EUROPEAN UNION AGENCY FOR THE OPERATIONAL MANAGEMENT OF LARGE-SCALE
IT SYSTEMS IN THE AREA OF FREEDOM, SECURITY AND JUSTICE

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EURODAC 2020 ANNUAL REPORT

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eu-LISA | Eurodac

Contents

Executive Summary

Eurodac was impacted by **COVID-19**, resulting in some delays to planned corrective maintenance and to non-critical service requests in particular in the first semester of 2020

In 2020, Eurodac usage overall decreased by

-30%

compared to 2019, mostly due to the reduction in border checks and travel restrictions imposed in Europe during the first half of 2020

In 2020, the Eurodac Central System was available

99.87%

of the time

Intensive preparations and testing ahead of the implementation of the Brexit withdrawal agreement. The **UK** was successfully disconnected and its data were deleted on

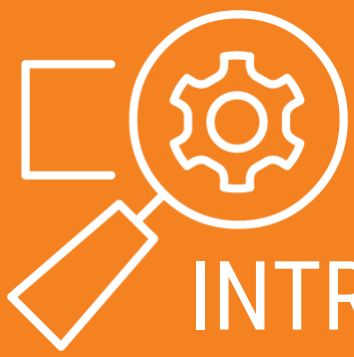
1 January 2021

99.95%

of the transactions processed by the Eurodac Central System in 2020 were in line with the relevant SLA

The processing time for renewing **DubliNet** certificates was shortened in 2020 to 4 days

On 23 September 2020, the Commission presented the **New Pact on Migration** and Asylum including an amended proposal for the recast of Eurodac



1 INTRODUCTION

1. Introduction

The European Dactyloscopy (fingerprints) database[1] (Eurodac), is one of the three large-scale IT systems under eu-LISA management. The system started operations in 2003, and eu-LISA has been responsible for the operational management of its Central System since June 2013.

Eurodac facilitates the application of the Dublin Regulation and is one of the instruments used to implement the Common European Asylum System (CEAS). The system enables the comparison of fingerprint sets, and thus supports its authorised users in determining the country responsible for the assessment of an asylum claim presented in one of the Member States[2]. Since July 2015, Eurodac is also used by Member State law enforcement authorities and Europol, under strict conditions, in the prevention, detection and investigation of terrorist offences or of other serious criminal offences.

The optimal functioning of Eurodac is achieved through close cooperation between the Member States and the Commission, and in particular through the work of the Management Board (MB) of eu-LISA and the Eurodac Advisory Group (AG), which meet regularly throughout the year.

The current annual report presents a general overview of the Eurodac performance in 2020 and includes information on its operational management, latest maintenance updates and developments, activities related to the Central System and its usage by the Member States.

In addition to the publication of the *Eurodac Annual Report*, as prescribed by its regulations, eu-LISA publishes on an annual basis the *Annual Statistics of Eurodac*, and the updated *List of Designated Authorities* with access rights to Eurodac for asylum purposes[3].

Two exceptional circumstances that greatly affected 2020 are included in the current report, and they are the impact of COVID-19 on the system usage, and preparations for the UK disconnection following the implementation of the Brexit withdrawal agreement as of 1 January 2021.

1.1. 2020 and COVID-19, an exceptional year

We can all agree that 2020 was a **challenging year**. eu-LISA and the Member States were no exception in having to deal with the effects of the global pandemic, and inevitably some aspects of the operational management and usage of the Eurodac were impacted. This caused a chain reaction in all the usual dynamics of the daily running of the system and its related activities.

There were ubiquitous direct consequences impacting the normal functioning of the Eurodac, such as the following:

- Staff responsible for the operational management of the system as well as contractors had **to adapt to work remotely** most of the time in particular in the first part of the year, as the number of personnel working on-site was limited due to COVID-19 protective measures. This resulted in some delays to some corrective maintenance and to some non-critical service requests.
- Overall usage of the **Eurodac was 30% lower than in 2019**, mostly due to the reduction in border checks and the travel restrictions imposed across Europe during the first semester (Q1 and Q2) of 2020.

