % as 'Medium'.

User experience. Of the 45 test user respondents, 35.5 % rated their overall experience as 'Interesting' and 37.8 % as 'As expected', while 17.8 % rated it as 'Boring but motivated'. 9 % stated that they would drop out if they were actual respondents. Moreover, 23.6 % stated that they felt embarrassed or offended at some point of the survey.

5.2.3 Supervised usage / interviews

Based on the results of the usage analysis and the cognitive survey, a focus group cognitive analysis was executed to provide in-depth insight. The aim of this activity was to detect and analyse potential problems by observing the filling in of the questionnaire in real conditions and by having in-depth discussions with respondents.

To this end a focus group was recruited to participate in in-depth interviews. The recruitment was done by the NSCPs among volunteers within their respective networks. The guidelines given to NSCPs concerning recruitment emphasised that, due to the structure of the questionnaire, trans people of both genders should be recruited. Unfortunately, it proved impossible to find any intersex volunteers.

Each member of the focus group participated in the interview via videoconferencing and screen sharing, which allowed the experts to directly observe in detail the use of the questionnaire and identify areas of friction or confusion, usability problems, etc.

The 'think aloud' methodology was followed, in which the respondents were instructed to fill in the questionnaire while saying whatever they were thinking about while reading questions and responding. At specific points, depending on the case, the experts interrupted and held an in-depth discussion with the respondent to analyse specific cognitive issues. Two experts participated in each session, while the time for each session ranged from one to one and half hours. The interviews took place during the period 13–17 May 2019.

The structure of the focus group in terms of identity/orientation and age was as follows:

- lesbian, 40 years old (Greece),
- lesbian, 30 years old (Italy),
- gay, 55 years old (Greece),
- gay, 35 years old (France),
- trans woman, 40 years old (Spain),
- trans man, 20 years old (Poland),
- trans / gender fluid, 35 years old (Greece).

5.2.4 Translation/linguistic testing

Spreadsheets with translated questions and answer categories (one separate sheet for each language), including the English text for reference, were shared with experts from the local communities, as selected by NSCPs and local organisations. The experts in each case included a lesbian, gay or bisexual person and a trans person.

The experts were asked to check the translations for:

1. adherence to terminology commonly used in the respective community;
2. cases in which the wording used in the translation was perceived as offensive or otherwise problematic;
3. for local usage of languages (such as French or Dutch in Belgium) the potential need to create a separate language file with local adaptations.

These comments were further enriched by the linguistic/translation comments received through the automated usability testing.

In total a median of 77 comments were received for each language (ranging from as low as zero for Catalan and 13 for Serbian to as high as 343 for Luxembourgish, 331 for Hungarian and 243 for Polish). The comments were sent back to the translation service and on average 92 % were accepted by the translators/proofreaders.

5.2.5 Actions undertaken based on the outcomes of usability and cognitive testing

Overall, the questionnaire and the online tool were positively received; the questionnaire was considered inclusive and was well appreciated, whereas the online tool's user interface was perceived as easy and intuitive. Comments and feedback received from the testers mainly focused on specific points.

After the completion of the whole testing phase, and after synthesising the input received from testers the most critical issues were communicated to and discussed with FRA. These were questions that appeared to be more problematic, including where wording of the questions was considered ambiguous, unclear or hard to understand or questions that were perceived to be offensive or difficult to answer.

The corrective actions undertaken are presented below.

- Question H15: 'In the country where you live, do you consider yourself to be part of any of the following?'
  - The question was rephrased to 'In the country where you live, do you consider yourself to be part of any of the following, other than being LGBTI?'. This modification was implemented to clarify that it refers to minority issues other than LGBTI ones, since respondents considered it offensive that being LGBTI was not included as an answer option and thus as a minority issue.
  - In the same question, the answer category 'A minority in terms of disability (excluding diagnosis of gender dysphoria/gender identity disorder)' was modified to 'A minority in terms of disability', since the text in parentheses was perceived as implying that a non-conforming gender identity is perceived as a disability.
- Question F8: 'Where did it happen?'. In the list of answer categories, 'social media' was included as a 'place' where a harassment incident might have occurred.
- Question A9: 'Do you agree or disagree with the following statements?; I look feminine / I look masculine' was removed. Testers found the question offensive and/or difficult to answer. In addition, its

wording was perceived as ambiguous and the concept of the question unclear.

- Across the whole questionnaire, the words automatically inserted into questions through piping were highlighted and put into brackets. This solution was adopted to make it clear to users that those words are automatically inserted by the system and thus clarify any linguistic issues/inconsistencies.

5.3. Simulation testing

The simulation testing took place at the final integrated operational production environment before actual launch. The aim of the simulation was to mimic a realistic number of users and test the behaviour of the integrated system under realistic conditions. 'Robot' software to simulate actual users by providing random responses to the tool and following the tool's flow and branching was created using Protractor/Selenium technology. The software runs on an actual web browser, reads the browser's display and 'clicks' on options or types text as if it were a real user. This way the tool and database can be tested end-to-end in a simulation of realistic usage conditions.

Moreover, the simulation software also performs the following automated tests for each page/question displayed to the respondent:

- checks the tool's output for potential error messages or break conditions;
- checks branching logic to validate whether each question displayed is in accordance with the rules;
- checks branching logic to validate whether questions not displayed are in accordance with the rules;
- checks piping of variables.

A total of about 2,000 randomly simulated responses were generated with no errors detected. Furthermore, the server log file was used to check for error conditions while saving the responses to the database, and finally the database was inspected with checks and data queries designed to validate the consistency of the data.

6 Awareness-raising campaign

The communication plan for the EU LGBTI II survey was created to reach LGBTI people in the 28 EU Member States, North Macedonia and Serbia.

6.1. Goals of the awareness-raising campaign

The goals of the communication strategy were initially to:

- let LGBTI people know about the survey;
- motivate LGBTI people to take part in the survey (by following a link);
- motivate LGBTI people to share the survey to their social media network, friends and LGBTI environment.

And eventually to:

- collect a large number of LGBTI people's replies to the EU LGBTI II survey, following the successful response rate to the previous survey;
- cover the most diverse group of respondents possible, both in terms of affiliation with the gay, lesbian, bisexual, trans and intersex groups and in terms of sociodemographic characteristics (intersectionality and inclusiveness) within these groups.

To reach the broadest possible segments of the target group(s), the explicit aims of the communication strategy were to:

- use dedicated channels to reach out to the LGBTI groups, where applicable;
- encourage sharing of the survey to reach out to the biggest and most diverse audience;
- set up fall-back solutions, in case the initial contact approach was not sufficiently effective, to reach out to sub-populations that are harder to reach and motivate them to participate (e.g. elderly LGBTI, intersex and trans people).

6.2. The target groups of the communication strategy

The survey's target group was also the target group of the communication activities, i.e. the communication activities addressed the following people:

- people who described themselves as lesbian, gay, bisexual, trans or intersex, and all other people who were not comfortable with any of these labels but were not heterosexual and cisgender;
- people who had lived in any of the 28 EU Member States, North Macedonia or Serbia for the last year, regardless of legal circumstances (residency) or citizenship;
- people who were aged at least 15.

6.3. Communication plan

The communication plan and its implementation was managed by Homoevolution under FRA's guidance. Homoevolution, a marketing and consultation company with an extensive network of international LGBTI media professionals, worked with FRA to coordinate cooperation with the European-wide LGBTI umbrella

organisations, monitoring of progress and activation of all the back-up plans.

6.3.1 National survey contact points

The consortium awarded the survey contract recruited key figures from the LGBTI community throughout Europe and from a broad spectrum of identities to form a network of NSCPs, as set out in the call for tender specifications, to support the awareness-raising campaign. They included LGBTI media owners, communication experts, activists and influencers. These key figures acquired in-depth information at the grassroots level of the available communication channels per country, cross-checking and updating the information, channels and material from the previous wave of the survey (2012). Throughout the process, additional local contact points and experts were recruited to establish a broader and more inclusive panel for consultation and application of the survey with access to all countries. Furthermore, FRA and the NSCPs developed the guidelines for the creation of a brand identity, a visual identity and a call to action in terms of the most effective and appropriate communication, language and inclusion.

The NSCPs that coordinated the LGBTI II survey were as follows:

- Alfonso Llopart (Spain, Portugal),
- Andrea Gilbert (international consultant),
- Aron LeFevre (Netherlands),
- Athanasios Vlachogiannis (Estonia, Latvia, Lithuania, Poland, Finland),
- Clayton Mercieca (Malta),
- Cleopatra Economidou (Greece, Cyprus),
- Dirk Baumgartl (Germany, Luxembourg, Austria),
- Dragana Todorovic (Croatia, North Macedonia, Serbia, Slovenia),
- Frederick Boutry (Belgium, France),
- Harry Saxon (Ireland, United Kingdom),
- Jakob Haff (Denmark),
- Jakub Stary (Czechia, Slovakia),
- Jelena Vasilijevic (Croatia, North Macedonia, Serbia, Slovenia),
- Jessica Gysel (Belgium, France),
- Omar Didi (France),
- Thomas Kristensen (Denmark),
- Valerio Colomasi Battaglia (Italy, Malta),
- Yanaki Smilani (Bulgaria, Romania),
- Zsolt Erdei (Hungary).

In January 2019, Homoevolution and FRA organised a meeting with the majority of the NSCPs. During that meeting the final guidelines for the creation of a brand identity, a visual identity and a call to action were discussed, as well as communication, language, inclusion and effectiveness. The meeting introduced the survey specifics and the framework of the NSCPs' tasks.

6.3.2 Strategy on social media

As for the survey, communication materials were needed in the official languages of the survey countries. An option to create central official accounts in social media in all languages was considered early in the project. However, centrally managing messages and comments in 30 countries was deemed not feasible. The approach finally adopted was to decentralise communication via social media and not to create official social media accounts for the survey. The collaborating organisations/media in all 30 countries were provided with communication materials. They used their own social media channels in accordance with FRA's guidelines. All communication materials linked directly to the official survey website (www.lgbtisurvey.eu). As LGBTI communities were executing this part of the communication through their own social media channels, the messages had a touch of familiarity to the receivers. Traditionally under-represented people were expected to be eager to share the survey with friends from their own communities – even more so when the survey concerned action taken at an official, European level. This had the additional effect of reaching various subgroups and achieving inclusion and intersectionality in terms of the respondents of the survey.

6.3.3 Back-up plans and offline strategies

For each country and community fall-back plans were in place to be activated in cases of under-representation of specific groups within the LGBTI population. The online nature of the survey meant there were limitations on the level of accessibility. People without direct frequent access to online groups or community pages (people without social media accounts or those who are not

out, for instance) were targeted via 400 offline distribution spots with survey flyers and posters. Offline strategies were deployed through community events and, if they existed, hospitality venues, walk-in centres or support services. LGBTI print media ran advertising and the campaign video was displayed at several Pride events, parties and festivals around Europe (Annex B).

For all 28 EU countries, North Macedonia and Serbia, a guideline on the communication approach was established so that the NSCPs could create the respective country plans (Annex B).

The communication approach focused on habit-specific or identity-specific online pages and community groups to give a voice to under-represented parts of the community and boost its intersectionality. Via the organisations and experts involved, survey promotion also took place in informal LGBTI and Queer forums, trans and intersex closed groups, student groups in universities, Facebook groups, etc.

A dedicated Google-based campaign for the intersex audience was run, providing a link to the survey to people searching the term 'intersex' and similar terms.

For each country the survey team created, with the support of the NSPCs, a different strategy to tackle any issues of under-representation. Under the guidance of FRA, Agilis and Homoevolution, non-governmental organisations (NGOs), grassroots organisations and channels were identified to efficiently promote the survey and to reach under-represented people. The support of ILGA Europe, OII Europe (Organisation Intersex International Europe), TGEU (Transgender Europe) and IGLYO (International Lesbian, Gay, Bisexual, Transgender, Queer & Intersex Youth and Student Organisation) was crucial for reaching out to LGBTI communities with diverse backgrounds all over the EU, North Macedonia and Serbia. The support of EPOA (European Pride Organisers Association), ERA (LGBTI Equal Rights Association for Western Balkans and Turkey), EL*C (EuroCentralAsian Lesbian* Community), NELFA (Network of LGBTIQ* Families Association) and EGPA (European LGBT Police Association) was also of great importance.

The expected under-represented groups are detailed below.

- **Older (50+) LGBTI people.** The NSCPs were instructed to reach out to groups and organisations for elderly LGBTI people in their respective countries, if available. If there were no senior LGBTI groups, the NSCPs approached other groups focused on the LGBTI community as well as general organisations. Offline strategies were deployed through community events and, if they existed, hospitality venues, walk-in centres or support services. The communication materials included senior characters (see the examples of the creatives, or online advertisements in Section 6.4), which increased recognition and thus the participation rate of these groups. The number of 50+ people participating in the survey increased in absolute terms (in total, there were 10,314 respondents in 2019 compared with 9,120 respondents in 2012) although the share of older respondents to the total number of respondents remained similar in the two survey rounds (9 % in 2019 vs 10 % in 2012).

- **Trans people.** The NSCPs provided a list of trans organisations and media throughout Europe, which was supplemented by FRA. These channels and social media / newsletters (see Annex B) were used to reach out to the trans population effectively. TGEU also provided support. The creatives (online advertisements) and communication materials included diverse representations, which contributed to the participation rate of these groups. This approach resulted in more trans respondents than in 2012 (15,845 (13 %) in 2019 as opposed to 6,771 (7 %) in 2012).

- **Intersex people.** The NSCPs provided a list of intersex organisations, media, unofficial groups and key figures throughout Europe, which was supplemented by FRA and OII Europe (see Annex B). Communication was established with other LGBTI groups that might have intersex members or in their work approach the intersex population as a high priority. Further outreach by word of mouth was also encouraged. OII Europe cooperated closely, communicating about the survey with their members, followers and other intersex organisations in European countries. A Google-based campaign for the intersex audience was run, targeting people who were searching the term 'intersex' and similar terms. The creatives and communication materials included diverse representations, which was expected to boost the participation rate of intersex people.

- **Bisexual people.** The NSCPs provided a list of bisexual organisations and inclusive media throughout Europe, supplemented by FRA. Those channels, their social media / newsletters and dating apps such as planetromeo.com, Grindr, Gaydar/Gaydar-Girls, Lesarion and more (described in Annex B) ran promotions on their websites and apps. International LGBTI news portals were identified that would specifically reach out to bisexual people too. Following this approach, the percentage of bisexual people participating in the 2019 survey was 8 percentage points higher than in 2012 (23 % in 2019

and 15 % in 2012). A significant achievement was the doubling of the percentage of bisexual women taking part in 2019 compared with 2012.

- **Lesbian women.** The NSCPs provided a list of organisations. EL*C supported the survey's promotion by reaching out to its network of lesbian organisations. Lesbians were also reached effectively through general LGBTI organisations, specific dating apps and media. The creatives and communication materials included diverse representations. The percentage of lesbian women who participated in 2019 was almost the same as those taking part in the 2012 survey (17 % in 2019 vs 16 % in 2012). However, in absolute terms, the number of lesbian respondents increased (19,576 in 2019 vs 14,927 in 2012).

- **LGBTI young people.** The digital and social media nature of the communication materials for the survey and the creatives resulted in a high participation of young LGBTI people, especially for those in the age group 16–17 years old. For these groups specifically, Homoevolution and the NSCPs involved social media influencers via YouTube and Instagram, known to reach a young audience. IGLYO also actively reached out to its member organisations and social media followers. Respondents aged 15–17 years old represented 13 % of the survey sample (13 % of lesbian women, 5 % of gay men, 28 % of bisexual women, 13 % of bisexual men, 19 % of trans and 18 % of intersex respondents).

- **Refugees and immigrants.** The NSCPs developed a list of organisations that work with and for LGBTI refugees and immigrants. In countries with many newly arrived refugees, specific organisations, groups and even establishments were contacted. In countries with few refugees and immigrants, no specific organisations could be used; dating apps were used to reach these specific groups. The creatives and communication materials included diverse representations, to encourage recognition by and thus participation of these groups. For this group specifically, the language barrier was acknowledged as a potential issue, as the survey was only available in the languages of the survey countries.

- **People of diverse ethnic and/or racial origin and minority groups.** The project team developed a list of organisations that explicitly work with and for this group and FRA supplemented that list. In some countries, close communication with affiliated groups and NGOs that are not LGBTI specific was established to promote the survey in their respective channels. The creatives and communication materials included diverse representations to encourage recognition and thus were made as inclusive as possible, aiming to increase the participation rate of these groups. 8 % of the LGBT survey respondents considered themselves part of an ethnic minority group (including of migrant background) (7 % in the 2012 survey), 6 % as part of a disability minority (5 % in 2012), 5 % of a religious minority (7 % in 2012) and 8 % part of any other minority (7 % in 2012).

6.4. Website

The official website of the survey was www.lgbtisurvey.eu

Since the survey was exclusively digital, having an official website was of the highest importance. To reach out to a diverse audience, the website was designed in an inclusive way, for example:

- the website was also easily accessed by assistive technologies, so that it was accessible for people with visual impairments;

- the colour palettes used for the website were designed to prevent colour blind people not being able to access the website;

- the website was fully responsive and mobile friendly.

Figure 30. Screenshot of the EU LGBTI II survey homepage

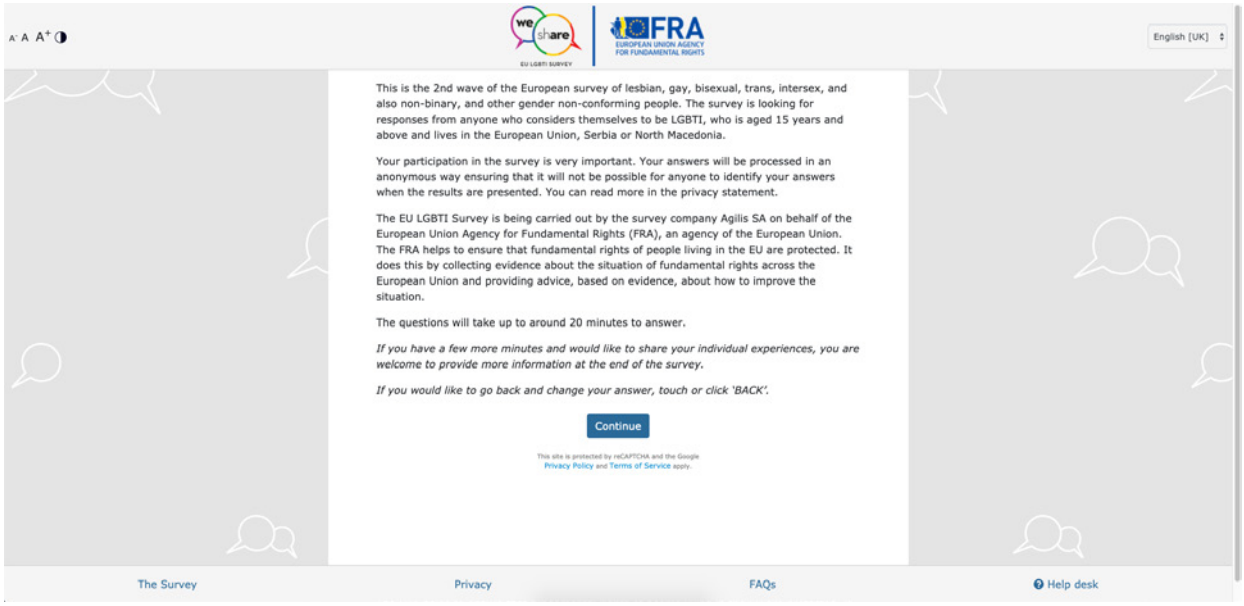
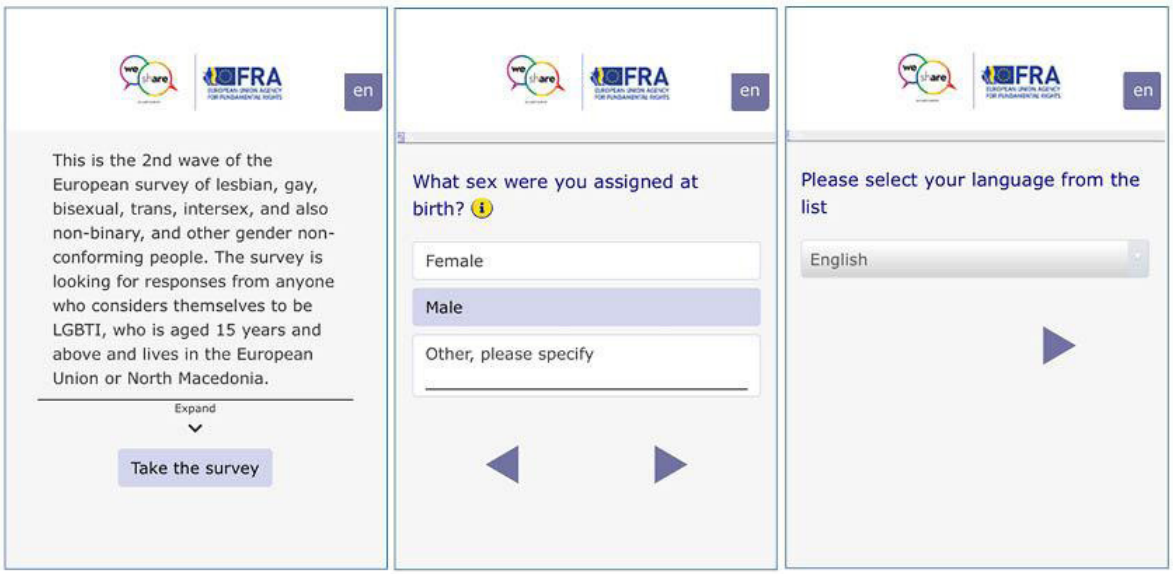


Figure 31. Screenshot of the EU LGBTI II survey first question

Figure 32. Screenshots of the Mobile version of the EU LGBTI II survey website

Mobile version of website



6.5. Brand and creatives

6.5.1 We Share

The brand identity or logo determined the direction of the communication. The guidelines followed were: formality, modern touch, inclusive for all LGBTI people, feeling of purpose and a safe space, social media friendly, includes a call to action. The brand name should be recognisable internationally and thus the wording had to be short, simple and in English. Translation of the brand would not help towards achieving one identity, so wording was selected that was well known to most people because of its use on social media. In this way, the 'We Share' brand was created.