[1] Regulation (EU) No 603/2013, OJ L 180, 29.6.2013, hereinafter referred to as 'the Eurodac Regulation'.
[2] Under the term 'Member States', the current document refers to the Member States of the European Union (EU) and Associated Countries that were bound under Union law by Regulation (EU) No 603/2013 until 31 December 2020, if not specified otherwise. The Eurodac Member States and Associated Countries on 31 December 2020 were Austria, Belgium, Bulgaria, Cyprus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, the United Kingdom, as well as Iceland, Liechtenstein, Norway and Switzerland.
[3] All publications are available on https://www.eulisa.europa.eu/our-publications/reports

- Planned **training activities** had to be reorganised and redefined, and face-to-face learning was replaced by **eLearning**. With one exception however, the only face-to-face training event organised by the Agency in 2020 was an activity for the Eurodac community.
- Three out of the four Eurodac AG meetings scheduled for 2020 were moved online.

Despite all these exceptional circumstances, there was **no impact on the availability of the Eurodac** throughout the year.

1.2. Legal and policy developments

With regard to legal and policy developments, 2020 gave us a glimpse of the evolution of Eurodac in the near future, in the European Commission's **New Pact for Migration and Asylum** which was presented on 23 September[4].

The New Pact proposes a common framework for a fair and humane EU asylum and migration management system, providing a balance between solidarity and fair sharing of responsibility. One element of the New Pact is an Amended Proposal for the **recast of the Eurodac Regulation**, as it was presented in 2016.

Besides reinforcing some of the elements of the 2016 proposal, notably the detection of secondary movements, the amended proposal includes amendments to ensure that Eurodac functions properly within the new interoperability framework and to ensure the access of ETIAS and VIS units to Eurodac. There are also amendments to reflect the provisions of the new legal instruments included in the Pact, namely of the new Regulation on Asylum and Migration Management, and of the Screening Regulation.

The New Pact for Migration includes an amended proposal to recast the Eurodac Regulation

[4] Migration and Asylum Package: New Pact on Migration and Asylum documents adopted on 23 September 2020, European Commission (europa.eu).

2

OPERATIONAL MANAGEMENT OF EURODAC

2. Operational management of the Eurodac

eu-LISA is in charge of the operational management of the Eurodac Central System, and therefore, responsible for ensuring uninterrupted access to the system 24/7 in order to facilitate the continuous exchange of data between national authorities with access rights to the Eurodac database. This is achieved through the provision of various services that include management services, a service desk, monitoring and supervision, as well as the implementation of appropriate corrective, adaptive and evolutionary maintenance.

In order to deliver continuous and reliable operational management of the Eurodac and to ensure optimal system performance, the Agency put in place a framework contract for Maintenance in Working Order (MWO) signed with an external contractor. The contractor[5] provides maintenance services and technical support.

2.1. Eurodac: technical functions, evolution and redesign

On the night of 31 December 2020, just before the official disconnection of the UK from the Eurodac, there were a total of **5.85 million records stored** in the Eurodac Central System, representing a slight **increase (3%)** compared to the 2019 figure.

The current maximum capacity of the system of 7 million data sets was expected to be reached within three years and was calculated on the basis of previous volumes. In view of the exceptional circumstances of 2020 (Brexit and COVID-19), it might well be that the current storage capacity could last longer than three years. Just deleting the UK records has significantly increased the available server capacity of the Central System, and has restored the volume of records stored to almost the same volume as two years ago.

Nonetheless, the successive postponement of the Eurodac recast has significantly hampered the efficient management of the Eurodac evolution. The architecture and components of the system are reaching the end of their lifecycle, creating significant challenges in terms of maintenance and support, particularly in relation to backup, database and AFIS components. All these challenges have prompted the **Agency** to **start the project of redesigning Eurodac ahead of the adoption of the new regulation**. Preparations for this new project were carried out in the second half of 2020, and the developments were planned to start in the beginning of 2021.

In the new design, there is a plan to split the **Eurodac Central System into two parts**: a core system, and an AFIS[6] system, similar to the SIS and the VIS layout. The **new architecture** of the system **will be flexible**, in order **to facilitate the implementation** of changes stemming from the new legal provisions, and to ease additional interconnection with the **interoperability** components, when required.

The impact of the project will be significant, as it will allow the Agency to guarantee the mid-term availability of the system for the Member States, while ensuring that new functionalities will be developed and implemented in due course, once adopted.

All the functional evolutions of the system planned for 2020 had to be shelved due to the ongoing discussions on the Eurodac recast and, therefore, the releases implemented mainly focused on adaptive and corrective maintenance.

The deployment of releases allows the system to be updated with the latest patches and essential functionalities, as part of the planned evolutions. The implementation of releases is agreed in advance with all the stakeholders, in order to

[5] In October 2017, the MWO contract was signed with the consortium Sopra Steria Benelux SA (Group Leader), Bull SAS and Gemalto SA. The duration of the framework contract is three years, and it may be renewed three times for a maximum period of 12 months each time. The first automatic renewal took place at the end of 2020.
[6] Automated Fingerprint Identification System.

minimise the impact on the performance and availability of the system. Likewise, once a release plan is launched and before deployment reaches the production environment stage, releases go through extensive test campaigns.

The Eurodac release plan was one of the most impacted by the pandemic in 2020. It had to be reviewed and significantly updated in the first half of the year. During 2020, the following releases were performed:

- **Release19_2**: this release, encompassing the Operating System upgrade project (AIX and MGT servers), was considered non-critical, and thus was postponed as its initial plan was disrupted by the first wave of the pandemic. The release was eventually deployed by the end of the year.
- **Release 20_1**: this corrective release containing corrective maintenance elements for the biometric component of the system – was deployed on 16 September 2020. It solved an issue with the CAFIS Broadcast daemon, by updating the application components and ensuring the proper maintenance of the system.

There was a third release (20_2) planned for 2020 for the Operating System upgrade (AIX, Windows and mail server) and security patching of the Eurodac. However, although its implementation started in 2020, it was only fully operational in 2021 due to pandemic-related measures.

Following its redesign, the plan is to split the Eurodac into two parts: a core system, and an AFIS system, as in SIS and VIS

In addition to these releases, and in preparation for the interoperability architecture, the Eurodac **backup hardware migration to a CSI** (Common Shared Infrastructure) was completed, together with the migration of the Information Technology Service Management (ITSM) tool SM9. The migration of other components also started in 2020 and will be completed in 2021.

In **February 2020**, the main Eurodac **servers were updated with the most recent security patches**, and the switchover and switchback processes were optimised.

The implementation of the two releases mentioned above was carried out with a switchover to the Backup Central Unit (BCU) and a switchback to the Central System. During the implementation of Release 19_2, the system was working from the BCU between 13-20 February, and during Release 20_1 between 16-22 September. In total for 2020, the system was unavailable for 198 minutes due to essential maintenance.

DubliNet

Aside from the operational management of the Eurodac Central System, eu-LISA is also responsible for the technical maintenance of DubliNet. During 2020, the technical maintenance was performed in accordance with the operational Service Level Agreement and **no service interruption was noted**.

As part of the DubliNet community, the Agency participates in regular meetings on the asylum domain under the Dublin Regulation, as well as in sessions specifically focused on DubliNet. Part of the DubliNet community also attends the regular steering group meetings of the network of Dublin Units, organised by EASO.

In 2020, two remote steering group meetings were organised, in May and in November. In addition, in November 2020, the Thematic Expert Group meeting on DubliNet took place, where eu-LISA gave a presentation on the DubliNet state of play, provided a report on the certificate renewal campaign, and gave a training session to the DubliNet community.

Every two years, the **DubliNet certificates** granting access to Member States network users have to be **renewed**. eu-LISA is in charge of organising the renewal which took place in January 2020. The Member States gave **positive feedback on the improvement to the renewal process**, which was carried out for the first time in the shortest timeframe to date (a 4-day period). The next renewal of certificates will be carried out in 2022.

2.2. Brexit and the Eurodac

The withdrawal process of the United Kingdom from the European Union started in November 2018, with the signature of the draft ***Withdrawal Agreement of the United Kingdom from the European Union***. On 1 November 2019, the UK officially became a third country in the EU and, although the UK retains access to the systems, it no longer participates in EU meetings. The official Entry into Force of the UK's withdrawal from the EU happened on 1 February 2020, and there was a transition period until 31 December 2020. The whole process terminated **on 1 January 2021** when **the UK was officially disconnected from the EU large-scale IT systems in which it participated (SIS II and the Eurodac).**

During 2020, eu-LISA made all the necessary preparations to disconnect the UK and to delete the UK data from the Eurodac by the date required by the legal framework.

The Agency made the **necessary preparations** for the application of the provisions of the Withdrawal Agreement and the respective Commission guidelines regarding the UK participation in the Agency´s governance bodies, human resource management, statistical reports and other related matters.