'We Share' urged users to share their experience through the survey and afterwards share the link to the survey through their social media network. In the logo, the 'We' and 'are' parts highlight how important inclusivity is: 'We share who we are'. **EU LGBTI SURVEY** was added as a subtitle.

The main tagline was '**Your story matters'**, and this was translated into all European languages. It was included in all communication materials including the video, web banners, print advertisements, flyers, etc.

6.5.2 Creatives and visual identity

Video

For visual promotion, an illustrated video was created. Animation was preferred over photography or real-life images to encourage recognition without confirming stereotypes. The official video, with subtitles in 30 languages, can be found online (https://www.youtube.com/watch?v=KjVSiWRL1II).

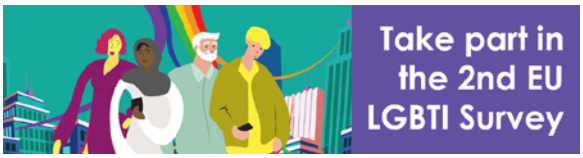
Creatives

All creatives (online advertisements) were based on the artwork of the video and they were used individually (for specific target groups). Over 2 000 different applications of the creatives in different sizes and languages were used for social media, print advertisements, animated banners, flyers and posters.

Below are screenshots of some creatives. The banners were created as GIF files.

Figure 33. Screenshots of the EU LGBTI II survey banners and creatives

970 x 250 pixels

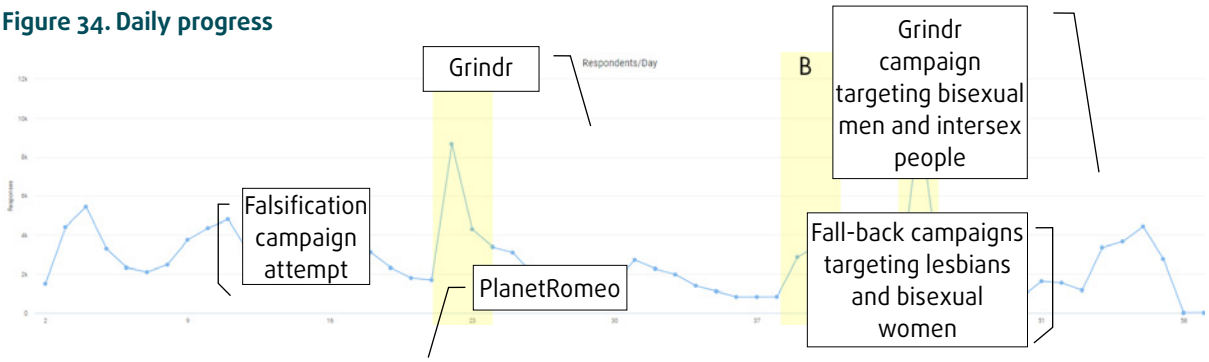


300 x 250 pixels

728 ´ 90 pixels

The visual identity presented above was used to create templates, flyers and print advertisements for offline communication.

Flyer front	Flyer back
	

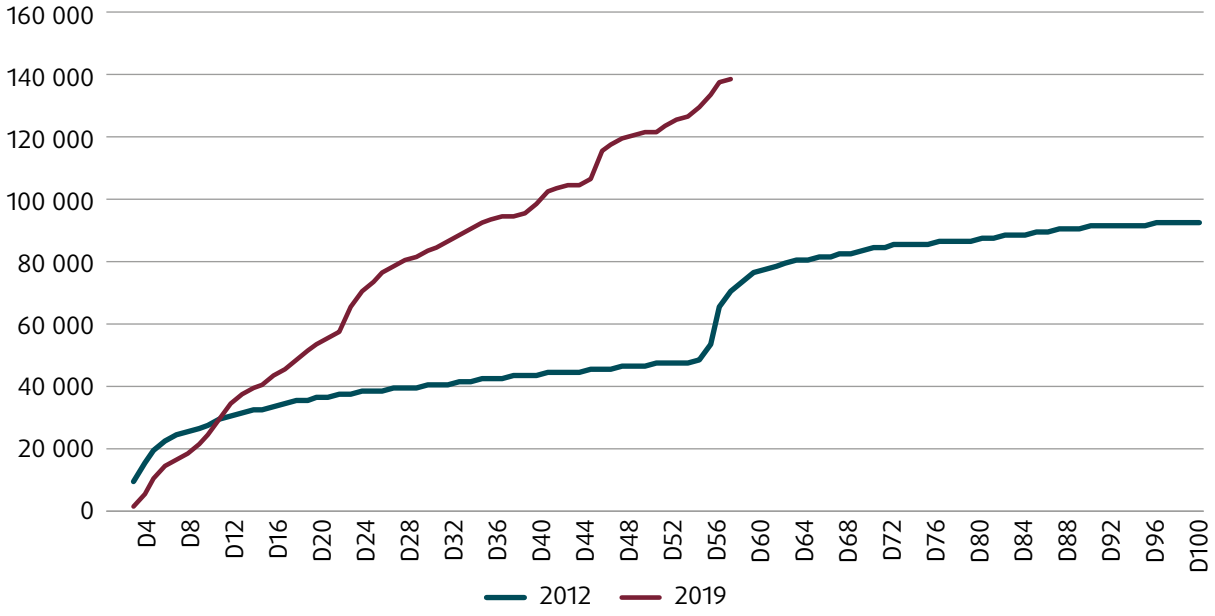
Figure 34. Daily progress



The two major spikes (Figure 34; points A and C) represent normal traffic plus the dissemination of direct messages to all Grindr users in all 30 countries on the same date and at the same time. Another broad spike (B) is mainly caused by a nationwide video campaign for the survey in Spain that gained momentum with great results. What is also interesting is that, because of all the campaigns running, every day there was a minimum number of survey completions from all of the survey countries.

Figure 35 shows that the 2019 survey achieved a bigger sample in a shorter period of time than the 2012 survey. Therefore, the time the survey was online could be much shorter in 2019 than in 2012 (55 days instead of 97 days).

Figure 35. Cumulative daily data collection flow 2012 vs 2019



6.6. Performance

Various campaigns were run, based on the channels identified by the NSCPs and FRA:

1. international media and dating apps/sites,
2. international (LGBTI) organisations,
3. national LGBTI media, national LGBTI organisations.

The Table 3 presents the proportion of respondents in each country that came to know about the survey through each different promotion channel.

Every channel of communication was provided with a specific URL, making it possible to track the traffic and showing the effectiveness of each channel and campaign:

- the direct network of national organisations created traffic that accounted for 6 % of all the completed questionnaires;
- print and digital advertising created traffic that accounted for 26 % of the completed questionnaires, with print advertising using the general URL (www.lgbtisurvey.eu) and not a specific URL;
- the social media reach of either an organisation or a media outlet accounted for 33 % of the completed questionnaires;
- completed questionnaires that were the result of the viral effect (sharing via social media or direct links) of the campaign materials accounted for 35 % of all completed questionnaires.

Table 3. Outreach channels – responses to question I1: 'Please tell us how did you come to know about this survey? You can select up to 3 options'

I1. Please tell us how did you come to know about this survey?										
Country	I read about it in a newspaper (online or printed) (%)	I received an email from an LGBTI organisation or online network (%)	I received an email from any other organisation or online network (%)	Somebody told me about it or sent me the link (%)	Through social media – on my own timeline/space on Facebook, Instagram, Twitter, etc. (%)	Through social media – in a page or group I follow on Facebook, Instagram, Twitter, etc. (%)	I saw an advertisement (banner) online (%)	I saw an advertisement (banner) in a dating app (%)	Somewhere else (%)	Total (*n*)
AT	1.7	10.9	1.5	16.3	18.8	25.1	10.4	19.9	5.4	2 315
BE	2.9	9.9	1.2	13.7	26.5	36.4	5.6	13.4	2.8	2 686
BG	1.1	4.4	2.0	9.0	30.5	31.0	12.4	22.9	7.0	1 894
HR	0.6	4.3	0.6	10.6	30.1	34.2	10.8	19.4	3.1	1 088
CY	3.5	3.8	0.5	7.0	35.9	34.1	9.8	15.2	4.8	630
CZ	2.6	2.1	0.3	8.7	32.2	31.7	15.1	15.7	3.9	3 562
DK	1.3	7.9	0.8	8.9	26.5	37.8	6.4	17.8	3.4	2 244
EE	0.5	4.7	0.1	14.0	34.1	41.7	17.3	6.6	1.8	1 139
FI	0.6	2.8	0.3	16.0	38.1	36.3	6.8	5.1	4.4	4 711
FR	8.4	4.2	0.9	11.1	22.3	37.6	5.5	16.4	3.1	13 418
DE	3.6	10.1	1.8	16.0	17.2	25.3	13.7	17.8	5.1	16 119
EL	6.1	2.2	0.6	12.0	27.8	32.1	10.3	17.7	4.3	4 502
HU	4.9	3.2	0.3	11.2	25.6	48.2	13.1	6.4	2.6	4 059
IE	1.2	3.6	0.8	8.6	34.9	26.3	10.9	21.4	4.2	2 383
IT	3.1	4.6	0.6	22.0	22.3	25.6	10.2	18.5	3.1	9 781
LV	0.3	2.2	0.4	9.0	43.6	31.0	11.2	14.1	2.2	743
LT	2.2	2.8	0.1	6.4	39.5	42.6	13.8	9.3	3.5	1 398
LU	3.9	9.4	1.4	18.0	19.9	28.3	5.5	14.7	9.7	361
MT	0.4	5.9	0.5	14.8	41.1	35.3	5.8	7.1	4.0	800
NL	1.0	9.7	1.8	12.8	22.0	21.0	7.2	27.0	5.6	3 914
PL	3.2	2.9	0.5	15.4	31.3	44.0	4.1	12.2	3.0	13 718
PT	1.6	5.0	0.9	17.2	23.3	18.8	5.5	29.3	8.4	4 294
RO	0.2	4.8	0.4	10.6	37.4	40.9	8.5	10.2	3.9	3 214
SK	1.2	2.5	0.2	10.9	43.0	36.0	10.2	8.0	2.4	2 955
SI	0.5	5.2	2.1	8.4	34.1	25.3	6.5	24.2	4.4	633
ES	1.9	1.9	0.4	16.7	37.4	37.6	3.5	7.9	2.8	20 180
SE	1.6	5.3	0.8	11.4	20.8	36.3	9.2	19.2	4.2	2 502
UK	0.8	4.0	0.8	9.7	37.8	28.3	11.5	14.2	3.8	12 265
MK	0.7	4.2	1.2	10.5	42.3	33.3	11.2	8.3	4.2	600
RS	1.5	3.7	0.8	9.3	37.7	30.2	11.2	18.0	3.5	1 691
Total	2.9	4.7	0.8	13.9	29.3	33.4	8.5	14.7	3.8	139 799

6.6.1 International (LGBTI) organisations

ILGA Europe, TGEU, OII Europe and IGLYO offered invaluable support for the survey's promotion. The research team also collaborated with EPOA, ERA, EL*C, UKPON (UK Pride Organisers Network), NELFA, and EGPA.

ILGA Europe, TGEU, OII Europe and EPOA provided feedback and suggestions on the country communication plans. They reached out to their members and/or followers via emailing lists, groups in social media and individual contacts to promote the survey.

International and intergovernmental organisations also supported the awareness-raising campaign about the survey. The European Commission, the United Nations, the Council of Europe, the Organization for Security and Co-operation in Europe, the World Bank and the LGBTI Intergroup in the European Parliament shared the call for action and the survey link. FRA reached out to these organisations and provided campaign materials for them to use, such as the video and online banners.

6.6.2 International media and dating apps/sites

International (EU-targeted) LGBTI news portals and smaller news portals with audiences in more than one country generated specific traffic. Those channels ran advertising banners, promotional articles and used their social media channels and influencer contacts.

Moreover, campaigns were run on dating sites and apps such as Grindr, PlanetRomeo, Gaydar and GaydarGirls, Lesarion and DBNA (Du Bist Nicht Allein) (Table 4).

Table 4. Effectiveness of media and dating apps/sites with international reach

Channel	Completed survey (*n*)	Percentage of total
Grindr dating app	24 389	17.2
PlanetRomeo	7 827	5.5
Gay Star News	5 120	3.6
Gaydar/ GaydarGirls	1 948	1.4
DBNA dating	770	0.5
Lesarion	342	0.2

6.6.3 National LGBTI media

National LGBTI media were evaluated by the NSCPs; many of the media channels collaborated in the promotion. The main national LGBTI media were contacted officially and, at their request, they received the media kit for the survey. Eventually, this resulted in extra participation. Table 5 shows the top 10 national channels in terms of number of completed survey questionnaires.

Table 5. Effectiveness of national LGBTI media

Channel	Completed survey (*n*)
Shangay media (ES)	9 520
Antivirus Magazine (CY, EL)	3 005
Replika (PL)	2 660
Humen media (HU)	2 585
Blu (DE)	960
Jeanne magazine (FR)	764
MagLes magazine (ES)	670
Gaypost.it (IT)	634
Queer.de (DE)	603
Dezanove (PT)	420

6.6.4 National LGBTI organisations and groups

The NSCPs, ILGA Europe, OII Europe, TGEU and EPOA collaborated with FRA and Homoevolution to reach out to national LGBTI organisations. The main national LGBTI groups and organisations in all 30 countries received the media kit for the survey, which resulted in extra participation.

6.6.5 Virality of the communications

The communication strategy was to reach the maximum possible virality of the communications. To enhance this, influencers from the LGBTI community in the survey countries were requested to post about the survey promoting the official website and using hashtags.

This part of the communication outcome is depicted in Table 6 as extra traffic. This includes traffic directly to the official website, as a result of reposting from a news portal or by an organisation or following the link from a flyer or a video respondents saw during a Pride event. In addition to that, the share buttons of the official survey website also resulted in a good response (see Table 6). In total, one can see that at least 35 % of the completed surveys was the result of secondary traffic based mostly on the virality effect of the communications.

Table 6. Extra traffic to the official survey website – non survey promotion campaign based – resulting from following the survey URL link online, and share buttons in social media and on the website

Channel	Completed survey (*n*)	Percentage of total
Extra traffic	43 777	30.9
Share button for Facebook (website)	2 017	1.4
Share button for Twitter (website)	1 879	1.3
Share button for email (website)	1 257	0.9

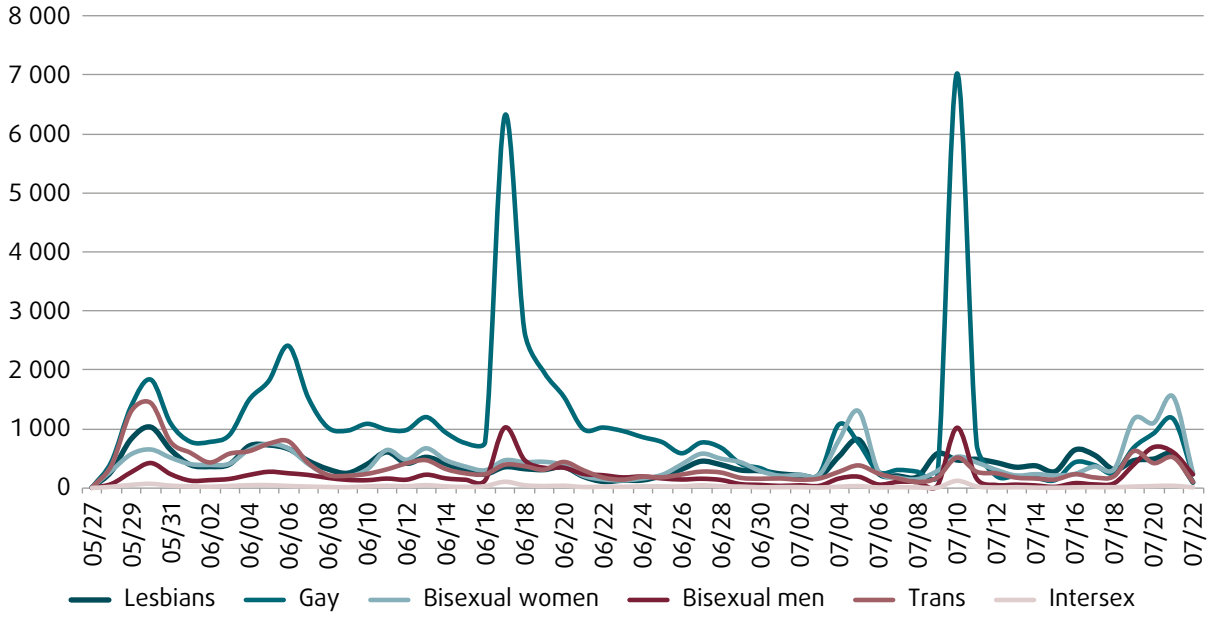
7

Data collection

The survey was launched on Monday 27 May 2019 at 11.00 Central European Time (CET) and it was communicated to the public by the promotional channels from 28 May. The survey was concluded on Monday 22 July at 19.04 CET.

In this chapter, the presentation of the sample size achieved is based on the number of submitted questionnaires, before data cleaning (for more information on the data-cleaning process, see Chapter 8, Data processing). Figure 36 shows the daily number of submissions over the period the survey was open. A number of fluctuations can be observed. The first peak was observed a couple of days after the starting date, with promotional campaigns run by LGBTI organisations contributing the most. The sharpest peaks, however, were noticed at the end of the third and at the beginning of the seventh week of the survey, when Grindr ([19]) distributed direct messages about the survey to its users; the peaks are mainly attributed to gay and bisexual men.

Figure 36. Daily submissions by target group



([19]) Grindr is a social networking application accessible through: https://www.grindr.com.

The survey closed with 141 621 questionnaires completed (before performing any of the data-cleaning methods discussed in Chapter 8). The target sample sizes at country level were achieved, yet specific parts of the population did not reach the target threshold (older sub-populations, especially lesbians aged 55+, bisexual men and women aged 35+, trans people aged 35+ and intersex people aged 35+). To improve the quality of the results, these last cases were addressed using weighting adjustments (see Section 8.3).

7.1. Sample size and composition

The survey reached 141 621 fully completed questionnaires. In line with their relative population size considering the LGBTI target population, Spain, Germany, Poland, France, the United Kingdom and Italy contributed the most (see Table 7 for the sample sizes disaggregated by country). All but five countries (Croatia, Italy, Luxembourg, Slovenia and North Macedonia)

Table 7. Estimates of target LGBTI population, target sample size and realised sample size by country of residence

Country	Estimated target population	Estimated target sample	Realised sample	Realised/target sample (%)
AT	305 424	1 897	2 347	124
BE	382 655	2 184	2 715	124
BG	239 603	1 656	1 914	116
HR	141 400	1 291	1 105	86
CY	30 880	597	642	108
CZ	356 785	2 085	3 597	173
DK	195 683	1 493	2 266	152
EE	44 259	949	1 157	122
FI	184 672	1 450	4 774	329
FR	2 197 115	11 184	13 525	121
DE	2 823 204	13 499	16 259	120
EL	359 420	2 097	4 540	216
HU	334 037	2 004	4 090	204
IE	160 147	1 359	2 433	179
IT	2 016 801	10 521	9 881	94
LV	65 237	648	752	116
LT	97 159	1 134	1 413	125
LU	20 936	570	368	65
MT	16 422	556	813	146
NL	580 895	2 915	3 978	136
PL	1 328 701	7 975	13 870	174
PT	345 173	2 045	4 342	212
RO	669 082	3 240	3 267	101
SK	191 270	1 477	2 975	201
SI	69 370	660	639	97
ES	1 556 100	8 814	20 381	231
SE	337 609	2 016	2 540	126
UK	2 235 653	11 326	12 725	112
MK	74 389	704	610	87
RS	239 566	1 654	1 703	103
Total	17 599 647	100 000	141 621	142

surpassed the target sample size. For small countries, difficulties in reaching the target sample sizes were anticipated because the limited numbers of communication channels and of LGBTI-related organisations limited the scope of what could be done in terms of the survey's promotion.

The survey sample was predominantly young – 75 % of respondents were aged 34 years or below. This is in accordance with FRA's previous experience of collecting data on LGBT people through an online survey. Younger people are more active on the recruitment channels (e.g. dating sites) and on social media; hence, the potential for awareness is higher for them. Overall, it was challenging to reach a sufficient number of completed questionnaires for respondents in older age categories across all LGBTI categories, as the targeted sample size for people aged 55 years and over was not achieved in any of the LGBTI categories. However, the proportion of the target sample realised for gay men in the older age group was much higher than in the other LGBTI categories, without any additional effort needed.

Gay men comprise the majority of the total sample (42 %),followed by bisexual women with 19 %, lesbians with 16 %, trans people with 14 % and bisexual men with 7 %. 1 % of the sample was categorised as intersex (Table 8). However, the actual proportions in the population are unknown and, for example, the number of people in the population who identify as lesbians may not be the same as the number of those who identify as gays. The survey may still under-represent certain groups, but it is not possible to say with certainty which groups and by how much.

7.2. Questionnaire duration

The mean time for completing the survey was 18 minutes (Table 9). Time varied between languages but by no more than 5 minutes. Questionnaires completed in Russian and Luxembourgish took longer, 20 minutes on average, while those completed in Croatian, English and Italian recorded the minimum average times of less than 17 minutes.