In the second half of 2020, the Agency made intensive preparations for the disconnection of the UK from the Eurodac. The objective was to be able to complete this change seamlessly on the official date (1 January 2021). The preparations involved the Central System, TESTA-ng, the DubliNet domains and certificates, and the Member States. They included tests in both test and pre-production environments, as well as several rehearsals.

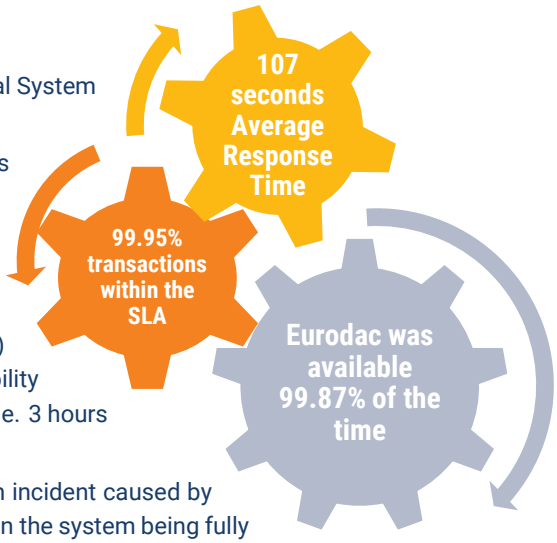
The Agency regularly discussed the technical details with the Commission and with the Eurodac AG, and participated in a specific working session on Brexit for the EU Agencies, organised by the Commission on 5 September 2020.

Well in advance of the disconnection date, eu-LISA sent notifications and reminders to the Member States and, prior to the official disconnection, performed a final rehearsal of the operation (including a check on the required tools and scripts, and a health check evaluation of the Eurodac Central System). On the night of **31 December 2020**, the **successful disconnection** was carried out as planned, and was followed by the **deletion of all the UK data and records**. During this operation, the Eurodac was unavailable for 7.5 hours.

2.3. Service quality

Despite the ongoing pandemic situation, the performance of the Eurodac Central System was stable and consistent throughout the year.

The Central System performed as expected, in line with the legal requirements and the service level agreement (SLA). During 2020, the system improved both in relation to availability and the number of average transactions processed within the SLA.



Overall, the **system was available for 99.87% of the time**. More specifically, the Eurodac was unavailable for 708 minutes (i.e. 11 hours and 48 minutes) throughout the year: 510 minutes (i.e. 8.5 hours) corresponded to unavailability caused by an incident in the mail relay, whereas the remaining 198 minutes (i.e. 3 hours and 18 minutes) represented maintenance tasks as mentioned above.

On 26 June 2020, the Eurodac experienced unplanned downtime because of an incident caused by the mail relay, namely the component transferring emails. The incident resulted in the system being fully unavailable and blocked for 8.5 hours. The issue was fixed, and no transactions were lost during the incident. The Agency has since worked on a definitive solution to this problem, to be deployed in the first 2021 release.

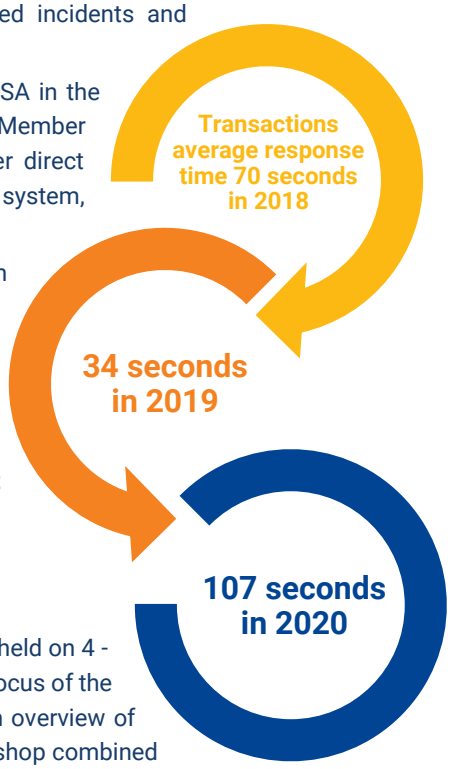
On average**, 99.95% of the transactions processed** by the Eurodac Central System in 2020 were **in line with the service level agreement** (SLA).