Total questionnaire duration is part of the available paradata. The average completion time was calculated by averaging non-extreme durations across all questionnaires.

Total duration distribution is heavily right-skewed because of extreme durations which may have occurred because of technical delays or user interruptions (e.g. respondents taking a break in the middle of the questionnaire, or doing something else, before continuing to fill in the survey). Because these are usually not directly related to the content or length of the questionnaire, they are not included in the average time taken by respondents to complete the survey. Durations exceeding 100 minutes (about 1 % of questionnaires) were considered extreme.

Table 8. Distribution of respondent category as defined by users

Gender identity (self-identification)	Respondent category	*N*	%
Lesbian (cisgender endosex)	Lesbian	22 987	16.2
Gay (cisgender endosex)	Gay	59 502	42.0
Bisexual (cisgender endosex)	Bisexual: man, women	37 471	26.5
Trans woman	Trans	2 981	2.1
Trans man	Trans	4 541	3.2
Trans person	Trans	1 407	1.0
Non-binary	Trans	4 565	3.2
Cross-dresser	Trans	667	0.5
Genderqueer	Trans	1 857	1.3
Gender fluid	Trans	2 301	1.6
Agender	Trans	1 394	1.0
Polygender	Trans	244	0.2
Intersex	Intersex	1 704	1.2
Total		141 621	100.00

Note: based on questions A2, A4, A5, A6 and A6_1. See Table 20 for more details of the criteria used for categorisation of the respondents.

Table 9. Completion time (in minutes) for fully completed questionnaires per language: mean, median and standard deviation (SD)

Language	Mean	Median	SD	Language	Mean	Median	SD
Bulgarian	19	17	10	**Macedonian**	19	16	12
Catalan	17	15	9	**Maltese**	19	17	9
Czech	19	16	11	**Dutch**	17	15	10
Danish	18	15	10	**Polish**	18	15	10
German	19	16	10	**Portuguese**	17	15	10
Estonian	17	16	9	**Russian**	20	17	12
Greek	18	16	11	**Romanian**	18	16	10
English	17	14	10	**Albanian**	17	15	9
Spanish	17	15	9	**Slovak**	19	16	10
French	18	16	10	**Slovenian**	16	14	9
Croatian	16	14	9	**Serbian**	19	16	10
Italian	17	15	10	**Serbian (Cyrillic)**	19	16	11
Latvian	19	16	12	**Finnish**	18	16	10
Luxembourgish	21	18	12	**Swedish**	18	16	11
Lithuanian	19	16	10	**Turkish**	20	17	10
Hungarian	19	17	11	**Total**	18	15	10

The average completion time differed per section of the questionnaire. The completion time depended on the number and length of questions, the number of response options and/or their ranking as well as the additional requirement for memory recall. The routings applied inside sections resulted in extra variability, as respondents handling more questions typically devoted more time to replying. The prevalence of the events surveyed may then yield substantial differences in the actual recorded time because some respondents may have answered fewer questions because of routing (e.g. a respondent who had not been a victim of harassment did not get follow-up questions about the last incident of harassment).

As seen in Table 10, section C about discrimination required almost double the effort in terms of time from respondents as the screening section A. Similarly, the average completion time for the sections about intersex characteristics (IX) and the socioeconomic background of respondents (H) were almost the same (3 minutes), whereas questions on safety (D), the social context (G) and knowledge about the survey (I) were answered faster than the remaining sections (1 minute).

Section duration was computed as the sum of the durations of all questions included in the particular section. Analogically to total duration, extreme values were excluded. Respondents that were routed out from questions were treated as not applicable and were not included in the calculation.

Table 10. Average completion time for fully completed questionnaires per questionnaire section

Section	Mean completion time	SD	Number of questions
A	134 s (2 min)	65	16
TR	107 s (2 min)	65	9
IX	151 s (3 min)	97	14
B	77 s (1 min)	52	5
C	248 s (4 min)	120	17
D	48 s (1 min)	29	4
E	30 s (0.5 min)	43	11
F	102 s (2 min)	87	12
G	53 s (1 min)	23	2
H	158 s (3 min)	68	24
I	48 s (1 min)	24	4

7.3. Non-respondents

More than half (54 %) of those who started the survey ([20]) completed it successfully. The non-responses include questionnaires that were not completed because the respondents did not meet the eligibility criteria (age, living in the EU, North Macedonia or Serbia and self-identifying as LGBTI). Furthermore, some users may have discontinued the survey in the middle and started again from the beginning at a later – more convenient – time. The incomplete questionnaires of these users would have been included in the non-responses. For this reason it is likely that the true average response rate was higher.

As shown in Table 11, over 118 000 visitors who accessed the survey website started the survey but did not finish it. Almost two thirds of the visitors left the survey during the introduction (12 %) or in section A (49 %).

Drop-outs from section A include those who did not fulfil the eligibility criteria (about 33 200 respondents). A relatively high drop-out rate is also seen in section C on discrimination (18 %). Because of the anonymous set-up, however, it is not known how many of these people returned later and filled in the survey.

About 33 200 respondents were screened out as not belonging to the survey's target group, not meeting some of the eligibility criteria (being at least 15 years old, self-identifying as LGBTI and living for the past 12 months in the EU, North Macedonia or Serbia). A majority of ineligible respondents (70 %) were excluded because they were not associated with any of the LGBTI categories. People not fulfilling this criterion were typically heterosexual or responded 'other' regarding their sexual orientation and, at the same time, they did not self-identify as intersex or trans people.

Table 11. Number of respondents dropping out by the questionnaire section reached

Section	*n*	Percentage	Section	*N*	Percentage
Introduction	13 791	12	E	1 982	2
A	58 164	49	F	5 019	4
TR	2 355	2	G	992	1
IX	1 425	1	H	2 633	2
B	6 039	5	I	1 185	1
C	21 643	18	**Total**	**118 070**	**100**
D	2 842	2			

([20]) Meaning those who clicked on the 'Start the survey' button on the landing page.

7.4. Recruitment effectiveness

The social media were the most frequent source through which the respondents learnt about the survey. About one third (33 %) learnt about the survey on pages or groups followed on social networking websites. A slightly smaller proportion (29 %) learnt about the survey on their own social media timeline/space. Online banners in dating apps were influential in reaching gay and bisexual men and were mentioned by almost 30 % of respondents in these groups. Personal communication and exchanging of the survey link contributed particularly in the case of intersex respondents (20 %). Other online or printed forms and emails had a smaller impact. Table 12 presents the effectiveness of the communication channels.

Paradata on the promotional campaigns through which respondents entered the survey was extracted from the unique campaign identifier (campaign ID). This information was designed to monitor and quantify the impact of promotional campaigns.

Two thirds (65 %) of the data collected came via online promotional campaigns and the remaining 35 % by other means (including people who were informed **indirectly** via campaigns, e.g. getting a link from a friend who saw it in a campaign). As seen in Table 13, the share of responses obtained through campaigns varies across countries; however, the general trend is the same. In Czechia, Greece, Hungary, Lithuania and Ireland the campaigns account for 90 % of the submitted questionnaires in the dataset (before data cleaning). In contrast, in North Macedonia, Belgium, Croatia and Estonia this percentage did not exceed 36 %.

Table 12. How respondents learnt about the survey broken down by LGBTI group (, percentage within group) ([a]), uncleaned dataset

How did you learn about the survey?	Lesbian	Gay	Bisexual (woman)	Bisexual (man)	Bisexual (other)	Trans	Intersex	Total
I read about it in a newspaper (online or printed)	770	2 322	406	191	0	46	341	**4 076**
	3 %	4 %	1 %	2 %	0 %	3 %	2 %	**3 %**
I received an email from an LGBTI organisation or online network	1 320	3 086	605	408	0	158	1 083	**6 660**
	6 %	5 %	2 %	4 %	0 %	9 %	5 %	**5 %**
I received an email from any other organisation or online network	152	628	75	110	0	32	147	**1 144**
	1 %	1 %	0 %	1 %	0 %	2 %	1 %	**1 %**
Somebody told me about it or sent me the link	3 716	6 021	4 642	1 065	14	271	3 895	**19 624**
	16 %	10 %	17 %	11 %	27 %	16 %	20 %	**14 %**
Through social media – on my own timeline/space on Facebook, Instagram, Twitter, etc.	8 049	12 758	11 529	2 216	17	461	6 517	**41 547**
	35 %	21 %	42 %	22 %	33 %	27 %	33 %	**29 %**
Through social media – in a page or group I follow on Facebook, Instagram, Twitter, etc	9 489	14 414	11 892	2 368	18	531	8 423	**47 135**
	41 %	24 %	43 %	24 %	35 %	31 %	42 %	**33 %**
I saw an advertisement (banner) online	1 678	5 866	2 091	973	3	140	1 242	**11 993**
	7 %	10 %	8 %	10 %	6 %	8 %	6 %	**8 %**
I saw an advertisement (banner) in a dating app	128	16 686	96	2 884	2	186	747	**20 729**
	1 %	28 %	0 %	29 %	4 %	11 %	4 %	**15 %**
Somewhere else	470	3 236	386	677	3	153	565	**5 490**
	2 %	5 %	1 %	7 %	6 %	9 %	3 %	**4 %**

Note: ([a]) Respondents were allowed to select more than one answer option, hence percentages do not sum to 100 %.

Table 13. Percentage of submitted questionnaires obtained through promotional campaigns ([a]) (uncleaned dataset) by country

Country	Percentage of sample realised from campaigns	Country	Percentage of sample realised from campaigns
AT	62	LT	95
BE	36	LU	51
BG	86	MT	54
HR	35	NL	60
CY	62	PL	64
CZ	91	PT	75
DK	79	RO	67
EE	31	SK	85
FI	65	SI	46
FR	42	ES	67
DE	64	SE	59
EL	90	UK	79
HU	90	MK	29
IE	85	RS	41
IT	52	**Total**	**65**
LV	57		

Note: ([a]) This shows the percentage of respondents arriving through a campaign link per country.

Some promotion campaigns were run through LGBTI organisations and targeted mainly people involved in them. Other campaigns ran via other means and addressed the general target population, which is not necessarily affiliated to organisations. A number of campaigns was promoted both ways.

Table 14 provides a summary of campaign performance (for a more thorough description by country of promotion, see Annex C2) for the questionnaires that were collected via promotional campaigns. More than half of respondents were reached via general campaigns (56 %). This figure also includes dating sites (such as Gaydar, Grindr, Lesarion or PlanetRomeo) which added 38 % to the total sample. About 30 % of the sample was addressed by LGBTI-related organisations. The remaining part refers to campaigns promoted through both media and organisations (14 %).

Table 14. Campaign performance (*n*) by campaign type

Medium	Only general campaigns			LGBTI-related organisations	Both general campaigns and organisations	Total
	Dating site	Other media	Total			
Banner	3 854	10 574	14 428	0	12891	**27 319**
Country media ([a])	0	630	630	0	0	**630**
Flyer ([b])	0	0	0	0	42	**42**
Google ([c])	0	1	1	0	0	**1**
Interstitials ([d])	7 061	0	7 061	0	0	**7 061**
Message ([e])	24 388	0	24 388	0	0	**24 388**
Organisations ([f])	0	0	0	4 638	0	**4 638**
Promotions ([g])	0	0	0	23 315	0	**23 315**
Social media ([h])	0	3 959	3 959	0	0	**3 959**
Website	0	1161	1 161	0	0	**1 161**
Total	**35 303**	**16 325**	**51 628**	**27 953**	**12 933**	**92 514**

Notes: the total corresponds to 65 % of the sample obtained through promotional campaigns as shown in Table 13.

([a]) Country-based LGBTI media (magazines, websites, etc.).

([b]) Print flyer distribution.

([c]) Google campaign based on keywords (run only for intersex people).

([d]) Banner inside the applications while the user is scrolling.

([e]) Message received when first logging into the application.

([f]) LGBTI and other organisations that promoted the survey.

([g]) Other kinds of promotion.

([h]) Social media postings and promotion to the audience of each channel.

7.5. Respondent feedback

During the data collection period, the survey team received 119 survey-related requests through the helpdesk that was accessible from the survey website (Table 15). The requests related to:

- the survey's coverage, namely the exclusion of identities under the broader umbrella of the LGBTIQ+ community (such as asexuals, pansexuals, aromantics and polyamorous or monoamorous people);
- the lack of an answer option including 'non-binary' people under the question about sexual attraction;
- the difficulties in replying to questions about experiences during school years (recalling issues, difficulties in deciding how to reply to the questions when the respondent was living in a country different from the one where they went to school).

Table 15. Survey-related requests received by the helpdesk

Topic	Number
Broader coverage of the survey in terms of the identities covered	47
Expression of interest in the survey/results	6
Technical issues	35
Remarks related to specific questions	14
Request asking for the date of closure of the survey	5
Addition of support organisations on the last page of the survey	3
Complaint about the terminology used in some questions	4
Screened out for reasons other than the request for broader coverage of identities	3
Other	2
Total	119

7.6. Problems faced during the data collection

No major difficulties were encountered during data collection. Throughout the duration of the online survey, the following issues were detected:

- Until the 30 May 2019, question A6 (Are/were you a trans person?) was asked if respondents answered to A3 (How would you describe yourself today?) 'Woman/girl' or 'Man/boy'. From 30 May, the routing was changed and question A6 was asked if respondents answered question A3 with 'Woman/girl', 'Man/boy' or 'Do not identify as male, female, trans or not binary'. This change was to allow respondents who do not identify as male, female, trans or non-binary to specify whether they self-identified as 'trans' instead of being automatically categorised under the 'trans' umbrella, as was the case until 29 May. This is desirable because A3 refers to the way the respondent currently identifies, while A6 refers to both present and past. Somebody may not identify as trans now (and answer A3 accordingly) but might have identified as trans in the past (which is captured by A6).

- Until 30 May 2019, question A6_1 (How would you describe your current gender identity?) was asked if to A3 (How would you describe yourself today?) respondents answered 'Trans woman/girl', 'Trans man/boy', 'Non-binary or genderqueer or agender or polygender or gender fluid' or 'Do not identify as male, female, trans or not binary' or if to A6 (Are/were you a trans person?) they answered 'Yes'. After 30 May, the 'Do not identify as male, female, trans or not binary' condition was removed from the routing, in accordance with the change in the routing of A6 mentioned above.

Because of the abovementioned issues 153 cases were routed to the trans-specific section in the first 3 days of the survey, before the changes to the routing took effect after 30 May 2019. However, it is not possible to determine the exact impact of the issue because it is unknown how many of those 153 respondents were incorrectly categorised as 'trans'. Such survey entries remained in the dataset subject to the consistency checks that are described in Sections 8.1.3, 8.1.4 and 8.1.5 and were kept for analysis if they did not fail such tests. Another issue at the start of the survey concerned users coming from the PlanetRomeo campaign who could not take the survey via mobile phone because of different technical standards. The issue arose at the beginning of June 2019 and was resolved within 2 days.

- At the start of the survey, Google Analytics was discontinued, as this Google service uses cookies that could not be bypassed and retained users' information. However, some cookies from other services (Google reCAPTCHA and Cloudflare) remained. At the start of the survey, Google Analytics was installed in the survey's website to provide detailed information on the referent sites and therefore on actual implementation of the promotional plan. Although code blocking any third-party cookies, other than those explicitly required, was installed in the survey website, the project team realised that the Google service was able to bypass this blocking by embedding the cookie in the page before the execution of any code. As Google discloses no information whatsoever on the information stored in this cookie, FRA decided to completely discard Google analytics from the survey's website from the start of the survey (3.6.2019). This had no drawback or impact on the survey, since information on the promotion campaigns and the responses generated by them was recorded by the Agilis software and was accessible in aggregated form through the survey monitoring tool.

- On the other hand, two specific cookies for reCAPTCHA and Cloudflare, respectively, were absolutely necessary for information security reasons, mainly to block fraudulent attempts by bots or other potential cyber-attacks. Moreover, it was verified that no personal or otherwise identifying information was kept in these cookies. The message displayed to users asked for their consent to the use of these cookies, not storing any personal data, as well as their consent to the data privacy policy document notifying them that 'Some technically necessary cookies have to be used for security purposes, e.g. by services that block fraudulent responses to the survey or cyber-attacks to the survey's servers. These cookies do not store any personal or identifying information. You can delete these cookies after the submission of the questionnaire using the appropriate options of your browser.'

7.7. Falsification attempt

At a very early stage after the launch of survey, a coordinated campaign aiming to interfere with the survey and influence the results came to the attention of FRA and the contractor. This attempt originated from a website with users mainly in the United Kingdom, aiming to skew the results of the survey against trans people. It was verified that the survey was shared among groups

in this web channel in an effort to oppose the rights of trans people. The referrer website from which known attempts came was also known, which made it possible to trace the counter-campaign and assess that over 86 % of those who came to the survey through this particular referrer website participated in the survey as trans people. It should be made clear, however, that not all of the entries from this site were excluded from the final dataset because of the referral site and that the latter was not the only suspicious link through which such anti-trans campaigners entered the survey. Instead, FRA and the survey contractor carefully examined the responses associated with the site in question to determine the risk that a response constituted an effort to interfere with the survey.

In the light of the above, a rigorous review of the online group and forum conversations on the aforementioned site was carried out ([21]). The process ended up with an extensive list of terms that were typically found in threads in which group members discussed responses to specific survey questions with the potential to undermine the reliability of the results. The terms pertained primarily to question A2: 'What sex were you assigned at birth?' but also to other questions in section A albeit to a lesser extent. With this knowledge to hand, eight terms were picked as being most representative and formed a brief list of suspicious words that such groups misidentifying themselves as trans people tend to adopt from the trans-phraseology. The list was then integrated into a search function, which enabled efficient searching for these words in the free text responses to question A2 from all respondents, after the text had first been translated into English to make sure that such attempts were not also ongoing in other languages or countries ([22]):

- observed
- assigned
- identified
- correctly
- confirmed
- determined
- birth
- born.

To ensure that the above search function would not recognise genuine trans respondents as falsification attempts because of the mere appearance of a keyword, trans respondents coming from referrers other than the website on which this campaign was coordinated were excluded from this search. The test came up with a limited number of suspicious entries, around 64 % of which were completed by respondents who self-identified as trans people or lesbians. Such entries were excluded from the final dataset during the cleaning stage (see Section 8.1.3).

([21]) https://www.mumsnet.com/Talk/womens_rights/3597916-The-EU-want-to-hear-from-genderfree-people

([22]) A case insensitive to grammar forms search was also applied (*observe*, *assign*, *identif*, *correct*, *confirm*, *determin*, birth, born) and captured a larger number of suspicious questionnaires; however, a human quality check showed that the amount captured had been inflated by a number of questionnaires that were falsely caught because of their specific wording, although nothing suspicious was actually implied by the context of the response.

8 Data processing

When survey data collection was completed, a series of steps were undertaken to ensure the quality and accuracy of the data collected. The steps covered validation rules to monitor errors and assess response patterns reflecting inconsistencies, as well as cleaning-up strategies to identify and further handle suspicious entries. Finally, weighting adjustments were applied to data to correct for potential over-/under-representation of groups.

8.1. Data validation

To validate the correctness and to ensure the high quality of the data collected a series of steps was undertaken (see Sections 8.1.1–8.1.5). This included tests to evaluate the length of time respondents took to answer the questionnaire and checks for consistency/logic and to detect falsification attempts and duplicate responses. Each validation test was applied at respondent level. A decision about each completed questionnaire's validity was made based on the results of the validation tests and on the basis of a set of pre-specified criteria (see Section 8.1.6). Questionnaires that were assessed as erroneous, suspicious or inconsistent were excluded from the cleaned dataset.

> The uncleaned dataset of 141 621 responses was validated and edited. This resulted in a cleaned dataset of 139 799 responses. This comprises the final data that were used for analytical purposes.

The following section elaborates on the validation tests and the decision criteria, which were examined in combination to assess each case.

8.1.1 CAPTCHA score

CAPTCHA is a computer system intended to distinguish human from machine input. An invisible reCAPTCHA was used to detect applications from bots ([23]). For those users who were actually eligible to participate in the survey, the CAPTCHA score was recalculated just before questionnaire submission and only entries with scores greater than 0.3 were accepted – plausible values ranged from 0 (representing almost certainly an automated completion of the survey) to 1 (representing almost certainly an authentic completion of the survey by a human respondent).

8.1.2 Questionnaire duration

This step was meant to detect respondents completing the survey too quickly. Short questionnaire durations raise suspicions of limited accuracy (respondents may have not read or answered the questions with caution).

Total time spent on questionnaire completion is the difference between the starting time and the time of submission. Very long times (typically exceeding 100 minutes) can be explained by interrupted completion or by late submission due to technical issues. In contrast, short times are suspicious and were subject to further investigation.

Respondents were divided into categories created as combinations of respondent categories (lesbian, gay

([23]) A **bot** or a **web robot** is a software application that runs automated tasks over the internet. In this way, the malicious deployment of bots aims to imitate or replace the behaviour of human users. Similar programmes may be used to imitate and reproduce in a repetitive way and at a high rate the completion of a questionnaire by a large number of survey respondents in an attempt to falsify a survey and influence its outcomes or annul its validity and scope.

and bisexual; trans; and intersex) and the number of different types of incidents (physical/sexual attack, harassment, discrimination). The number of different types of incidents was expected to affect the questionnaire duration because incidents experienced increased the number of survey questions that had to be completed and thus led to longer expected completion times. Respondent category was relevant because of the additional questionnaire sections for trans and intersex respondents. Intersex respondents who also identified as trans were asked to complete both the intersex section and the trans section. Total completion time was studied separately for each combination of respondent category and number of incidents. Cut-off times that defined the minimum duration needed to pass the total duration test were chosen based on expertise from similar surveys in such a way that the same proportion of respondents were identified as 'speeders' among the LGBTI groups. A respondent was:

- identified as a speeder (i.e. fail) if the questionnaire duration was less than or equal to 0.7 percentile of the duration distribution;
- flagged with a warning if the questionnaire duration was between 0.7 and 1 percentile;
- identified as a non-speeder (i.e. pass) if the questionnaire duration was greater than 1 percentile.

Due to their limited number, intersex respondents were categorised only between those who do or do not identify as trans people, and the number of incidents was not used in the analysis of their survey completion time. Table 16 shows the selected cut-off points.

Furthermore, the questionnaires were also evaluated on the basis of **partial durations** in six questionnaire sections. The sections were selected in a way that minimises the effect of routing and includes questions answered by the majority of respondents. Analogically to the approach used with the total questionnaire time, the 0.7 and 1 percentiles were chosen to identify speeders (fail) and non-speeders (pass) and to give intermediate warnings. Each respondent ended up with six flags, showing the outcome of the test for each section. The flags were combined into a single flag summarising performance across all sections (Table 17).

Table 16. Cut-off durations in seconds defining speeding: fail if [min,0.7], warning if (0.7,1] and pass if (1,max]

Respondent category	Percentile	Number of incidents			
		0	1	2	3
Lesbian, gay and bisexual	0.7	368 (≈ 6min)	420 (≈ 7 min)	473 (≈ 8 min)	545 (≈ 10 min)
	1	382 (≈ 6 min)	436 (≈ 7 min)	490 (≈ 8 min)	567 (≈ 10 min)
Trans	0.7	419 (≈ 7 min)	460 (≈ 8 min)	533 (≈ 9 min)	595 (≈ 10 min)
	1	429 (≈ 7 min)	477 (≈ 8 min)	552 (≈ 9 min)	608 (≈ 10 min)
Intersex	0.7	393 (≈ 7 min)			
	1	407 (≈ 7 min)			
Intersex and trans	0.7	331 (≈ 6 min)			
	1	361 (≈ 6 min)			

Table 17. Decision rule for combining partial duration speeder tests in six sections

Final flag	Intermediate flags from six sections	
	No of section speeders	No of section warnings
Non-speeder	0	≤ 1
Warning	0	[2, 3, 4]
Speeder	0	≥ 5
Non-speeder	1	0
Warning	1	[1, 2, 3]
Speeder	1	≥ 4
Warning	2	≤ 1
Speeder	2	≥ 2
Speeder	≥ 3	≥ 0

8.1.3 Detection of inconsistent responses

This test aimed to evaluate the consistency of response patterns in selected questions through logical rules.

While inconsistencies in the answers of a respondent are anticipated and do not necessarily indicate false information, they may be indicative of inattentive participation and of limited data reliability when they appear too frequently. This can potentially affect the accuracy of results. To check the consistency of answers, 20 logical tests based on either single questions or pairs of questions were defined. Combinations of possible answers were selected to form the condition to be tested with the particular set. An example of such a condition is that the age of realisation of being lesbian, gay or bisexual should be equal to or less than the age when the respondent told someone for the first time. If a respondent's answers violated the defined logical condition, the test resulted in a 'fail' and in a 'pass' value otherwise. The results of all 20 tests were eventually combined into a total score. Questionnaires with a score equal to or greater than 30 % of fails were flagged with a fail flag. Questionnaires with 10–30 % of test fails were flagged with a warning. This rather conservative approach was applied because most rules are imperfect and in exceptional cases may be violated without any intention to provide false information or because of possible alternative understandings of questions. If passing all the logical tests were a requirement, this would tend to select of subsample of immaculately well-adjusted, always rational respondents, free of all the occasional paradoxes that life may entail.

Questionnaires that included one of two predefined inconsistent patterns in the screening questions were marked for permanent removal:

1. A2 = 'Female', A3 = 'Man/boy', A4 = 'Gay', A5 = 'No' and A6_1 = 'Not applicable';

2. A2 = 'Male', A3 = 'Woman/girl', A4 = 'Lesbian', A5 = 'No' and A6_1 = 'Not applicable'.

8.1.4 Check for fraudulent cases

The answers to the open questions were used to identify potentially fraudulent observations. They were inspected by a non-automated detection method, including manual scanning of the free text in the open fields that had been translated into English. The search intended to track down mocking, spurious cases as flagged by specific wording or from the context in questions. In ambiguous cases in which making a judgement on fraudulence was not was not straightforward, the decision was taken upon extended review of the whole questionnaire. Identified cases were marked for permanent removal and came mostly from intersex or trans profiles (82 %). This was the case for a coordinated attempt to influence the survey by a group of users predominantly from the United Kingdom presented in detail in Section 7.7. However not all entries from the flagged website and discussions in its forums were of a fraudulent nature. Only cases that were identified as fraudulent were excluded.

8.1.5 Inspection of duplicate entries

The aim of this check was to detect entries that have a very high probability of coming from the same respondent. Because of the extent of the questionnaire, the probability of the same person delivering exactly the same responses twice is low, especially in open fields. In view too of respondents' anonymity, the aim of the duplicates inspection test was to acquire a sufficient degree of confidence that two entries came from the same respondent by relying on their similarity. An entry was considered as a duplicate only if its responses:

- proved to be the same as those in an earlier case (by time of submission) across a pre-selected set of 64 closed questions; and

- showed similarities on closer inspection of the text in open fields, or of respondent's paradata, or both.

This criterion did not issue warnings. In the case of duplicate entries, the first entry was kept.

8.1.6 Performance of validation tests

Table 18 summarises the performance of each validation test. A number of overlapping fails occurred for each combination of two tests. Altogether none of the tests was redundant and every single one contributed to entries that were not captured by another test and flagged as suspicious, owing to the different perspective and the distinct formulation of each test per se.

Table 18. Summary of validation tests and number of fails ([1])

Validation test	Pass criterion	No of fails	No of warnings
CAPTCHA score	CAPTCHA score > 0.3	214	–
Questionnaire duration: total duration speeder	Total time > 1 percentile	1 002	437
Questionnaire duration: six sections duration speeder	Number of speeder fails/warnings above pre-defined threshold	356	1 240
Detection of inconsistent responses: conceptual matching	Percentage of logical rules that fail < 0.1	23	5 229
Detection of inconsistent responses: inconsistency in screening questions	No predefined inconsistent patterns detected	113	–
Duplicate entries inspection: fraud inspection in open questions	No fraudulent replies	157	–
Duplicate entries inspection: coordinated attempt	Text free of specific key words	44	–
Duplicate entries inspection	Differing response patterns in 64 closed questions	13	–

Note: ([1]) Dashes are used when a criterion did not issue warnings.

The final decision about exclusion or inclusion of an entry, however, relied upon parallel assessment of the outcomes of all validation rules. An entry was:

- **excluded** if any of the tests failed or more than two tests resulted in a warning (1 795 observations);
- given a **warning** if exactly one test yielded a warning and all others passed (6 123 observations); and
- **accepted** if all tests passed (133 703 observations).

Warnings were kept in the cleaned dataset and only questionnaires receiving a 'fail' in the final decision were excluded as suspicious for restricted validity.

8.2. Data editing

To categorise open responses, additional corrections in the open fields of selected questions were made via a keyword-based editing approach. Errors that were made during the data collection were corrected at this stage.

8.2.1 Editing open questions

A number of editing processes followed the first stage of data cleaning. They aimed to reduce the amount of open responses in selected questions by recategorising them into the available answer options.

Based on a preliminary human check of open answers to the following questions a list of typical keywords was prepared per question (e.g. 'agender' in the case of A3):

- A2 (What sex were you assigned at birth?): Other, please specify;
- A3 (How would you describe yourself today?): Do not identify as male, female, trans or not binary, please specify how would you identify;
- A4 (Which group best matches your sexual orientation?): Other, please specify.

These keywords were integrated into an automated search function that sought these specific words inside the free text of the equivalent question (translated into English). Once detected, the response was recategorised accordingly into the matched answer option (e.g. if a respondent had typed in 'Gay' as their answer to 'Other, please specify' in question A4, their answer was recategorised as 'Gay', instead of 'Other'). To improve the accuracy of the results, in some cases the logical rules were also applied, combining information from multiple screening questions. The number of edits made is displayed in Table 19.

Table 19. Number of edits achieved per question (uncleaned data after removing cases that failed validation tests; see Section 8.1)

Question	Original answer/category	No and percentage (out of *N*)	No of successful edits	Percentage of successful edits (out of open responses)
A3 (How would you describe yourself today?)	Do not identify as male, female, trans or non-binary, please specify how would you identify	1 331 (1 %)	366	28 %
A4 (Which group best matches your sexual orientation?)	Other, please specify	5 108 (4 %)	167	3 %
A2 (What sex were you assigned at birth?)	Other, please specify	1 548 (1 %)	309	20 %
Respondent category (based on A2, A4, A5, A6)	Bisexual (other)	35 (0 %)	8	23 %

Note: sample size n = 139 826.

Based on questions in section A (Introduction and screening) the survey respondents were categorised into one of the following categories: lesbian, gay, bisexual woman, bisexual man, trans person and intersex person. The category trans is an umbrella category and includes trans women, trans men, cross-dressing women, cross-dressing men, non-binary, genderqueer, gender fluid, agender, polygender and others who identify as trans people. Bisexual respondents were split into bisexual men, bisexual women and bisexual (other) based on their answers to question A2 (What sex were you assigned at birth?) with three available response options (female, male, other).

Table 20: Criteria used for categorisation of the respondents

Condition				Respondent category	
A5 = 1				Intersex	
A5 = 2	A6_1 = 1			Trans woman	Trans
	A6_1 = 2			Trans man	
	A6_1 = 3			Cross-dressing woman	
	A6_1 = 4			Cross-dressing man	
	A6_1 = 5			Non-binary	
	A6_1 = 6			Genderqueer	
	A6_1 = 7			Gender fluid	
	A6_1 = 8			Agender	
	A6_1 = 9			Polygender	
	A6_1 = 10			Trans person	
	A6_1 = −888			Trans person	
	A6_1 = −999			Trans person	
	A6 = -2			Trans person	
	A6 = 2	A4 = 1		Lesbian	
		A4 = 2		Gay	
		A4 = 3	A2 = 1	Bisexual woman	
			A2 = 2	Bisexual man	
			A2 = 3	Bisexual (other)	

Note: this means that the lesbian, gay and bisexual categories cover respondents who self-identified as lesbian women, gay men and bisexual women or men, with the exception of those respondents who also identified as trans or intersex people, as they are included in the trans and intersex categories, respectively.

Table 21. Distribution of LGBTI identities in the final cleaned data

Identity	No	Percentage
Lesbian	22 707	16
Gay	58 908	42
Bisexual woman	27 217	20
Bisexual man	9 711	7
Trans	19 669	14
Intersex	1 587	1
Total	**139 799**	**100**

Due to a small number of respondents who were categorised as bisexual (other) ([24]), this category was excluded (in total 27 cases).

This second-stage data cleaning was completed for 139 799 cases, the distribution of which across identities is shown in Table 21. An overview of the main sociodemographic characteristics of the sample is provided in Annex E.

8.2.2 Error handling

After finalisation of the survey and during the data preparation stage, three issues were detected. To ensure that these errors would not affect the ensuing validation process or the results of any future analysis, they were treated as detailed below.

- Question A2 (What sex were you assigned at birth?) was mistranslated into Polish. Translation of the 'female' and 'male' answer options was reversed; consequently, female respondents were wrongly classified as male and vice versa. The same translation issue was identified in Turkish. Before deploying sex in the validation criteria discussed in the previous section, questionnaires completed in Polish (n = 13 166) or Turkish (n = 34) were corrected by recoding females as males and males as females.

- Question C6_1C (During your employment in the last 5 years, have you experienced negative comments or conduct at work because of you being {RESPONDENT_CATEGORY}) was translated into Dutch identically as C6_1A (During your employment in the last 5 years, have you been open about you being {RESPONDENT_CATEGORY} to people you meet at work?). The responses completed in Dutch which were routed to C6_1C (n = 3 367) were coded as missing.

- Due to a programming mistake in question C13 (Have you ever heard of the [NAME OF EQUALITY BODY]?) respondents from Hungary were offered an answer option including the Equality Body in Croatia (one body) and vice versa respondents from Croatia had an answer option including the Equality Bodies in Hungary (two bodies). The correction was implemented in the online survey on 3 June 2019. This error affected 652 respondents from Hungary and 86 respondents from Croatia. During the analytical stage these responses were treated as missing.

Regarding mistranslations, the aforementioned corrections were made on questionnaires that were completed in the specified language (i.e. the language selected at the beginning of the survey). Because switching language was allowed at any point of the survey, there might have been respondents who changed language before replying to the question containing the error. Nevertheless, monitoring the number of times and the exact time points at which a respondent changed language would add too much complexity to the error handling rule; thus, this possibility was not implemented.

8.3. Weighting of data

In the absence of official population statistics on the number and structure of the LGBTI population, the extent to which the characteristics of the survey sample achieved matches those of the target population cannot be assessed. Rather than ignoring the recruiting and response mechanisms, weighting procedures were used to compensate for potential exclusion, selection and non-participation biases. The composition of the sample and the characteristics of respondents may be imbalanced across countries, LGBTI categories and age groups. That may be attributed to actual variations in the size of those groups, the awareness-raising campaign activities and their ability to reach respondents, the online mode of the survey, etc. When comparing the realised sample with the derived sample size targets

([24]) 52 cases before data cleaning, down to 35 cases after removing cases that failed validation tests and down to 27 after editing the open questions (end of data cleaning).

described in Section 2.2, we see that some of the groups are under-represented. For example, members of older age groups of the LGBTI community are more difficult to reach, as shown by the experience gained from FRA's 2012 LGBT survey.

At the stage of designing the survey, the stratification variables for the design of the target population estimation exercise (age and LGBTI group) were determined, providing also a basis for the **benchmark weights**. As explained in Section 2.2, three age bands were defined: 15–34, 35–54 and 55+. For the calculation of weights, the last two age bands were merged because the sample collected in the older stratum was not large enough to be treated separately. Another factor accounting for imbalance in the sample composition may be the fact that the affiliates of LGBTI organisations may be over-represented. Affiliates of LGBTI organisations may have received personalised invitations that promote the survey, while equally eligible, unaffiliated LGBTI people may have heard of the survey only by chance and their probability of participating was much smaller. To correct for possible over-representation of affiliated respondents **affiliation weights** were applied.

The final weights had to be able to improve the final results in terms of:

- country-level percentages for a country's overall LGBTI population;
- within-country percentages for any of the LGBTI categories; and
- percentages presented as EU averages, including data for all countries involved.

The same weights take care of correcting for over- or under-representation across age groups to correct for missing cases in the older age bands.

8.3.1 Benchmark weights

Weighting adjustments are used to compensate for under-/over-representation in different distinct strata of the target population, i.e. when members of the target population are inadequately or more than sufficiently represented in the sample. Given the lack of official target population statistics, the target population estimation exercise aimed to provide a basis for post-stratification weighting. This means that the estimates derived for the target population's distribution across the selected strata were used for statistical adjustment of the data so that the sample totals matched the corresponding estimated population totals in each cell formed by cross-classifying two or more strata.

Table 22 shows the realisation factors for the sample achieved compared with the targeted sample thresholds. The sample over-represents young people, while the (over-/under)-representation of certain LGBTI groups is comparatively moderate. Notably, intersex people were reached quite successfully in most countries, with total realisation factors mostly above 1. However, the proportions of LGBTI respondents in the survey vary from country to country. While some of the differences between countries in the composition of the sample may reflect actual variation in the size of the groups, we assume that the awareness-raising activities and other factors also contributed to these differences. For example, relatively higher participation of LGBTI respondents in some countries may be due to this groups' higher level of organisation.

Table 22. Realisation factors for achieved sample versus targeted sample thresholds (%)

Country	Gay			Lesbian			Bisexual men			Bisexual women			Trans			Intersex		
	15-34	35+	Total	15-34	35+	Total	15-34	35+	Total	15-34	35+	Total	15-34	35+	Total	15-34	35+	Total
AT	5.8	3.3	4.4	4.4	2.4	3.3	1.4	0.9	1.2	2.4	0.8	1.8	5.8	1.3	3.0	2.0	0.8	1.2
BE	6.1	5.0	5.5	4.3	2.5	3.3	1.6	1.0	1.3	2.2	0.9	1.7	7.5	1.7	3.8	2.7	1.3	1.7
BG	7.0	1.7	3.9	3.2	0.5	1.6	3.4	1.2	2.4	3.4	0.3	2.1	2.9	0.1	1.1	2.2	0.5	0.9
HR	3.1	1.1	2.0	2.1	0.4	1.1	1.3	0.5	0.9	2.2	0.3	1.4	2.3	0.3	1.0	2.4	0.4	0.9
CY	4.3	2.3	3.3	2.1	0.5	1.3	0.9	0.5	0.8	1.6	0.4	1.2	2.0	0.2	1.0	4.3	0.7	1.9
CZ	13.4	3.8	7.9	6.7	0.4	3.0	3.4	1.2	2.4	5.6	0.3	3.4	8.6	0.5	3.3	5.4	0.7	1.9
DK	4.0	4.1	4.0	3.0	3.0	3.0	1.7	1.3	1.5	2.1	1.0	1.7	6.7	1.5	3.4	2.0	0.5	1.0
EE	1.6	0.4	1.0	2.9	0.3	1.4	0.8	0.1	0.5	4.7	0.2	3.0	4.2	0.3	1.7	1.8	0.3	0.8
FI	3.8	2.3	3.0	11.5	2.6	6.6	2.2	1.1	1.7	12.1	3.2	8.8	33.0	3.6	14.2	3.0	0.8	1.5
FR	7.9	5.1	6.4	7.9	1.9	4.6	2.4	1.3	1.9	4.4	0.5	3.0	10.8	0.7	4.4	2.5	0.6	1.1
DE	9.7	5.8	7.5	7.8	3.9	5.6	3.2	1.9	2.6	3.5	1.1	2.5	14.1	2.3	6.3	4.0	1.4	2.1
EL	12.4	5.5	8.3	8.3	1.7	4.3	5.4	1.8	3.7	10.2	0.9	6.3	10.6	0.9	4.0	11.0	1.4	3.8
HU	10.8	2.7	6.3	10.6	1.0	5.0	3.1	0.8	2.1	11.4	0.7	7.1	10.8	0.9	4.3	5.8	1.0	2.3
IE	4.7	3.1	3.9	4.3	2.3	3.3	2.5	1.1	1.9	4.0	0.7	2.9	6.0	0.7	2.9	2.7	0.4	1.1
IT	6.7	3.5	4.7	6.4	1.4	3.3	2.1	1.0	1.6	4.3	0.4	2.6	5.6	0.3	2.0	4.6	0.9	1.8
LV	3.8	1.1	2.3	3.7	0.5	1.8	1.9	0.5	1.3	4.7	0.5	3.0	5.2	0.4	2.1	2.5	0.2	0.8
LT	2.9	0.5	1.6	2.8	0.1	1.3	1.4	0.2	0.9	5.8	0.1	3.5	3.7	0.1	1.4	4.7	0.3	1.7
LU	1.9	1.4	1.6	1.7	0.9	1.3	0.6	0.2	0.4	0.7	0.4	0.6	1.4	0.3	0.7	0.7	0.2	0.3
MT	3.7	2.4	3.0	4.9	1.5	3.2	0.7	0.5	0.6	2.8	0.7	2.1	3.7	0.7	1.9	4.0	0.7	1.8
NL	8.8	8.1	8.4	3.7	3.0	3.3	3.2	2.3	2.8	3.1	1.4	2.4	11.5	2.3	5.7	3.8	2.9	3.2
MK	3.6	0.9	2.2	2.5	0.2	1.4	2.0	0.7	1.5	2.6	0.2	1.8	2.3	0.3	1.1	4.3	0.8	2.1
PL	8.9	2.1	5.4	7.1	0.7	3.7	3.0	0.4	2.0	9.1	0.5	6.0	9.8	0.4	4.0	6.6	0.5	2.4
PT	16.1	6.5	10.4	4.8	1.2	2.6	6.6	3.1	5.0	4.8	0.6	3.0	8.9	0.5	3.2	10.2	1.5	3.7
RO	7.7	1.4	4.2	7.8	0.7	3.7	4.2	1.3	3.0	9.8	0.3	6.1	8.7	0.5	3.4	13.4	0.9	4.2
RS	5.4	1.3	3.1	3.2	0.6	1.7	2.2	0.8	1.6	3.0	0.3	1.9	3.9	0.2	1.5	8.2	0.7	2.7
SK	8.0	2.9	5.3	5.7	0.8	3.1	2.5	0.6	1.8	7.3	0.4	4.8	4.6	0.4	2.0	10.0	1.0	4.0
SI	4.8	1.7	3.0	3.2	0.4	1.6	1.6	0.4	1.0	2.7	0.1	1.6	2.4	0.1	0.9	3.5	0.0	0.9
ES	12.6	3.8	7.2	9.0	1.3	4.4	7.9	1.0	4.6	18.8	0.9	11.3	13.7	0.4	4.6	4.3	0.5	1.5
SE	4.1	3.7	3.9	3.2	1.7	2.4	2.2	2.1	2.2	2.4	1.4	2.0	11.5	2.2	5.7	2.5	0.7	1.3
UK	4.3	3.6	3.9	6.9	2.2	4.4	1.9	1.4	1.7	5.7	1.3	4.1	11.6	2.4	6.0	2.6	1.2	1.6

Note: Values higher than 1 indicate that the achieved sample was greater than the targeted threshold sample, while values lower than 1 indicate the opposite.

Considering these issues, post-stratification weighting was considered necessary to bring the realised sample in line with the estimated population totals and to correct for the disproportional distributions of LGBTI categories and age groups. This strategy may be seen as the best possible approach to partly overcoming the natural limitations of the non-probability sampling involved in the survey.