After the COVID-19 outbreak in spring 2020, when **the usage of the system was at minimum levels**, the figures on daily incoming traffic were constantly increasing between 3k and 3.5k on average. In that sense, the busiest month in terms of traffic was just before the start of the pandemic in February, when there was an average of approximately 3,940 transactions registered per day. Whereas the month of May was the least busy month of the year, with an average of approximately 1,091 transactions per day.

The average response time for transactions increased compared to 2019. In 2020, on average the response time was 107 seconds, increasing considerably from 34 in 2019.

The eu-LISA Service Desk is the Single Point of Contact (SPoC) for reporting incidents[7] or requesting services by means of opening 'tickets'. During 2020, there was a total of 476 'tickets' opened (i.e. a significant drop in comparison to the 751 tickets opened in 2019). Of this total number of 476 tickets, 364 concerned incidents and 112 service requests.

In addition, of the total number of 476 tickets opened, 266 were opened by eu-LISA in the course of regular monitoring operations and 210 represented tickets opened by Member States. This substantial fall in the number of tickets opened is seen as another direct consequence of the pandemic and resulting reduced traffic and usage of the system, especially during the spring months of 2020.



Finally, to assess the level of satisfaction with the services provided and in line with its standard practices, eu-LISA carries out an annual **Customer Satisfaction Survey**. Through this survey, the Member States have the opportunity to assess the performance of the Service Desk, incident and problem management, operational communication, technical assistance, and support for national activities. The participation rate for the 2020 survey was very high, with 90% of the Member States providing input. The **satisfaction rate** reported was extremely high, with **99% of input reflecting levels of 'satisfied' and 'very satisfied'.**

2.4. Training

The only face-to-face training event organised in 2020 by eu-LISA was a workshop held on 4 - 5 February in Stockholm, in collaboration with the Swedish Migration Agency. The focus of the '***Eurodac: Multi-Spectrum Imaging (MSI) Scanner usage* workshop' was to give an overview of the usage of MSI scanners and how to deal with low-quality fingerprints. The workshop combined lectures with hands-on sessions, during which participants were provided with the possibility to use MSI training devices. This workshop followed on from the 'Eurodac MSI/ Optical Test Study' carried out in 2019 by Sweden and Norway in test environments.

As previously mentioned, training activities had to be reorganised and adapted to the COVID-19 pandemic. eu-LISA's training team made a great effort to adapt the contents of different learning modules into eLearning self-paced materials. In 2020, preparatory activities to design a new e-learning training portfolio for the Eurodac community also started. This work will be completed soon, and new modules will be available on the Learning Management System in the first half of 2021.

2.5. Security

As already mentioned above, security patches were updated in February 2020, to address all vulnerabilities identified during the regular security test campaigns. In addition to that, as part of the ongoing information security management process, the **Eurodac security documentation was updated** in 2020, encompassing the security risk assessment, Security Plan and Business Continuity Plan. This documentation will be further updated in the second half of 2021 to include the implementation of the Information Technology Security Risk Management (ITSRM) method, which will be submitted for adoption by the Management Board in 2022.

In November 2020, eu-LISA carried out the first Multi-System security exercise. Similar to previous exercises, the objectives were to test eu-LISA's Information Security Management System, Business Continuity Management System and Information Technology Service Management that are in place. More specifically, the areas evaluated were the security plans, business continuity and disaster recovery plans, identification of opportunities for enhancing incident response and the organisation of the security exercise itself.

[7] An incident is opened by the Service Desk following an exchange/interaction with the Member States or following eu-LISA monitoring activities (abnormal observations).

First Multi-System Exercise carried out in partially remote mode

Due to the exceptional and challenging circumstances of the global COVID-19 pandemic, the security exercise had to be executed partially in remote access mode. This was the first operational-only (extended table-top) exercise performed to date where secondary supporting systems were in use and which assessed the three systems at the same time and for the first time. The outcomes of the exercise were discussed with the participants in a debriefing meeting on 10 December 2020.

9 participants took part in the security exercise (which included representatives from eu-LISA, the Commission and ENISA), and the Member States representing the Eurodac were Cyprus, Estonia, Iceland, Italy and Romania. In addition, 10 Member States (representing the 3 systems) were designated as observers, two of which (The Netherlands and Spain) were representing the Eurodac. The result of the security exercise was a report with 34 recommendations addressed to both eu-LISA and the Member States. The implementation of those recommendations will be carried out after the report is adopted by the Eurodac AG.