> Even if effective weighting adjustments are applied to a non-probability sample, it continues to differ from a probability sample in that it is not based on a list of individuals with a known chance of selection from a sampling frame into a sample. It is thus separated from ideal conditions for estimating population means by two fundamental problems: (1) the absence of such a sampling frame; and (2) the degree to which the MAR (missing at random) assumption[25] would hold if such a list were available and unit non-response were the only factor compromising the sample quality. However, in the presence of reasonable benchmarks based on some prior knowledge about the target population, it is possible to partly correct for typical shortcomings of a non-probability online sample that is essentially based on self-selection.[26] Adequate 'benchmarking' (or post-stratification) can make the sample **more similar to a quota sample**. It is suggested that quota samples[27] collected on the basis of good knowledge about target populations and outcome-relevant (confounding) variables achieve a precision of estimates comparable to probability surveys that are affected by a substantial degree of non-response.

The defined target population for LGBTI categories and age bands in each country provided the basis for correcting imbalances in the realised country samples. It provided the information for benchmarking by defining how many respondents should ideally represent each cell that resulted from crossing the six respondent categories (lesbians, gays, bisexual women, bisexual men, trans people and intersex people) and two age groups (15–34 and 35+ years). In general, within a country, each respondent was assigned a weight considering their category and age group.

For the calculation of within-country benchmarking weights, the standard cell weighting procedure ([28]) was used so that the sample totals conformed to the estimated population totals on a cell-by-cell basis. The following steps were applied.

- **Step 1.** A common procedure for preventing large weighting adjustments is to collapse cells. Cells are collapsed with other cells so as not to end up with very large weights, resulting in individual cases in the dataset having a disproportionately large impact on the results. Thus, the first step encompasses the collapsing of cells in cases where the realised sample across age categories and within each LGBTI category is not adequate (i.e. cell counts containing less than 30 respondents):

$$\mathrm{n\_s}_{i,k} = sum\,(\mathrm{n}_j)$$

  where

  - $\mathrm{n\_s}$ refers to the achieved sample size;
  - i = 1, ..., 30 denotes the country;
  - j = 15–34, 35+, denotes the age classes;
  - k denotes LGB(M)B(F)TI groups ([29]).

In cases where collapsing was applied, weights referred to the total population (aged 15+) within each LGBTI category.

- **Step 2.** The realised (achieved) sample size for each country, LGBTI category and age group is divided by the target population size in the respective groups, as follows:

$$r1_{i,j,k} = \frac{\mathrm{n\_s}_{i,j,k}}{\mathrm{n\_t}_{i,j,k}}$$

  where

  - $\mathrm{n\_s}$ refers to the achieved sample size;
  - $\mathrm{n\_t}$ refers to the estimated target population size;
  - $i = 1, ..., 30$ denotes the country;
  - $j = 15–34, 35+, 15+$ denotes the age classes;
  - k denotes LGB(M)B(F)TI groups.

([25]) See Kalton and Flores-Cervantes (2003), at 85–87.
([26]) See DiSogra et al. (2011).
([27]) Mercer et al. (2017); Groves et al. (2009), at 409–410.
([28]) See Kalton and Flores-Cervantes (2003).

([29]) LGB(M)B(F)TI refers to the following groups: lesbian women, gay men, bisexual men, bisexual women, trans and intersex people.

- **Step 3.** The realised (achieved) sample size for each country, LGBTI category and age group is divided by the total realised sample size of each country, as follows:

$$r2_{i,j,k} = \text{n\_s}_{i,j,k} / \text{n\_s}_{i}$$

where

- n_s refers to the achieved sample size;
- $i = 1, ..., 30$ denotes the country;
- $j = 15–34, 35+, 15+$ denotes the age classes;
- k denotes LGB(M)B(F)TI groups.

- **Step 4.** The base weight is derived as the ratio of the outcome of step 2 to the outcome of step 3:

$$w_{b_{i,j,k}} = r1_{i,j,k} / r2_{i,j,k}$$

A final check was implemented to ensure that an average weight of benchmark weight multiplied by the realised sample size resulted in 1.0 in each country. Table 23 presents the benchmark weights (before trimming). Cases highlighted (in yellow) denote those cells that have been merged due to small sample sizes, thus capturing the age group 15+.

Table 23. Derived within-country (base) weights per LGBTI and age category (1)

Country	Gay		Lesbian		Bisexual men		Bisexual women		Trans		Intersex
	15–34	35+	15–34	35+	15–34	35+	15–34	35+	15–34	35+	15+
AT	0.517	0.916	0.678	1.277	2.094	3.316	1.250	3.761	0.519	2.257	2.474
BE	0.571	0.692	0.816	1.401	2.249	3.508	1.614	3.943	0.471	2.097	2.005
BG	0.352	1.463	0.774	5.346	0.716	2.154	1.168		2.348		2.679
HR	0.451	1.334	1.253		1.507		0.974		1.462		1.607
CY	0.434	0.810	1.367		2.310		1.533		1.772		0.858
CZ	0.345	1.224	0.695	12.458	1.371	3.748	1.350		0.535	8.924	2.410
DK	0.735	0.712	0.958	0.985	1.755	2.160	1.363	2.800	0.439	1.978	2.889
EE	0.950	3.644	1.029		2.887		0.498		0.880		1.891
FI	1.610	2.690	0.534	2.369	2.790	5.807	0.510	1.918	0.187	1.709	4.054
FR	0.552	0.859	0.556	2.343	1.835	3.336	0.992	8.584	0.405	6.073	3.877
DE	0.545	0.907	0.671	1.343	1.635	2.714	1.504	4.989	0.372	2.317	2.550
EL	0.472	1.067	0.706	3.327	1.092	3.199	0.572	6.854	0.560	6.595	1.518
HU	0.490	1.957	0.494	5.525	1.738	6.461	0.463	7.269	0.482	6.094	2.367
IE	0.656	0.994	0.731	1.319	1.258	2.729	0.788	4.384	0.513	4.229	2.676
IT	0.477	0.912	0.500	2.300	1.489	3.123	0.736	7.238	0.566	9.233	1.803
LV	0.578	1.984	1.189		1.595		0.722		1.032		3.126
LT	0.630	3.969	1.410		1.918		0.515		1.298		1.091
LU	0.553	0.752	0.644	1.121	2.404		1.820		1.434		2.845
MT	0.637	0.990	0.476	1.565	3.765		1.134		1.254		1.203
NL	0.578	0.630	1.361	1.717	1.577	2.240	1.668	3.643	0.450	2.185	1.580
MK	0.486	1.999	1.242		1.157		0.971		1.560		0.821
PL	0.504	2.086	0.629	6.338	1.489	11.039	0.491	9.114	0.456	12.712	1.902
PT	0.349	0.868	1.167	4.711	0.844	1.809	1.175	8.749	0.637	10.710	1.511
RO	0.541	3.002	0.536	6.142	0.991	3.248	0.690		0.481	9.315	0.996
RS	0.404	1.670	0.698	3.433	0.997	2.935	1.139		1.436		0.834
SK	0.478	1.323	0.677	4.803	2.175		0.802		1.899		0.986
SI	0.387	1.096	1.191		1.772		1.149		2.143		2.290
ES	0.525	1.740	0.731	4.905	0.832	6.766	0.349	6.980	0.482	15.661	4.496
SE	0.788	0.878	1.016	1.895	1.457	1.548	1.376	2.335	0.279	1.490	2.543
UK	0.926	1.114	0.579	1.831	2.062	2.931	0.706	3.172	0.343	1.635	2.453

Note: (1) Cases highlighted in yellow denote cells that have been merged due to small sample size.

8.3.2 Affiliation weights

- **Step 5.** Relative participation propensities, which were the inverse values of the odds ratios obtained from logistic regressions for each type of affiliation were also derived at country level ($w\_p_{i,j,k}$).

The weighting to benchmarks for age and respondent category was complemented by a propensity weighting. This weighting corrects for possible over-representation of affiliated respondents and respondents who had been reached through campaigns via LGBTI organisations. The calculation does not require estimates of a true percentage of organised LGBTI persons in the different countries.

> An inspection of variables relevant for capturing affiliation in the questionnaire reveals that the survey did not reach out only or even mostly to highly engaged members of LGBTI organisations, as on average 7.4 % of the respondents reported being active members or volunteers in such organisations. Linking different forms of LGBTI (non-)engagement to recruitment channels is also important, as it might be a mere assumption that different forms of engagement entail specific patterns of access to recruitment channels and responsiveness. There was considerable variation in the most effective recruitment channels between countries. Nevertheless, some channels seemed to be very important in general (social media) and some rather unimportant across all countries (newspapers, emails from non-LGBTI organisations, unspecified other channels). The dominant role of the widely popular social media (e.g. Facebook) already suggests that access to the survey was in no way dependent on the more formalised types of LGBTI engagement.

The following procedure was used to calculate the affiliation weights.

1. The relative propensity ([30]) of respondents to be a certain or a possible participant in earlier LGBTI surveys was taken as a proxy variable of the respondents' relative propensity to participate in the EU LGBTI II survey.

2. LGBTI organisational affiliation was defined through three types of organisational affiliation: (1) active or in regular contact; (2) follower or financial supporter; (3) no active involvement.

3. The propensities were calculated for different types of affiliated respondents in each country sample using logistic regression. The dependent variable captures whether a respondent certainly or possibly participated in an earlier survey for LGBTI people and the independent variable captrues the affiliation types (with non-affiliation as the reference category). A separate analysis was done for younger (under 35 years) and older (over 35 years) respondents, thus controlling for the age category.

4. The derived unstandardised weights are the inverse values of the odds ratios obtained (relative participation propensities) for each type of affiliation. In other words, a respondent with only half the propensity of participating, compared with another one, is seen as representing two respondents of this type – one who could be reached to participate and one who could not be reached.

This approach was tested on a uncleaned dataset, which was deemed suitable for testing purposes. The pattern of odds ratios in Table 24 is quite regular across countries: in both the younger and older age groups, strong affiliation (active member) results in participation propensities about twice as high as those of weaker affiliation (follower). The follower-type affiliates are, nevertheless, also participants with usually more than twice the propensity to participate of non-affiliated respondents (the reference category). The pseudo-R-squared values indicate that on average about 10 % of the LGBTI survey participation propensities may be explained by organisational affiliation. This indicates a modest, but quite a reliable, relationship across countries between affiliation and LGBTI survey participation.

([30]) Bethlehem, J. (2009).

Table 24. Relationship between affiliation types and LGBTI survey participation (logistic regression results, uncleaned dataset)

Country	Aged under 35 years			Aged over 35 years		
	Nagelkerke pseudo-R^2	Active member / volunteer / in regular contact (odds ratio)	Follower of activities / financial supporter (odds ratio)	Nagelkerke pseudo-R^2	Active member / volunteer / in regular contact (odds ratio)	Follower of activities / financial supporter (odds ratio)
AT	0.087	4.427	2.095	.142	5.469	2.479
BE	0.092	3.769	2.498	.062	2.529	2.328
BG	0.068	3.143	2.683	.118	4.091	3.731
HR	0.135	9.241	2.817	0.227	15.098	4.844
CY	0.194	7.436	5.925	0.078	4.514	2.006
CZ	0.108	5.125	3.098	0.151	10.278	2.825
DK	0.087	3.997	2.055	0.094	3.175	2.901
EE	0.051	3.492	2.203	0.171	6.632	3.684
FI	0.054	3.162	2.268	0.057	3.031	2.074
FR	0.085	4.239	2.401	0.058	2.966	2.027
DE	0.082	3.828	2.228	0.105	3.837	2.554
EL	0.081	4.480	2.521	0.095	4.937	2.487
HU	0.080	4.758	2.753	0.134	6.460	3.124
IE	0.101	4.251	2.903	0.112	4.428	2.197
IT	0.114	5.734	2.692	0.074	3.520	2.101
LV	0.054	2.452	2.472	0.097	6.857	2.816
LT	0.076	4.834	2.353	0.333	39.000	6.000
LU	0.117	6.759	2.383	n.s.	n.s.	n.s.
MT	0.117	6.492	3.027	0.174	7.588	3.225
NL	0.097	4.187	2.416	0.125	4.585	2.608
PL	0.068	4.432	2.423	0.122	5.356	3.243
PT	0.098	5.504	2.519	0.102	5.101	2.926
RO	0.073	5.176	2.141	0.062	4.364	1.477
SK	0.078	4.219	2.648	0.209	16.306	4.465
SI	0.169	8.129	3.325	0.098	4.632	2.797
ES	0.053	3.205	2.408	0.088	4.172	2.242
SE	0.070	3.349	2.163	0.079	3.469	2.140
UK	0.081	4.188	2.630	0.107	4.001	2.572
MK	0.222	11.978	5.476	0.159	7.368	n.s.
RS	0.112	6.500	3.063	0.093	5.289	1.783
Significant results (%)	100 %	100 %	100 %	97 %	97 %	93 %
Geometric mean	0.091	4.770	2.663	0.111	5.483	2.710

Note: dependent variable – certain or possible participation in an earlier survey for LGBTI people. Reference category for organisational affiliation types is the most common type, no active involvement. Geometric means are only shown for the significant results in each column ($p < 0.05$). n.s., not significant.

The derived propensity weights were also checked in terms of whether they were also effective regarding outcomes. Four countries were investigated for different response categories for several survey questions and tested by correcting for affiliation. The countries were chosen on the basis of their belonging to four different quadrants in a 2 ´ 2 table expressing the prominence of LGBTI survey participation and organisational affiliation: Sweden (above average participation / above average affiliation), Spain (below average participation / below average affiliation), Croatia above average participation / below average affiliation) and Poland (below average participation / above average affiliation).

The dominant pattern across the otherwise very different countries is a less alarming outcome if correction for affiliation is applied. It is important to note that the age group was controlled for, because the expected result, that organisation members should generally be more aware of discrimination and similar experiences faced by the LGBTI community, may be masked by the fact that members also belonged to an older age group in relatively frequent cases, in which certain types of incidents (e.g. physical attacks) are less prevalent.

In summary, the propensity weighting component developed and tested shows generally desirable properties for an affiliation adjustment weight, indicating its validity.

8.3.3 Trimming of weights

- **Step 6.** The benchmark and propensity weights were trimmed.

The implementation of the weighting strategy resulted in some very large and very small weights. An inspection of the distribution of weights obtained in their standardised form (i.e. average equals 1.0) was the best starting point for weighting decisions.

Trimming rules based on percentiles (such as 95th or 99th) or on median and interquartile information did not seem adequate because the weighting procedure usually assigned only 12 different weight values per country. This resulted in a frequently large number of respondents with the same weight.

A better approach is to decide on specific values for maximum and minimum weights with a preference for a symmetrical solution, where the lowest accepted weight equals the inverse (1/*x*) of the highest accepted weight.

To avoid an excessive influence of some respondents' answers on the analysis it was decided that no respondent should have more than 10 times the average weight. Vice versa, for the lowest weights, no participant should have their influence on results reduced to a weight below 0.1 times of the average weight. These weights were allowed to have values beyond typical limits in survey research (4 or 5) because concerns about inflating variance and standard errors are less relevant in the case of a non-probability survey. The weight distribution was free of values outside the interval 0.1–10 in the majority of countries (with the exception of Czechia, Spain, Poland and Portugal). The process ([31]) was used for re-standardising the new weights:

1. weights above the defined upper limit were assigned the upper limit as their new value;

2. the new sum of weights to be contributed by the remaining weights was distributed evenly among them with the help of a constant factor applied to them;

3. weights below the defined lower limit were assigned the lower limit as their new value;

4. the new sum of weights to be contributed by the remaining weights above the lower limit but also below the upper limit was distributed evenly among them with the help of a constant factor applied to them.

In this process, the assigned upper and lower limit weights remained untouched by the re-adjustment of the weights in between, which also represents the re-standardisation of the new weights to an average of 1. Trimming was applied to the following stages:

1. within-country benchmark weights were trimmed before being multiplied by propensity weights for organisation affiliation;

2. final country-level weights.

8.3.4 Derivation of country-level and EU-level weights

- **Step 7.** The final weights were obtained for each individual in a country per stratum as the product of trimmed propensity weights and base weights: $w\_coun = w\_b_{i,j,k} * w\_p_{i,j,k}$, where $w\_b_{i,j,k}$ is the benchmark weight and $w\_p_{i,j,k}$ is the affiliation weight.

Once country weights had been calculated, the distribution of the weights was inspected. The values of the weights across all countries and strata ranged from 0.05 to 16.16, meaning that trimming should be applied to achieve a distribution free of extreme values. The

([31]) Kalton, G. & Flores-Cervantes, I. (2003).

approach described in Section 8.3.3 was used. Trimming was applied to seven countries where the maximum weight value exceeded 10 (Czechia, France, Italy, Poland, Portugal, Spain and Romania). Table 25 shows the country weights per LGBTI and age category after trimming. EU-level weights (for the 28 EU Member States) were calculated considering the proportional distribution of the national samples to the estimated target population of each country.

To obtain the EU-level weights, the following sequence of calculations was undertaken:

- **step 1** – the target LGBTI population per country is divided by the total target LGBTI population across all countries:

$$r3_i = n\_t_i / n\_t$$

where

  - n_t refers to the estimated target population;
  - $i = 1, ..., 28$ denotes the country;

- **step 2** – the total sample achieved at country level is divided by the total sample achieved across all countries:

$$r4_i = n\_s_i / n\_s$$

where

  - n_s refers to the achieved sample;
  - $i = 1, ..., 28$ denotes the country;

- **step 3** – the final EU weight assigned to each country is derived as the ratio of the outcome of step 1 to the outcome of step 2:

$$w_{EU_i} = r3_i / r4_i;$$

- **step 4** – to calculate indicators at EU level, the EU weights of each country were multiplied by the country level weights mentioned previously after those were trimmed:

$$w_{EU\_FINAL_i} = w_{EU_i} * w_{country_{i,j,k}}.$$

Analogically, weights were calculated for all countries included in the EU LGBTI II survey (abbreviated as EU-30) and for the EU without the United Kingdom (abbreviated as EU-27 – from February 2020) (Table 25).

Weights for obtaining EU averages should not be trimmed, and should therefore be excluded from the process.

Table 25. EU final weights per LGBTI category and age class (1)

Country	Gay		Lesbian		Bisexual men		Bisexual women		Trans		Intersex
	15–34	35+	15–34	35+	15–34	35+	15–34	35+	15–34	35+	15+
AT	0.71	1.25	0.93	1.74	2.86	4.52	1.70	5.13	0.71	3.08	3.38
BE	0.78	0.94	1.11	1.90	3.05	4.76	2.19	5.35	0.64	2.85	2.72
BG	0.44	1.82	0.96	6.63	0.89	2.67	1.45		2.91		3.33
HR	0.57	1.69	1.59		1.91		1.24		1.85		2.04
CY	0.52	0.98	1.65		2.79		1.85		2.14		1.04
CZ	0.46	1.63	0.92	16.55	1.82	4.98	1.79		0.71	11.86	3.20
DK	1.01	0.98	1.32	1.36	2.42	2.98	1.88	3.86	0.61	2.73	3.98
EE	1.18	4.51	1.27		3.58		0.62		1.09		2.34
FI	2.14	3.57	0.71	3.14	3.70	7.70	0.68	2.54	0.25	2.27	5.38
FR	0.69	1.08	0.70	2.95	2.31	4.19	1.25	10.79	0.51	7.64	4.88
DE	0.72	1.20	0.89	1.78	2.16	3.59	1.99	6.60	0.49	3.06	3.37
EL	0.57	1.29	0.86	4.03	1.32	3.88	0.69	8.31	0.68	8.00	1.84
HU	0.61	2.44	0.61	6.88	2.16	8.04	0.58	9.05	0.60	7.59	2.95
IE	0.85	1.28	0.94	1.70	1.62	3.52	1.02	5.66	0.66	5.46	3.45
IT	0.62	1.19	0.65	2.99	1.94	4.06	0.96	9.41	0.74	12.01	2.34
LV	0.71	2.43	1.45		1.95		0.88		1.26		3.83
LT	0.81	5.11	1.82		2.47		0.66		1.67		1.41
LU	0.60	0.81	0.70	1.21	2.60		1.97		1.55		3.08
MT	0.79	1.23	0.59	1.95	4.68		1.41		1.56		1.50
NL	0.80	0.87	1.87	2.36	2.17	3.08	2.30	5.02	0.62	3.01	2.17
MK	0.60	2.48	1.54		1.44		1.20		1.94		1.02
PL	0.81	3.37	1.02	10.24	2.41	17.83	0.79	14.72	0.74	20.54	3.07
PT	0.42	1.06	1.42	5.73	1.03	2.20	1.43	10.64	0.77	13.03	1.84
RO	0.68	3.80	0.68	7.77	1.25	4.11	0.87		0.61	11.79	1.26
RS	0.50	2.06	0.86	4.23	1.23	3.62	1.40		1.77		1.03
SK	0.62	1.73	0.88	6.28	2.84		1.05		2.48		1.29
SI	0.53	1.49	1.62		2.42		1.57		2.92		3.13
ES	0.62	2.05	0.86	5.77	0.98	7.97	0.41	8.22	0.57	18.44	5.29
SE	1.07	1.19	1.38	2.57	1.97	2.10	1.87	3.17	0.38	2.02	3.45
UK	1.17	1.41	0.73	2.31	2.60	3.70	0.89	4.00	0.43	2.06	3.09

Note: (1) Cases highlighted in yellow denote cells that have been merged due to small sample size.

8.3.5 Weighting data from the FRA 2012 LGBT survey

An important part of the analysis was the comparison of the results of the 2019 survey with those of the previous survey wave in 2012. The following differences between the waves should be considered when working with the 2012 survey:

- it covered 28 countries as compared with the 30 countries covered by 2019 survey (North Macedonia and Serbia were not part of the 2012 survey);
- it did not cover intersex people;
- it covered people aged 18 and over as compared to the 2019 survey's coverage of people aged 15 years and over.

The 2019 and 2012 samples had different distributions of LGBT and age categories (see Table 26). The most prominent feature of the 2012 sample is a strong (over-)representation of gay respondents, which accounted for 62 % of the LGBT full sample. The 2019 full sample was more successful in reaching a large number of bisexual and trans respondents – but only in the younger age group (18–34 years). For example, the proportion of young trans people recruited was twice as high in 2019 as in 2012 – a fact, that would be likely to distort any comparisons without weighting adjustments.

To account for such imbalances, both samples were weighted in the best possible way to match the estimated population proportions. The weighting strategy applied for the 2019 sample was applied to the 2012 sample. This strategy was perceived as the best possible approach for weighting the 2012 dataset for the purposes of comparison, as it removes both samples' particularities as much as possible, being oriented towards the estimated population benchmarks. However, some adjustments were necessary. Most importantly, it was not possible to calculate the affiliation weight component for the 2012 sample. The relevant questions for the derivation of this component were not included in the 2012 questionnaire.

Applying the population benchmark strategy to the 2012 dataset

The fact that respondents aged 15–17 years were not part of the 2012 survey means that special benchmarks for the 18–34 age group needed to be defined prior to the weighting for comparisons. Thus, the first step required is the estimation of population benchmarks for the target population in 2012.

The published results of the APS (2012) were again used as a basis for the estimation of age/sexual orientation proportions. The survey provides results for the percentage of the target population broken down by LGBT category and age groups (namely 16–24, 25–34, 35–49, 50–64, 65+). The following steps were taken to derive

Table 26. Participant distributions in FRA LGBT survey samples for the 2012 and 2019 waves (28 countries)

LGBT and age category	2012		2019	
	Number	Percentage	Number	Percentage
Gay 18–34	33 331	35.8	32 688	27.8
Gay 35+	24 426	26.2	22 019	18.7
Lesbian 18–34	10 667	11.5	13 949	11.8
Lesbian 35+	4 260	4.6	5 627	4.8
Bisexual men 18–34	4 295	4.6	6 045	5.1
Bisexual men 35+	2 905	3.1	2 187	1.9
Bisexual women 18–34	5 481	5.9	17 546	14.9
Bisexual women 35+	943	1.0	1 854	1.6
Trans 18–34	3 940	4.2	12 703	10.8
Trans 35+	2 831	3.0	3 142	2.7
Total	**93 079**	**100**	**117 760**	**100**

Note: numbers of participants and percentages shown for the 28 countries included in both waves. Green shading indicates substantially higher relative representation of a group compared with the other sample; orange shading indicates substantially lower representation of a group.

estimates of proportions for the target population for the two age bands: 18–34, 35+.

1. Official population statistics per age group (18–24, 25–34, 35–49, 50–64, 65+) were retrieved for the United Kingdom's population in 2012 from Eurostat ([32]).

2. The percentages provided by the APS (2012) were multiplied by the population in the respective age groups, thus deriving the number of the LGBT people in the United Kingdom per age group. The assumption was made that the proportion given by the APS for the age group 16–24 holds for the age group 18–24; therefore, it was applied to the population in the age group 18–24.

3. UK estimates for the LGBT target population in the five age bands were aggregated to achieve the number of LGBT people in the United Kingdom in the two targeted age bands (18–34, 35+).

4. Estimations of the proportions of the population that identify as lesbian and as bisexual women were derived as the ratio of the lesbian and bisexual female population per age group to the female population in each age group (18–34, 35+). Similarly, estimations of the proportions of the population that identify as gay and as bisexual men were derived as the ratio of the gay and bisexual male population per age group to the male population in each age group (18–34, 35+). An estimation of the proportion of trans people in the total population was derived in the same way.

Again, the other studies were complementarily used to adjust the total LGBT percentages provided by the APS (2012), as described in Section 2.1. The final adjusted estimates are provided in Table 27.

Based on the proportions calculated per LGBT category and age class, the same estimation process as detailed in Section 2.1 was further applied to derive estimates

Table 27. Estimation of the proportion of LGBT target population per age group/category based on the studies identified

LGBT category	Age category	Estimates from APS (2012) (%)	Weighted average from surveys	Correction factor	Adjusted final estimates (%)
Gay	18–34	3.31	2.29	1.01	3.34
	35+	1.83			1.85
	Total	2.27			2.29
Lesbian	18–34	1.69	1.16	1.05	1.77
	35+	0.88			0.92
	Total	1.11			1.16
Bisexual men	18–34	0.91	0.70	1.39	1.26
	35+	0.34			0.47
	Total	0.51			0.70
Bisexual women	18–34	1.61	1.10	1.20	1.92
	35+	0.65			0.77
	Total	0.92			1.10
Trans	18–34	0.37	0.29	0.63	0.23
	35+	0.50			0.31
	Total	0.46			0.29

Note: the averages of the estimates excluded obvious outliers on per case bases. Layte (2006) was excluded because of the low estimate given for lesbian women. For gay men, Sandfort (2001) and IFOP (2017) did not give estimates for this category, and estimates by IFOP (2011) and IFOP (2014) were considered too high. Vanwesenbeeck (2010) was excluded from the calculation of the weighted average of bisexual men and bisexual women due to high estimates. For trans people, APS (2017) and Natsal-3 (2012) were used for the estimates.

([32]) Eurostat population statistics (https://ec.europa.eu/eurostat/web/population-demography-migration-projections/data/database), code: demo_pjan. Data extracted in September 2019.

of the target population size for each stratum (i.e. LGBT category and age group) for each country, using official population statistics for 2012.

Having calculated estimates for the 2012 target population, the same weighting and trimming approach as used for the 2019 dataset was followed, using the strata of LGBT categories and 18–34 and 35+ age bands. Where population data were required to be used, e.g. for derivation of EU weights, the official population statistics for 2012 from Eurostat were used.

For reasons of consistency and comparison between samples from the two survey waves, weights were also recalculated for the 2019 dataset considering only the subset of the sample including people aged 18 years and over, LGBT categories (excluding intersex) and 28 countries (excluding North Macedonia and Serbia). Again, the same weighting approach was applied across the strata: LGBT groups and age band (18–34, 35+).

8.3.6 Overview of the weights

This section presents an overview of the final weights used for the calculation of the indicators.

The weighting approach aimed to provide improved results at:

- **country level** – weights assigned to each respondent in the sample within each country correcting for differences in the LGBTI and age composition within the surveyed countries;
- **EU level** – weights accounting for the representation of each country in the EU level calculations, thus ensuring that the respondents from each country are represented proportionally to the country's target population size ([33]).

Country-level indicators were calculated using only the country-level weights. To calculate indicators at EU level, these weights were multiplied by the additional EU-level weights.

Table 28 provides a summary of the weighting variables used in the LGBTI II survey SPSS datasets. Other weighting variables were used in intermediate calculations.

([33]) With special treatment of the United Kingdom in the calculation of EU-averages (two aggregates including and excluding the United Kingdom).

Table 28. Weighting variables in the dataset used in the calculations ([1])

Name of variable in the dataset	Description of the variable	Description of the use of variables in calculations
BENCH_WEIGHT	Benchmark within country weight (SPSS)	Untrimmed benchmark weight (intermediate variable)
AffiWT	Affiliation weight (SPSS)	Propensity weight calculated from logistic regressions based on affiliation standardised and trimmed (intermediate variable)
BENCHWT	Benchmark within country weight trimmed	Trimmed benchmark within country weight (range 0.1–10.0) (intermediate variable)
BENAFFWT	**Country level weight (SPPS)**	**Country-level (benchmark ´ propensity combination) weights standardised and trimmed (range 0.1–10.0) used for derivation of indicators at country level**
EU30_WEIGHT	EU-30 country weight (SPSS)	EU-30 country weight (intermediate variable)
EU28_WEIGHT	EU-28 country weight (SPSS)	EU-28 country weight (intermediate variable)
EU27_WEIGHT	EU-27 country weight (SPSS)	EU-27 country weight (intermediate variable)
BENAFFWTEU30	**EU-30 country weight FINAL**	**Product of EU-30 weight, benchmark and propensity weight (after trimming) (FINAL), used for derivation of indicators at EU-30 level**
BENAFFWTEU28	**EU-28 country weight FINAL**	**Product of EU-28 weight, benchmark and propensity weight (after trimming) (FINAL), used for derivation of indicators at EU-28 level**
BENAFFWTEU27	**EU-27 country weight FINAL**	**Product of EU-27 weight, benchmark and propensity weight (after trimming) (FINAL), used for derivation of indicators at EU-27 level**
BENCH_WEIGHT_2012	Benchmark within country weight for 2012 (SPSS)	Untrimmed benchmark weight for comparison of 2019 and 2012 data (intermediate variable)
BENCH_WEIGHT_ trim_2012	Trimmed benchmark within country weight for 2012 (SPSS)	Trimmed benchmark weight used for the derivation of 2019 and 2012 indicators at country level (intermediate variable)
EU28_WEIGHT_2012	EU-28 country weight for 2012 (SPSS)	EU-28 country weight for comparison of 2019 and 2012 data (intermediate variable)
EU27_WEIGHT_2012	EU-27 country weight for 2012 (SPSS)	EU-28 country weight for comparison of 2019 and 2012 data (intermediate variable)
BENEU28_2012	EU-28 country weight for 2012 FINAL (SPSS)	Product of EU-28 weight and benchmark weight (after trimming) (FINAL), used for derivation of indicators at EU-28 level for comparisons between 2012 and 2019
BENEU27_2012	EU-27 country weight for 2012 (SPSS)	Product of EU-27 weight and benchmark weight (after trimming) (FINAL), used for derivation of indicators at EU-27 level for comparisons between 2012 and 2019

Note: ([1]) Weights in bold are included in the anonymized dataset.

Annexes

Annex A List of studies used in the target population estimation exercise

1. APS, 2017: Office for National Statistics, *Experimental Statistics on Sexual Orientation in the UK*, Annual Population Survey, Office for National Statistics, London.

2. APS, 2012: Office for National Statistics, *Experimental Statistics on Sexual Orientation in the UK*, Annual Population Survey, Office for National Statistics, London.

3. Natsal-3, 2012: University College London, London School of Hygiene & Tropical Medicine, NatCen Social Research, Health Protection Agency and University of Manchester, National Survey of Sexual Attitudes and Lifestyles (Natsal-3), University College London, London.

4. Layte, R., 2006, *The Irish Study of Sexual Health and Relationships*, Crisis Pregnancy Agency and Department of Health and Children, Dublin.

5. Vanwesenbeeck, I., Bakker, F. and Gesell, S., 2010, 'Sexual health in the Netherlands: main results of a population survey among Dutch adults', *International Journal of Sexual Health*, Vol. 22, No 2, pp. 55–71.

6. Sandfort, T. G. M., de Graaf, R., Bijl, R. V. and Schnabel, P., 2001, 'Same-sex sexual behavior and psychiatric disorders: findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS)', *Archives of General Psychiatry*, Vol. 58, No 1, pp. 85–91.

7. IFOP (Institut d'études opinion et marketing en France et à l'International), 2017, *To bi or not to bi? Enquête sur l'attirance sexuelle entre femmes*, IFOP, Paris.

8. IFOP (Institut d'études opinion et marketing en France et à l'International), 2016, *L' observatoire de la vie sexuelle des Parisiens: Le sexe à Paris*, IFOP, Paris.

9. IFOP (Institut d'études opinion et marketing en France et à l' International), 2011, *Le profil de la population gay et lesbienne en 2011*, IFOP, Paris.

10. Haversath, J., Gärttner, K. M., Kliem, S., Vasterling, I., Strauss, B. and Kröger, C., 2017, 'Sexual behavior in Germany', *Deutsches Ärzteblatt International*, Vol. 114, Nos 33–34, pp. 545–550.

Annex B Communication channels / Pride event visibility / advertisements

B.1 Communication channels

B.1.1 Austria

Xtranews
pride.at
ggg.at
Vangardist
Gay in Vienna
Lambda
HOSI Wien
Queer Youth Cafe Hosi
HOSI Linz
HOSI Salzburg
HOSI Tirol
Vienna Pride
EuroPride 2019 Vienna
Afro Rainbow
Regenbogenball
Lifeball
AGPRO
Familien Andersrum
Gay Cops Austria
ORQOA Oriental Queer
Queeramnesty Austria
Queer Base
Rosa Lila Panther
Trans Austria
VIMOe
Tuntenball Graz
Queeriosity
Transx
VisiBIlity
Sportverein Aufschlag
Queer Book
Queer as deaf
Türkis Rosa Lila
CSD Innsbruck
CSD Graz

B.1.2 Belgium

GUSMEN (media)
ZIZO media
Belgian Pride
RainbowHouse
cavaria
Arc-en-ciel Wallonie
Antwerp Pride
Brussels Gay Sport
Genre d'a coté
Mannekenfish
wel jong niet hetero
Merhaba
Belgian Business Association
Rainbow Cops
L-day (by Folia)
Genderstichting.be
Intersex Belgium
Mr Bear Belgium

B.1.3 Bulgaria

Bilitis
TIA Group
HUGE.BG
GLAS
Single step
LGBT Deystvie
Sofia Checkpoint
HUB Center
LGBT Plovdiv
LGBT – Blagoevgrad
Sofia Queer Forum
Magazine 79
Sofia Pride

B.1.4 Croatia

Zagreb Pride
Queer Zagreb Udruga/Domino
Rispet/LGBT Udruga Split
Centar za LGBT ravnopravnost
LGBT Centar Split
Udruga Lori
Lezbijska grupa Kontra
Trans Aid
Druga Rijeka
Queer Zagreb Udruga
Iskorak
Dugine obitelji
CroL.hr

B.1.5 Cyprus

Accept CY
Envision Diversity Association
Antivirus magazine
LGBT+ and Friends (UCY student club)
EMU Unicorn LGBTQ
Queer Cyprus Association
LGBT Rights Cyprus

B.1.6 Czechia

LUI Magazine
Nakluky.cz
Iboys.cz
Igirls.cz
Prague Pride
Charlie
PROUD
Queer Geography
eLnadruhou
STUD
Lesba.cz
Honilek.cz
Queer Shop
004.cz
Doodles
Trans*Parent
LGBTQ věřící
Pražská buzna
Stejná rodina
FreshGayMag
Papagay
Hate Free Culture
Mezipatra Queer Film Festival
Club Termix
Q Café
Café–Café
Celebrity Café
Le Clan Prague
ČSAP
Pioneer Prague

B.1.7 Denmark

Out & About
Homotropolis
XQ28
Gaymagz
Boyfriend
LGBT Danmark
LGTB+ Ungdom
Sabaah
LGBT Asylum
AIDS-Fondet
Sex & Samfund
Female Oxygen
Intersex Danmark
Bigruppen
Transpolitisk Forum
Foreningen til støtte for transkønnede børn
Copenhagen Pride
Happy Copenhagen
Pan Idræt
BLUS
MIX Copenhagen
T-Lounge Society
Aarhus Pride
Proud Filmfestival
Tribaderne
Aalborg Pride
Lambda
ES'GAY'P

B.1.8 Estonia

Eesti LGBT Uhing
Baltic Pride
Tallin Pride
Festheart

B.1.9 Finland

Seta
Transtukipiste
Trasek
HeSeta
Helsinki Pride
Sateenkaariperheet
Pirkanmaan Seta
Turku Pride
Turun seudun Seta
Aland Pride
Oulun Seta
Rovaniemen Seta
Pohjois – Savon Seta
Lahden Seta
Tampere Pride
Hivpoint
QX.fi

B.1.10 France

Garçon magazine
Garçon voyage
Qweek
Codesdegay
GayVox
Nordik magazine
YAGG (LGBT media)
Gaypers
KOMTID (LGBT media)
Jeanne magazine (LES)
Barbiturix (LES)
TETU
National Transgender Association
Federation LGBTI
Centre LGBT Paris
CLF Lesbian Coordination France
Homosexual Muslims France
SOS homophobie
Centre LGBTI Lyon
Marche Fierté Lyon
Fiertés Paris /InterLGBT
Fierte Montpellier
Pride Lille
Pink Parade / AGLAE
Euro Gay ski week
Associciation des Familles Homoparentales
APGL Parents and Future Parents Association Gay and Lesbian
PsyGay
David et Jonathan
Gay Lib
HES Socialites LGBT+
Lyon Centre LGBTI
ADHEOS
Flash into Fouffes
Inter-LGBT
Les Enfants d'Arc en Ciel, l'asso
ACTHE Association
Defenseur des Droits (generic)
MAG Jeunes LGBT
Chrysalide ASSO
Stop Homophobie
OII Francophonie

B.1.11 Germany

blu.fm/Männer
queer.de
L-Mag
siegessaeule.de
Straight Magazine
phenomenelle.de
gendertreff.de
Enough is Enough
VelsPol Trans
VelsPol
Queer Refugees Groups
Rainbow Refugees Groups
Bundesverband Trans
Akademie Waldschlösschen
Jugend im Waldschlösschen
Gladt e.V.

Lesbenring
LSVD
TransinterQueer
Deutsche Aidshilfe
Transmann
Magnus Hirschfeld Stiftung
Maneo
LesMigras
Transberatung Düsseldorf
SUB München
Trans Ident
Intersexuelle Menschen e.V.
Jugendnetzwerk Lambda
Rosa Alter
Lesben und Alter
CSDs
TransPride Cologne
Sport Clubs

B.1.12 Greece

Antivirus Magazine
OLKE
Colour Youth
Athens Pride
Thessaloniki Pride
Lgbtqi+ Refugees
Trans Association (SYD)
Rainbow School
Fat Unicorns
Blender Patras
T-Zine
Lesbian.gr
10 Percent
11528 helpline
Proud Seniors Greece
Rainbow Families
Proud Parents
LGBT people with disabilities

B.1.13 Hungary

Humen
Budapest Pride
Influencer – Maris
Influencer – Olivér Pusztai
Nyitottak Vagyunk
Labrisz
Transvanilla
Magyar LMBT Szövetség
Szimpozion
qLit

B.1.14 International

ILGA Europe
OII Europe
TGEU Europe
EGPA
ELC
IGLYO
EPOA
NELFA
Gay Star News
Grindr
PlanetRomeo
Lesarion
DBNA
Gaydar and GaydarGirls
Google

B.1.15 Ireland

Cara-Friend
BeLonGTo
TENI – Transgender Equality Network Ireland
Outwest
OutInFront
Dublin Pride
Cork Pride
Galway Pride
Amach LGBT Galway
Cork Gay Project
G-Force
LGBT Pavee
Labour LGBT
Loving Our Out Kids
National LGBT Federation
LINC
Gaire
Outhouse
Gay Cork

GCN media
LGBT Ireland
Gay Switchboard Ireland
Dublin Lesbian Line
HIV Ireland
Greenbow Deaf
Love Equality NI
Queer Diaspora
MASI – Movement of Asylum Seekers in Ireland

B.1.16 Italy

Gay.it
Gaypost.it
Cassero LGBTI Center
CCO Mario Mieli
I Sentinelli
Lezpop
Jump LGBT
Intersexioni
Agedo

B.1.17 Latvia

Association of LGBT and their Friends Mozaica
Baltic Pride
Pride.lv

B.1.18 Lithuania

LGL – Lithuanian Gay League
Baltic Pride
Gayline.lt
LGBT Friendly Vilnius
Tolerant Youth Association – Tolerantiško Jaunimo Asociacija

B.1.19 Malta

We Are – The University of Malta LGBT Society
ARC Malta
Malta Pride
LGBT Labour (Malta)
Queer Malta
Gay-Straight Alliance MCAST
LGBTI+ Gozo
Lovin Malta

B.1.20Netherlands

Amsterdam Pride
Utrecht Canal Pride
Rotterdam Pride
Amsterdam Trans Pride
COC Nederland (including all)
Roze in Blauw
Work Place Pride
Bundesintersenvertretung schwuler Senioren
Landelijk Netwerk Biseksualiteit (LNBi)
EduDivers
Embrace Pink
Stichting Transman
Transman.nl
IHLIA
Meer dan Gewenst
Netwerk Roze FNV
RozeLinks
De Kringen Utrecht
Joopea
NNID, Nederlandse organisatie voor seksediversiteit
Transgender Netwerk Nederland
Nederlandse Klinefelter Vereniging
Expreszo
Colour Ground
Stichting Maruf
Veilige Haven
Haardvuuravond
CHJC
Zonder Stempel
Secret Garden
Respect2Love
De Kringen
Vereniging Genderdiversiteit
Netwerk Mirre
Verliefde Jongens
Plattelandskring Twente
WINQ NL
Gay.nl
Gay News
Girls Like Us
ZijaanZij.nl

B.1.21 North Macedonia

Coalition Margini
LGBT United – Tetovo
LGBTI Center
Skopje Pride Week
Women's Alliance
Regional Lesbian Forum (LEZFEM)
Web for Protection against Discrimination
Subversive Front
Queer Macedonia
Association for Cultural and Media Activism QUEER SQUARE Skopje
Zaokruzi 20 (Do not judge whom you love)
TransFormA
HERA

B.1.22 Poland

Kampania Przeciw Homofobii
Replika
Trans-Fujza
Lambda Warszawa
Fabryka Rownosci
Akceptacja
Tolerado
Warsaw Pride – Parada Rownosci
Milosc nie wyklucza
Queer.pl
Homiki.pl
Grupa Stonewall

B.1.23 Portugal

Portugal Gay
Pois
Dezanove
Variacoes
ILGA Portugal
Caleidoscopio
Rede Ex Aequo
NuPride
Panteras Rosa
Clube Safo
AMPLOS
Rumos Novos
BJWHF

B.1.24 Romania

Accept
Pride Romania
Cluj Pride
Mozaiq
LGBTeam
TRANSForm
Campus Pride Bucuresti
Info Gay Magazine Romania
Lesbiene – LA Start
Departamentul Rainbow Romania
Act-Q Romania

B.1.25 Serbia

Da se zna
Labris
Gayten LGBT
EGAL
XY Spectrum
Come Out
GLIC (Merlinka Festival)
As Centar
Red Line
Rainbow
Pride Info Center
Roma Women of Vojvodina
Romyako Illo
FemSlam
AutujSe
Yucom
Optimist
SOS consultations for lesbians
Praxis

B.1.26 Slovakia

Ganymedes
Gay Christians Slovakia
Lesba
Filmovy Festival Inakosti
Q Centrum
Inakost
Slovenská Pride
Nakluky.cz

Iboys.cz
Igirls.cz
Prague Pride
Club Termix
LUI Magazine
Proud
Honilek.cz
004.cz
Fresh Gay Magazine
Papagay
Hate Free Culture
Mezipatra Queer Film Festival
Transfúzia
Pride Košice

B.1.27 Slovenia

Ljubljana Pride
Kvartir
Legebitra
Društvo DIH
Zavod TransAkcija
ŠKUC Magnus
Sekcija ŠKUC LL
LFU (Organization Lesbians/Trans)
Revija Narobe
Gejm (part of Revija Narobe)
Mavricni (LGBT forum)
Medoti (Facebook group)
Red Dawns (Rdece zore)
Klub Tiffany / ŠKUC – Kulturni Center
Out in Slovenia
s
Društvo LINGSIUM

B.1.28 Spain

Shangay
MagLes
Ella Festival
In & Out Radio
Mr Gay Pride España
Liga Fulanita
Maspalomas Pride
Pride Torremolinos
ARN C&B Pride
Pride Barcelona
Madrid Pride
Federación Española de Lesbianas, Gais, Trans y Bisexuales (FELGTB)
Colegas – Confederación Española LGBT
Fundación Triángulo
AET – Asociación Española de Transexuales
Colectivo LGTB+ de Madrid
Col.lectiu Gai de Barcelona
Casal Lambda Barcelona
Col.lectiu LGTB de Valencia

B.1.29 Sweden

SFQ
European Centre for Disease Prevention and Control
Arab Initiative
HBT Liberaler
PostHIVA grupen
EKHO
Tupilak
FPES
Intersex People of Sweden
Malmo Pride
RFSL
QX
West Pride – Göteborg
Foreningen KIM, Kon-Identitet-Mangfald
Stockholm Pride
Qruiser.com

B.1.30 United Kingdom

Birmingham LGBT
Intersex UK
Kaleidoscope Trust
Galop
Mosaic
LGBT History Month
The Proud Trust
LGBT Youth Scotland
LGBTI Solidarity for Peoples of Turkey
Stonewall
Stonewall Scotland
One Body One faith
UK Black Pride

Imaan
UK Lesbian and Gay Immigration Group
National LGBT Police Network
Scottish LGBTI Police Association
Mermaids
Gendered Intelligence
Switchboard
GIRES
Press For Change
UKPON
LGBT Consortium
PinkNews
G3 magazine
Rainbow Project
Scottish Trans Alliance
Fyne Times
The F Word
Diva Magazine
EDF – Equality and Diversity Forum
Gay Star News
Lancashire LGBT
TMSA UK
LGBT Foundation
LGBT Youth Scotland
myGwork LGBT+ Business Community
Lesbians and Gays Support the Migrants
Equality Network
Bicon – conference about bisexuality
Student Pride
Mind Out

B.2 Distribution / presence at Pride events

AUSTRIA

EuroPride Vienna / Human rights conference

BULGARIA

Balkan Pride exhibition

Sofia Pride

CROATIA

Zagreb Pride

CYPRUS

Cyprus Pride

CZECHIA

Prague Pride

DENMARK

Copenhagen's LGBTI community gathering for midsummer

ESTONIA

Baltic Pride

FINLAND

Helsinki Pride Week

FRANCE

Pride Paris

GERMANY

Cologne Pride

GREECE

Athens Pride

Thessaloniki Pride

HUNGARY

Budapest Pride

ITALY

Roma Pride

LATVIA

Baltic Pride

LITHUANIA

Baltic Pride

LUXEMBOURG

Luxembourg Pride Week

NORTH MACEDONIA

Skopje Pride Week

POLAND

Warsaw Pride

PORTUGAL

Lisbon Pride

ROMANIA

Bucharest Pride

Cluj Pride

SERBIA

Pride Parade Serbia

SPAIN

Torremolinos Pride

Madrid Pride

UNITED KINGDOM

London Pride

Bristol Pride

B.3 Print advertisements

GREECE

Antivirus Magazine full page

HUNGARY

Humen magazine full page

SPAIN

Shangay magazine

CZECHIA AND SLOVAKIA

LUI magazine

POLAND

Replika magazine full page

Annex C Data collection

C.1 Realised sample per country

Table C1. Realised uncleaned ([a]) and cleaned sample per country of residence, uncleaned sample broken down by respondent category and age group ([b])

Country	Respondent category	Age group			Total (LGBTI group), uncleaned	Total (LGBTI group), cleaned
		15–34	35–54	55+		
Austria	Lesbian	277	156	26	459	457
	Gay	676	394	70	1 140	1 122
	Bi (woman)	222	41	4	267	264
	Bi (man)	86	27	13	126	123
	Trans	235	76	18	329	326
	Intersex	13	12	1	26	23
	Total (age group)	1 509	706	132	2 347	2 315
Belgium	Lesbian	276	159	31	466	460
	Gay	702	565	140	1 407	1 394
	Bi (woman)	204	42	6	252	250
	Bi (man)	91	35	9	135	133
	Trans	302	97	19	418	416
	Intersex	16	16	5	37	33
	Total (age group)	1 591	914	210	2 715	2 686
Bulgaria	Lesbian	184	38	0	222	220
	Gay	755	245	4	1 004	995
	Bi (woman)	288	15	0	303	303
	Bi (man)	188	50	3	241	240
	Trans	108	10	0	118	118
	Intersex	14	11	1	26	18
	Total (age group)	1 537	369	8	1 914	1 894
Croatia	Lesbian	132	30	0	162	159
	Gay	354	140	7	501	496
	Bi (woman)	200	16	0	216	214
	Bi (man)	76	18	2	96	94
	Trans	92	17	1	110	108
	Intersex	13	5	2	20	17
	Total (age group)	867	226	12	1 105	1 088
Cyprus	Lesbian	72	16	1	89	85
	Gay	241	112	7	360	359
	Bi (woman)	76	8	0	84	84
	Bi (man)	27	6	3	36	36
	Bi (sex unspecified)	2	0	0	2	
	Trans	44	6	1	51	49
	Intersex	14	5	1	20	17
	Total (age group)	476	153	13	642	630

Country	Respondent category	Age group			Total (LGBTI group), uncleaned	Total (LGBTI group), cleaned
		15–34	35–54	55+		
Czechia	Lesbian	390	29	2	421	420
	Gay	1 454	524	38	2 016	2 004
	Bi (woman)	482	15	0	497	493
	Bi (man)	190	45	11	246	242
	Bi (sex unspecified)	1	0	0	1	
	Trans	334	36	3	373	366
	Intersex	30	10	3	43	37
	Total (age group)	2 881	659	57	3 597	3 562
Denmark	Lesbian	196	171	48	415	413
	Gay	465	407	162	1 034	1 025
	Bi (woman)	204	50	5	259	256
	Bi (man)	98	45	13	156	157
	Bi (sex unspecified)	1	0	0	1	
	Trans	278	74	30	382	374
	Intersex	12	6	1	19	19
	Total (age group)	1 254	753	259	2 266	2 244
Estonia	Lesbian	181	26	0	207	206
	Gay	183	48	7	238	234
	Bi (woman)	440	13	1	454	446
	Bi (man)	47	3	1	51	51
	Bi (sex unspecified)	2	0	0	2	
	Trans	170	18	0	188	187
	Intersex	13	4	0	17	15
	Total (age group)	1 036	112	9	1 157	1 139
Finland	Lesbian	719	176	21	916	907
	Gay	443	242	77	762	751
	Bi (woman)	1 114	165	9	1 288	1 274
	Bi (man)	134	42	4	180	175
	Trans	1 335	231	26	1 592	1 575
	Intersex	23	12	1	36	29
	Total (age group)	3 768	868	138	4 774	4 711
France	Lesbian	2 015	526	62	2 603	2 583
	Gay	3 544	2 259	522	6 325	6 286
	Bi (woman)	1 668	103	12	1 783	1 765
	Bi (man)	550	182	43	775	764
	Bi (sex unspecified)	2	0	0	2	
	Trans	1 744	166	39	1 949	1 934
	Intersex	55	26	7	88	86
	Total (age group)	9 578	3 262	685	13 525	13 418

Country	Respondent category	Age group			Total (LGBTI group), uncleaned	Total (LGBTI group), cleaned
		15–34	35–54	55+		
Germany	Lesbian	1 828	1 092	163	3 083	3 059
	Gay	4 259	2 783	598	7 640	7 580
	Bi (woman)	1 204	223	19	1 446	1 433
	Bi (man)	727	274	80	1 081	1 072
	Bi (sex unspecified)	1	0	0	1	
	Trans	2 166	568	106	2 840	2 815
	Intersex	87	67	14	168	160
	Total (age group)	10 272	5 007	980	16 259	16 119
Greece	Lesbian	475	141	9	625	621
	Gay	1 271	745	77	2 093	2 083
	Bi (woman)	863	49	3	915	909
	Bi (man)	286	78	8	372	365
	Bi (sex unspecified)	3	0	0	3	
	Trans	385	58	11	454	448
	Intersex	56	18	4	78	76
	Total (age group)	3 339	1 089	112	4 540	4 502
Hungary	Lesbian	642	76	3	721	716
	Gay	1 192	351	28	1 571	1 563
	Bi (woman)	1 008	42	1	1 051	1 045
	Bi (man)	172	32	4	208	206
	Bi (sex unspecified)	1	0	0	1	
	Trans	426	58	6	490	486
	Intersex	33	15	0	48	43
	Total (age group)	3 474	574	42	4 090	4 059
Ireland	Lesbian	297	138	33	468	460
	Gay	568	339	82	989	972
	Bi (woman)	403	35	1	439	431
	Bi (man)	155	40	6	201	194
	Bi (sex unspecified)	1	0	0	1	
	Trans	265	44	4	313	305
	Intersex	17	4	1	22	21
	Total (age group)	1 706	600	127	2 433	2 383
Italy	Lesbian	1 382	453	31	1 866	1 853
	Gay	2 663	1 795	376	4 834	4 789
	Bi (woman)	1 385	102	8	1 495	1 481
	Bi (man)	441	146	52	639	627
	Bi (sex unspecified)	3	0	0	3	
	Trans	791	93	18	902	890
	Intersex	87	45	10	142	141
	Total (age group)	6 752	2 634	495	9 881	9 781

Country	Respondent category	Age group			Total (LGBTI group), uncleaned	Total (LGBTI group), cleaned
		15–34	35–54	55+		
Latvia	Lesbian	103	18	0	121	119
	Gay	189	62	2	253	251
	Bi (woman)	191	14	0	205	203
	Bi (man)	51	9	0	60	59
	Trans	95	12	0	107	105
	Intersex	5	1	0	6	6
	Total (age group)	634	116	2	752	743
Lithuania	Lesbian	181	9	0	190	188
	Gay	335	54	4	393	391
	Bi (woman)	536	4	1	541	538
	Bi (man)	85	8	1	94	93
	Trans	154	5	1	160	156
	Intersex	29	2	4	35	32
	Total (age group)	1 320	82	11	1 413	1 398
Luxembourg	Lesbian	48	29	1	78	78
	Gay	102	72	16	190	187
	Bi (woman)	29	10	1	40	38
	Bi (man)	17	4	0	21	20
	Trans	28	8	0	36	35
	Intersex	2	0	1	3	3
	Total (age group)	226	123	19	368	361
Malta	Lesbian	144	43	3	190	189
	Gay	207	118	22	347	342
	Bi (woman)	121	12	3	136	134
	Bi (man)	21	8	1	30	29
	Trans	70	18	3	91	90
	Intersex	14	3	2	19	16
	Total (age group)	577	202	34	813	800
Netherlands	Lesbian	243	143	81	467	459
	Gay	1 020	755	382	2 157	2 128
	Bi (woman)	287	59	16	362	359
	Bi (man)	197	73	27	297	287
	Bi (sex unspecified)	0	1	0	1	
	Trans	464	126	39	629	620
	Intersex	25	24	16	65	61
	Total (age group)	2 236	1 181	561	3 978	3 914

Country	Respondent category	Age group			Total (LGBTI group), uncleaned	Total (LGBTI group), cleaned
		15–34	35–54	55+		
Poland	Lesbian	1 873	209	3	2 085	2 065
	Gay	4 280	1 072	51	5 403	5 335
	Bi (woman)	3 519	105	1	3 625	3 606
	Bi (man)	741	62	3	806	795
	Bi (sex unspecified)	5	0	0	5	
	Trans	1 669	92	2	1 763	1 742
	Intersex	156	25	2	183	175
	Total (age group)	12 243	1 565	62	13 870	13 718
Portugal	Lesbian	279	87	18	384	380
	Gay	1 638	840	100	2 578	2 555
	Bi (woman)	409	35	5	449	444
	Bi (man)	351	122	18	491	482
	Bi (sex unspecified)	1	0	0	1	
	Trans	324	35	5	364	360
	Intersex	53	18	4	75	73
	Total (age group)	3 055	1 137	150	4 342	4 294
Romania	Lesbian	469	53	1	523	521
	Gay	875	186	14	1 075	1 065
	Bi (woman)	873	18	0	891	878
	Bi (man)	246	48	8	302	298
	Bi (sex unspecified)	2	0	0	2	
	Trans	351	32	0	383	372
	Intersex	76	14	1	91	80
	Total (age group)	2 892	351	24	3 267	3 214
Slovakia	Lesbian	369	59	1	429	428
	Gay	960	367	23	1 350	1 344
	Bi (woman)	691	23	1	715	713
	Bi (man)	156	25	2	183	179
	Bi (sex unspecified)	1	0	0	1	
	Trans	197	22	2	221	219
	Intersex	63	11	2	76	72
	Total (age group)	2 437	507	31	2 975	2 955
Slovenia	Lesbian	81	14	1	96	95
	Gay	228	108	7	343	340
	Bi (woman)	99	2	0	101	101
	Bi (man)	39	6	2	47	47
	Trans	40	5	0	45	43
	Intersex	7	0	0	7	7
	Total (age group)	494	135	10	639	633

Country	Respondent category	Age group			Total (LGBTI group), uncleaned	Total (LGBTI group), cleaned
		15–34	35–54	55+		
Spain	Lesbian	2 017	428	30	2 475	2 458
	Gay	5 042	2 096	261	7 399	7 339
	Bi (woman)	6 237	218	9	6 464	6 406
	Bi (man)	1 639	1 66	23	1 828	1 796
	Bi (sex unspecified)	8	0	0	8	
	Trans	1 956	108	22	2 086	2 067
	Intersex	92	25	4	121	114
	Total (age group)	16 991	3 041	349	20 381	20 180
Sweden	Lesbian	210	108	16	334	328
	Gay	502	346	167	1 015	998
	Bi (woman)	224	71	1	296	294
	Bi (man)	138	49	42	229	226
	Bi (sex unspecified)	2	0	1	3	
	Trans	487	112	37	636	632
	Intersex	17	8	2	27	24
	Total (age group)	1 580	694	266	2 540	2 502
United Kingdom	Lesbian	1 890	493	180	2 563	2 453
	Gay	2 105	1 439	493	4 037	3 938
	Bi (woman)	2 285	239	31	2 555	2 453
	Bi (man)	497	168	62	727	693
	Bi (sex unspecified)	4	8	0	12	
	Trans	2 028	506	167	2 701	2 607
	Intersex	65	44	21	130	121
	Total (age group)	8 874	2 897	954	12 725	12 265
North Macedonia	Lesbian	79	7	0	86	86
	Gay	207	49	1	257	254
	Bi (woman)	115	5	0	120	120
	Bi (man)	58	11	1	70	70
	Bi (sex unspecified)	1	0	0	1	
	Trans	47	7	1	55	53
	Intersex	14	4	3	21	17
	Total (age group)	521	83	6	610	600
Serbia	Lesbian	192	48	3	243	241
	Gay	606	172	13	791	788
	Bi (woman)	266	16	1	283	282
	Bi (man)	126	31	2	159	158
	Bi (sex unspecified)	0	1	0	1	
	Trans	154	15	2	171	171
	Intersex	44	10	1	55	51
	Total (age group)	1 388	293	22	1 703	1 691

Country	Respondent category	Age group			Total (LGBTI group), uncleaned	Total (LGBTI group), cleaned
		15–34	35–54	55+		
Total	Lesbian	17 244	4 975	768	22 987	22 707
	Gay	37 066	18 685	3 751	59 502	58 908
	Bi (woman)	25 643	1 750	139	27 532	27 217
	Bi (man)	7 630	1 813	444	9 887	9 711
	Bi (sex unspecified)	41	10	1	52	
	Trans	16 739	2 655	563	19 957	19 669
	Intersex	1 145	445	114	1 704	1 587
	Total (age group)	105 508	30 333	5 780	141 621	139 799

Notes: *([a]) Uncleaned sample refers to the sample before performing any of the data cleaning methods. Bi, bisexual.*

([b]) Due to a small number of respondents who were categorised as bisexual (other), this category was excluded from the cleaned dataset. This concerned 52 cases before data cleaning, down to 27 after the data cleaning.

C.2 Promotional campaigns

Table C2. Description of promotional campaigns

Campaign short name	Country of campaign	Medium	Target	Type	*N*	%
planetromeo_banner_AT	Austria	banner	General	Dating site	17	0.01
planetromeo_banner_BE	Belgium	banner	General	Dating site	31	0.02
planetromeo_banner_BG	Bulgaria	banner	General	Dating site	15	0.01
planetromeo_banner_CZ	Czechia	banner	General	Dating site	3	0.00
planetromeo_banner_DK	Denmark	banner	General	Dating site	8	0.01
planetromeo_banner_EE	Estonia	banner	General	Dating site	3	0.00
planetromeo_banner_DE	Germany	banner	General	Dating site	225	0.16
planetromeo_banner_EL	Greece	banner	General	Dating site	51	0.04
planetromeo_banner_FI	Finland	banner	General	Dating site	7	0.00
planetromeo_banner_FR	France	banner	General	Dating site	82	0.06
planetromeo_banner_HU	Hungary	banner	General	Dating site	68	0.05
planetromeo_banner_HR	Croatia	banner	General	Dating site	22	0.02
planetromeo_banner_IE	Ireland	banner	General	Dating site	1	0.00
planetromeo_banner_IT	Italy	banner	General	Dating site	97	0.07
planetromeo_banner_LT	Lithuania	banner	General	Dating site	3	0.00
planetromeo_banner_LV	Latvia	banner	General	Dating site	4	0.00
planetromeo_banner_MK	North Macedonia	banner	General	Dating site	12	0.01
planetromeo_banner_MT	Malta	banner	General	Dating site	2	0.00
planetromeo_banner_NL	Netherlands	banner	General	Dating site	13	0.01
planetromeo_banner_PL	Poland	banner	General	Dating site	24	0.02
planetromeo_banner_PT	Portugal	banner	General	Dating site	2	0.00
planetromeo_banner_RO	Romania	banner	General	Dating site	38	0.03
planetromeo_banner_RS	Serbia	banner	General	Dating site	30	0.02
planetromeo_banner_ES	Spain	banner	General	Dating site	18	0.01

Campaign short name	Country of campaign	Medium	Target	Type	*N*	%
planetromeo_banner_SE	Sweden	banner	General	Dating site	5	0.00
planetromeo_banner_SI	Slovenia	banner	General	Dating site	9	0.01
planetromeo_banner_SK	Slovakia	banner	General	Dating site	1	0.00
planetromeo_banner_UK	United Kingdom	banner	General	Dating site	4	0.00
orgs_promo_AT	Austria	promo	ORG	ORG	184	0.13
orgs_promo_BE	Belgium	promo	ORG	ORG	15	0.01
org3_promo_BG	Bulgaria	promo	ORG	ORG	634	0.45
org5_promo_CZ	Czechia	promo	ORG	ORG	2 315	1.63
org6_promo_DK	Denmark	promo	ORG	ORG	454	0.32
org8_promo_DE	Germany	promo	ORG	ORG	3 032	2.14
org9_promo_EL	Greece	promo	ORG	ORG	4	0.00
org10_promo_FI	Finland	promo	ORG	ORG	2 773	1.96
org11_promo_FR	France	promo	ORG	ORG	708	0.50
org12_promo_HU	Hungary	promo	ORG	ORG	155	0.11
org13_promo_HR	Croatia	promo	ORG	ORG	2	0.00
org14_promo_IE	Ireland	promo	ORG	ORG	356	0.25
org15_promo_IT	Italy	promo	ORG	ORG	1 042	0.74
org16_promo_LT	Lithuania	promo	ORG	ORG	1 218	0.86
org17_promo_LU	Luxemburg	promo	ORG	ORG	69	0.05
org18_promo_LV	Latvia	promo	ORG	ORG	528	0.37
org19_promo_MK	North Macedonia	promo	ORG	ORG	24	0.02
org20_promo_MT	Malta	promo	ORG	ORG	316	0.22
org21_promo_NL	Netherlands	promo	ORG	ORG	425	0.30
org22_promo_PL	Poland	promo	ORG	ORG	3 666	2.59
org23_promo_PT	Portugal	promo	ORG	ORG	320	0.23
org24_promo_RO	Romania	promo	ORG	ORG	1 539	1.09
org25_promo_RS	Serbia	promo	ORG	ORG	134	0.09
org26_promo_ES	Spain	promo	ORG	ORG	496	0.35
org27_promo_SE	Sweden	promo	ORG	ORG	319	0.23
org28_promo_SI	Slovenia	promo	ORG	ORG	2	0.00
org29_promo_SK	Slovakia	promo	ORG	ORG	2 158	1.52
org30_promo_UK	United Kingdom	promo	ORG	ORG	427	0.30
_country_media_AT	Austria	country_media	General	Other media	79	0.06
huge_banner_promo_BG	Bulgaria	banner_promo	ORG + General	Other media	258	0.18
antivirus_banner_CY	Cyprus	banner	ORG + General	Other media	13	0.01
outandabout_banner_promo_DK	Denmark	banner_promo	General	Other media	93	0.07
media2_banner_promo_DK	Denmark	banner_promo	General	Other media	376	0.27

Campaign short name	Country of campaign	Medium	Target	Type	*N*	%
blu_banner_promo_DE	Germany	banner_promo	General	Other media	960	0.68
queerde_banner_promo_DE	Germany	banner_promo	General	Other media	603	0.43
straight_country_media_DE	Germany	country_media	General	Other media	86	0.06
antivirus_banner_promo_EL	Greece	banner_promo	ORG + General	Other media	2 985	2.11
lesbian_banner_EL	Greece	banner	General	Other media	20	0.01
tzine_banner_EL	Greece	banner	ORG + General	Other media	115	0.08
jeanne_banner_promo_FR	France	banner_promo	General	Other media	763	0.54
humen_banner_promo_HU	Hungary	banner_promo	General	Other media	2 584	1.82
media_country_media_IE	Ireland	country_media	General	Other media	151	0.11
gayit_banner_promo_IT	Italy	banner_promo	General	Other media	290	0.20
gaypostit_banner_promo_IT	Italy	banner_promo	General	Other media	634	0.45
lovinmalta_banner_promo_MT	Malta	banner_promo	General	Other media	7	0.00
winq_banner_promo_NL	Netherlands	banner_promo	General	Other media	166	0.12
replika_banner_promo_PL	Poland	banner_promo	General	Other media	2 634	1.86
dezanove_banner_promo_PT	Portugal	banner_promo	General	Other media	420	0.30
shangay_banner_promo_ES	Spain	banner_promo	ORG + General	Other media	9 520	6.72
magles_banner_promo_ES	Spain	banner_promo	General	Other media	670	0.47
qx_country_media_SE	Sweden	country_media	General	Other media	312	0.22
lui_banner_promo_SK	Slovakia	banner_promo	General	Other media	207	0.15
_country_media_UK	United Kingdom	country_media	General	Other media	1	0.00
gaydar_banner_promo_INTL	INTL	banner_promo	General	Dating site	1 948	1.38
planetromeo_interstitials_en_INTL	INTL	interstitials_en	General	Dating site	1 366	0.96
lesarion_banner_INTL	INTL	banner	General	Dating site	341	0.24
flyers_flyer_INTL	INTL	flyer	ORG + General	Other media	42	0.03
gaystartnews_general_website_INTL	INTL	website	General	Other media	1 161	0.82
EPOA_orgs_INTL	INTL	orgs	ORG	ORG	2 909	2.05
ILGA_orgs_INTL	INTL	orgs	ORG	ORG	1 600	1.13

Campaign short name	Country of campaign	Medium	Target	Type	*N*	%
OII_orgs_INTL	INTL	orgs	ORG	ORG	114	0.08
IGLYO_orgs_INTL	INTL	orgs	ORG	ORG	15	0.01
GOOGLE_google_INTL	INTL	google	General	Other media	1	0.00
gusmen_banner_promo_BE	Belgium	banner_promo	General	Other media	147	0.10
planetromeo_interstitials_sp_INTL	INTL	interstitials_sp	General	Dating site	600	0.42
planetromeo_interstitials_ge_INTL	INTL	interstitials_ge	General	Dating site	2 786	1.97
planetromeo_interstitials_it_INTL	INTL	interstitials_it	General	Dating site	1 277	0.90
planetromeo_interstitials_fr_INTL	INTL	interstitials_fr	General	Dating site	981	0.69
planetromeo_interstitials_pt_INTL	INTL	interstitials_pt	General	Dating site	51	0.04
media_country_media_MT	Malta	country_media	General	Other media	1	0.00
grindr_message_EL	INTL	message	General	Dating site	1 157	0.82
grindr_message_DE	INTL	message	General	Dating site	2 375	1.68
grindr_message_FR	INTL	message	General	Dating site	2 685	1.90
grindr_message_IT	INTL	message	General	Dating site	1 336	0.94
grindr_message_CZ	INTL	message	General	Dating site	736	0.52
grindr_message_BU	INTL	message	General	Dating site	698	0.49
grindr_message_ES	INTL	message	General	Dating site	1 991	1.41
grindr_message_PT	INTL	message	General	Dating site	2 064	1.46
grindr_message_EN	INTL	message	General	Dating site	6 902	4.87
grindr_message_DK	INTL	message	General	Dating site	528	0.37
grindr_message_DU	INTL	message	General	Dating site	1 445	1.02
grindr_message_PL	INTL	message	General	Dating site	2 471	1.74
dbna_banner_INTL	INTL	banner	General	Dating site	770	0.54
social_LB_social_UK	United Kingdom	social	General	Other media	3 959	2.80

Note: INTL, international, ORG/org, organisation.

Annex D Test user panel distribution

Table D1. Distribution of test panel members by language, respondent category and age group

Language	Respondent category							Age group							Total
	Gay	Lesbian	Bisexual	Trans	Intersex	Other	Not specified	15–24	25–34	35–44	45–54	55–64	65+	Not specified	
bg	2			1	1		1		2					3	5
cs			1						1						1
da	4	1	1			2			1		1	3	1	2	8
de	2	1				2	1				2			4	6
et	1	1				1		1		1	1				3
en	12	6	2	9	2	2	1	6	13	6	3	1	2	3	34
el	2			1			1		1	1	1			1	4
es	3		1	1		1			1	2	2	1			6
fr	4					1	1		1	1	2			2	6
hr		1			1				2						2
it	2		1	1				1	2			1			4
lv	1		1	1		1				3				1	4
lt	1	1	1	1				2			2				4
lb	1								1						1
hu	3		1	1		1			5					1	6
mt				1						1					1
nl	2	2			1	3	1		2	1	1		1	4	9
pl				3	1	2	2		2	2	1			3	8
pt						1			1						1
sl						1								1	1
sk	1					1			1	1					2
fi	1	2		1	1	1					3	2		1	6
sv				1						1					1
sq	1		1						1	1					2
mk	1								1						1
sr		3	1			5			1		2			6	9
Total	**44**	**18**	**11**	**22**	**7**	**25**	**8**	**10**	**39**	**21**	**21**	**8**	**4**	**24**	**135**

Notes: *No testers for Romanian or Russian.*

bg, Bulgarian; cs, Czech, da, Danish, de, German; et, Estonian, en, English; el, Greek; es, Spanish; fr, French; hr, Croatian; it, Italian; lv, Latvian; lt, Lithuanian; lb, Luxembourgish; hu, Hungarian; mt, Maltese; nl, Dutch; pl, Polish; pt, Portuguese; sl, Slovenian; sk, Slovak; fi, Finnish; sv, Swedish; sq, Albanian; mk, Macedonian; sr, Serbian.

Annex E Sociodemographic characteristics

The sample in the 28 Member States of the EU (EU-28) is predominantly young, with a mean age of almost 29 years. Four out of five respondents (82 %) were younger than 40 years. More than one third were aged between 18 and 24 years. Respondents aged 15–17 years constitute one seventh of the sample. Only 4 % of respondents were aged 55 years or older.

Table E1. Age of survey respondents, by LGBTI group, unweighted, cleaned data (EU-28, %) ([a]) ([b])

Age group	Lesbian women	Gay men	Bisexual women	Bisexual men	Trans	Intersex	Total
15–17 years old	13	5	28	13	19	18	13
18–24 years old	33	27	48	42	43	30	35
25–39 years old	38	40	21	27	28	27	33
40–54 years old	13	21	3	12	8	19	14
55+ years old	3	6	1	5	3	6	4
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes: *the EU-28 aggregate includes the United Kingdom because the reference period for the data collection is from when it was an EU Member State.*

([a]) Out of all respondents in the EU-28 who provided a questionnaire that passed the quality criteria (n = 137 508); unweighted results.

([b]) Based on question A1: 'How old are you?'.

Source: *FRA, EU LGBTI II survey, 2019.*

In terms of education, almost half of the sample in the EU-28 (45 %) had completed university education (equivalent of bachelor degree or higher), 12 % post-secondary education, 28 % upper secondary education and 11 % lower secondary education. Only 4 % of the sample had completed only primary education or had no formal education. By comparison, 29 % of the general population in the EU-28 have completed tertiary education, 46 % have completed upper secondary and post-secondary education, and 26 % have completed less than primary or lower secondary education ([34]).

Table E2. Highest completed level of education of the survey respondents, by LGBTI group, unweighted, cleaned data (EU-28, %) ([a]) ([b])

Education level	Lesbian women	Gay men	Bisexual women	Bisexual men	Trans	Intersex	Total
No formal	0	0	0	1	1	2	0
Primary	3	2	6	4	4	7	3
Lower secondary	10	8	15	11	15	18	11
Upper secondary	27	24	32	30	34	29	28
Post-secondary other than college/university	11	12	12	14	12	13	12
Bachelor or equivalent	25	25	21	22	20	16	23
Master or equivalent	21	25	12	16	11	12	19
Doctoral or equivalent	3	4	1	3	2	3	3
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes: *the EU-28 aggregate includes the United Kingdom because the reference period for the data collection is from when it was an EU Member State.*

([a]) Out of all respondents in the EU-28 who provided a questionnaire that passed the quality criteria (n = 137 508); unweighted results.

([b]) Based on question H1: 'What is the highest level of education you have completed? 1. No formal education, 2. Primary education, 3. Lower secondary education, 4. Upper secondary education, 5. Post-secondary education other than college/university, 6. Bachelor or equivalent, 7. Master or equivalent, 8. Doctoral or equivalent'.

Source: *FRA, EU LGBTI II survey, 2019.*

([34]) According to Eurostat: population by educational attainment level (2018). Available on Eurostat's website.

About one third (37 %) of the respondents in the EU-28 indicated that their households have difficulty in making ends meet. This was most often the case for intersex (52 %) and trans (46 %) respondents.

Table E3. Self-reported household's difficulty in making ends meet, by LGBTI group, unweighted, cleaned data (EU-28, %) ([a]) ([b])

Household makes ends meet:	Lesbian women	Gay men	Bisexual women	Bisexual men	Trans	Intersex	Total
With great difficulty	3	4	4	4	7	12	4
With difficulty	8	7	9	8	12	13	9
With some difficulty	24	21	26	25	27	26	24
Fairly easily	31	28	29	28	28	24	29
Easily	24	25	24	23	18	16	24
Very easily	9	14	8	12	7	8	11
Don't know	0	0	0	0	0	(0)	0
Prefer not to say	(0)	0	0	(0)	0	(0)	0
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes: *the EU-28 aggregate includes the United Kingdom because the reference period for the data collection is from when it was an EU Member State.*

([a]) Out of all respondents in the EU-28 who provided a questionnaire that passed the quality criteria (n = 137 508); unweighted results.

([b]) Based on question H20: 'Thinking of your household's total income, is your household able to make ends meet? 1. With great difficulty, 2. With difficulty, 3. With some difficulty, 4. Fairly easily, 5. Easily, 6. Very easily, 888. Prefer not to say, 999. Don't know'.

Source: *FRA, EU LGBTI II survey, 2019.*

Four out of 10 respondents (41 %) in the EU-28 were in paid work when they completed the survey and 40 % were in education. Around 5 % of the respondents were unemployed.

Table E4. Economic activity status, by LGBTI group, unweighted, cleaned data (EU-28, %) ([a]) ([b])

Current economic status	Lesbian women	Gay men	Bisexual women	Bisexual men	Trans	Intersex	Total
In paid work (including on paternity or other temporary leave)	46	54	23	38	27	32	41
Self-employed	7	9	3	7	5	10	7
In unpaid or voluntary work	1	1	1	1	2	2	1
Unemployed	4	4	4	5	7	8	5
Student or pupil	37	26	65	44	48	33	40
Retired	1	2	0	1	1	3	1
Unable to work due to long-standing health problems	1	1	1	1	5	5	2
Fulfilling domestic tasks	0	0	0	0	1	1	0
Compulsory military or civilian service	0	0	0	1	0	(1)	0
Other	2	2	2	2	3	5	2
Don't know	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Prefer not to say	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes: *the EU-28 aggregate includes the United Kingdom because the reference period for the data collection is from when it was an EU Member State.*

([a]) Out of all respondents in the EU-28 who provided a questionnaire that passed the quality criteria (n = 137 508); unweighted results.

([b]) Based on question H2: 'Which of the following best describes your status? 1. In paid work (including on paternity or other temporary leave), 2. Self-employed, 3. In unpaid or voluntary work, 4. Unemployed, 5. Student, pupil, 6. Retired, 7. Unable to work due to long-standing health problems, 8. Fulfilling domestic tasks, 9. Compulsory military or civilian service, 10. Other, 888. Prefer not to say, 999. Don't know'.

Source: *FRA, EU LGBTI II survey, 2019.*

Almost half of the respondents (47 %) across all groups in the EU-28 live in a big city, 11 % live in the suburbs or outskirts of a big city, 30 % live in a town or small city and 13 % live in a rural area. By comparison, 42 % of the general population lives in a city, 31 % in a town or suburbs and 27 % live in rural areas ([35]).

Table E5. Place of residence, by LGBTI group, unweighted, cleaned data (EU-28, %)([a]) ([b])

Place of residence	Lesbian women	Gay women	Bisexual women	Bisexual men	Trans	Intersex	Total
A big city	45	53	39	42	39	40	47
The suburbs or outskirts of a big city	11	10	12	12	13	10	11
A town or a small city	31	26	36	32	34	32	30
A village	11	10	12	12	12	16	11
A farm or home in the countryside	2	1	2	2	2	2	2
Don't know	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Prefer not to say	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes: *the EU-28 aggregate includes the United Kingdom because the reference period for the data collection is from when it was an EU Member State.*

([a]) Out of all respondents in the EU-28 who provided a questionnaire that passed the quality criteria (n = 137 508); unweighted results.

([b]) Based on question H3: 'Where do you currently live? 1. A big city, 2. The suburbs or outskirts of a big city, 3. A town or a small city, 4. A village, 5. A farm or home in the countryside, 888. Prefer not to say, 999. Don't know'.

Source: *FRA, EU LGBTI II survey, 2019.*

The survey asked respondents whether they consider themselves part of a minority in terms of ethnicity (including migrant background), religion, disability or other. Most respondents (77 %) in the EU-28 did not consider themselves a member of any of the listed minorities, although 8 % indicated that they belong to an 'other minority group'. Those belonging to minorities related to their ethnicity (or migrant background), religion or disability constitute between 5 % and 7 % of the total sample. The share of trans and intersex respondents who identified as belonging to a minority in regard to disability is higher than for the other groups.

Table E6. Respondents who consider themselves belonging to a minority, by LGBTI group, unweighted, cleaned data (EU-28, %) ([a]) ([b])

Respondents consider themselves as minority in terms of:	Lesbian women	Gay men	Bisexual women	Bisexual men	Trans	Intersex	Total
Ethnic or migrant background	6	8	6	8	7	12	7
Religion	4	5	7	6	8	11	6
Disability	4	3	5	4	14	12	5
Other	7	7	8	6	11	13	8
None of the above	80	80	77	79	66	61	77
Don't know	0	0	1	0	1	(1)	0

Notes: *([a]) Out of all respondents in the EU-28 who provided a questionnaire that passed the quality criteria (n = 137 508); unweighted results.*

([b]) Based on multiple response question H15: 'In the country where you live, do you consider yourself to be part of any of the following, other than LGBTI? A. An ethnic minority (including of migrant background), B. A religious minority, C. A minority in terms of disability, D. Other minority group, E. None of the above, F. Don't know [shown only if respondent clicked on 'Next' button without selecting an option]'.

Source: *FRA, EU LGBTI II survey, 2019.*

([35]) According to Eurostat: Indicator – degree of urbanisation (2017). Available on the Eurostat website.

Annex F Introduction to the online tool and privacy statement

This annex presents the introduction to the online tool and the privacy statement that respondents saw.

F.1 Introduction to the online tool

This is the second wave of the European survey of lesbian, gay, bisexual, trans, intersex, and also non-binary, and other gender non-conforming people. The survey is looking for responses from anyone who considers themselves to be LGBTI, who is aged 15 years and above and who lives in the European Union, Serbia or North Macedonia.

Your participation in the survey is very important. Your answers will be processed in an anonymous way, ensuring that it will not be possible for anyone to identify your answers when the results are presented. You can read more in the privacy statement.

The EU LGBTI survey is being carried out by the survey company Agilis SA on behalf of the European Union Agency for Fundamental Rights (FRA), an agency of the European Union. The FRA helps to ensure that fundamental rights of people living in the European Union are protected. It does this by collecting evidence about the situation of fundamental rights across the European Union and providing advice, based on evidence, about how to improve the situation.

The questions will take up to around 20 minutes to answer.

If you have a few more minutes and would like to share your individual experiences, you are welcome to provide more information at the end of the survey.

If you would like to go back and change your answer, touch or click 'BACK'.

F.2 Privacy statement

This Privacy Statement explains what kind of personal data the European Union Agency for Fundamental Rights ('the Agency') collects from you and how the Agency uses that data.

1. Do we collect personal data?

We do not collect any personal data that can be used to uniquely identify a particular individual natural person. The purpose of the processing of the survey data is to provide the Agency with information concerning the opinions and experiences related to fundamental rights among persons aged 15 years and over that self-identify as lesbian, gay, bisexual or intersex (LGBTI) persons and who have been living in the [COUNTRY] for at least 12 months before the survey. Through this survey we collect anonymous information for statistical and research purposes in order to assess the situation and contribute to the improvement of the protection and respect of the LGBTI people's rights, promoting their non-discrimination and equality in society.

2. What kind of data do we collect?

The questions ask lesbian, gay, bisexual, trans or intersex persons about their life experiences, discrimination, crime victimisation and other aspects of everyday life. In addition to these topics, the survey also includes questions about their sexual orientation, sexual behaviour and gender identity, their sense of safety and security, the services they use, as well as their health, their religion and their country of birth. Answering these, as well as other questions in the survey, is voluntary.

3. How do we collect the survey data?

Respondents are invited to complete the survey online. For the management and assessment of the data collection, the survey will also collect anonymous metadata and paradata such as information concerning the type of browser and device used to complete the online survey (PC, smartphone, tablet, etc.), the referrer site and the time of submission. We do NOT collect at any stage names, addresses or IP addresses; therefore, your participation in the survey is completely anonymised and nobody can identify you at any stage or link you to the responses we collect. Some technically necessary cookies have to be used for security purposes, e.g. by services that block fraudulent responses to the survey or cyber-attacks on the survey's servers. These cookies do not store any personal or identifying information. You can delete these cookies after the submission of the questionnaire using the appropriate options of your browser.

4. Who is responsible for the processing of the data?

The European Union Agency for Fundamental Rights is the legal entity for the processing of the survey data and which determines the objective of this processing activity. The Head of Research and Data Unit is responsible for this processing operation.

The data collection (the survey) and data processing is being carried out by Agilis SA, an independent survey agency, on behalf of the Agency.

5. Which is the legal basis for this processing operation?

Data collection through the survey is necessary for the performance of a task carried out in the public interest by the Agency. Therefore, the processing is lawful under Article 5(a) of the Regulation (EU) No 2018/1725.

6. Who can see my data?

We do NOT collect any personal data that can identify you, such as names or addresses, at any stage. The anonymised data about your self-identification as L, G, B, T or I, your experiences and views can be accessed by the responsible head of unit and delegated members of the project team, as well as contractors working for the Agency to manage data collection activities, while the anonymised dataset may be shared with third parties for research purposes.

7. Do we share the survey data with other organisations?

The anonymous data may be shared with third parties for research purposes to ensure that the research community can benefit from the collected data when examining how people's experiences and opinions differ across countries.

8. When will we start the processing operation and how long will we keep the survey data?

The Agency and its contractor will start the processing operation in May 2019. The anonymised dataset will be stored indefinitely for research and statistical purposes.

9. What security measures are taken to safeguard personal data?

The Agency and its contractor have in place several security controls to protect the survey data from unauthorised access, use or disclosure. We keep the survey data stored on computer systems in a fully anonymised way with limited access to a specified audience only.

10. What can I do in the event of a problem?

a) The first step is to notify the Agency by sending an email to FRA-LGBTI-survey@fra.europa.eu and asking us to take action.

b) The second step, if you obtain no reply from us or if you are not satisfied with it, is to contact our data protection officer (DPO) at dpo@fra.europa.eu.

c) At any time you can lodge a complaint with the European Data Protection Supervisor (EDPS) at http://www.edps.europa.eu, who will examine your request and adopt the necessary measures.

Annex G References

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A great deal of information on the European Union Agency for Fundamental Rights is available on the internet. It can be accessed through the FRA website at fra.europa.eu.

Getting in touch with the EU

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All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en

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EU law and related documents

For access to legal information from the EU, including all EU law since 1952 in all the official language versions, go to EUR-Lex at: http://eur-lex.europa.eu

Open data from the EU

The EU Open Data Portal (http://data.europa.eu/euodp/en) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

FRA
EUROPEAN UNION AGENCY
FOR FUNDAMENTAL RIGHTS

HELPING TO MAKE FUNDAMENTAL RIGHTS A REALITY FOR EVERYONE IN THE EUROPEAN UNION

FRA's second survey on LGBTI people in the EU, North Macedonia and Serbia surveyed almost 140,000 participants. This technical report presents a detailed overview of the survey methodology used by FRA when collecting the survey data.

SUSTAINABLE DEVELOPMENT GOALS

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