2.6. Data Protection

Data protection is a key factor for the successful operation of the Eurodac and for the Member States using the system. The quality of the data, the data security and the regulatory compliance with legal frameworks are essential conditions for the Eurodac to provide effective support for application of the Dublin Regulation, while upholding the rights and freedoms of third-country nationals or stateless persons seeking international protection.

The protection of personal data processed by the Eurodac Central System is monitored by the **European Data Protection Supervisor (EDPS)** in close cooperation with the **Data Protection Officer (DPO)** of eu-LISA.

Following the regular audit of the Eurodac Central System performed in December 2019 by the EDPS, the draft report of the audit was received in November 2020. The purpose of the EDPS inspection was to verify the compliance of personal data processing activities of eu-LISA (as the Management Authority of this large-scale IT system) with the applicable data protection regulation and the Eurodac Regulation.

In accordance with Article 19(1)(hh) of eu-LISA´s Establishing Regulation, the Management Board shall adopt formal comments on the audit report before its final version is sent to the European Parliament, the Council, the Commission, the Agency, and the national supervisory authorities. For this purpose, the DPO collected internal feedback and consulted both the Eurodac AG and the Management Board. On 18 January, the eu-LISA Management Board duly adopted the formal comments.

To ensure coordinated supervision of data protection at central and national levels for the Eurodac, representatives of the national data protection authorities and the EDPS meet usually twice a year. The meetings were held in June and November 2020. On both occasions, by invitation of the Eurodac SCG (Eurodac Supervision Coordination Group), the DPO of eu-LISA represented the Agency. The SCG members were informed about the latest developments and issues of the systems that may impact the processing of personal data. They were also interested in hearing about how the systems were performing, any related incidents and the quality of the data. The DPO also presented the impact of Brexit in relation to the United Kingdom records in the Eurodac.

Throughout the reporting period, the DPO of eu-LISA was regularly consulted by the Eurodac team and the Eurodac Operational Change Advisory Board on several improvements to be implemented in the system involving personal data.

3

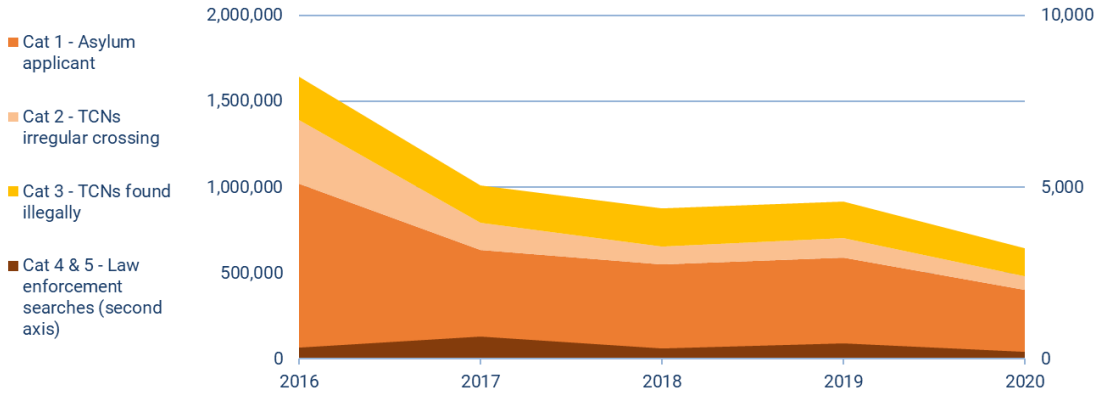
EURODAC USAGE: TRENDS AND FIGURES

3. Eurodac usage: trends and figures

As mentioned above, the singular events of 2020 strongly impacted the usage of Eurodac. The COVID-19 pandemic reduced the overall usage of the Eurodac, by approximately 30% compared to 2019. This was the direct result of the reduction in border checks and the travel restrictions imposed all over Europe. All transaction types were impacted and a decrease is visible compared to 2019, as most of the indicators show below.

During the last five years, the Eurodac usage steadily fell from over one million transactions (1,012,465) in 2016, to below one million in 2017 (with 879,072 transactions), before dropping to **644,926 transactions in 2020** (see Figure 1).

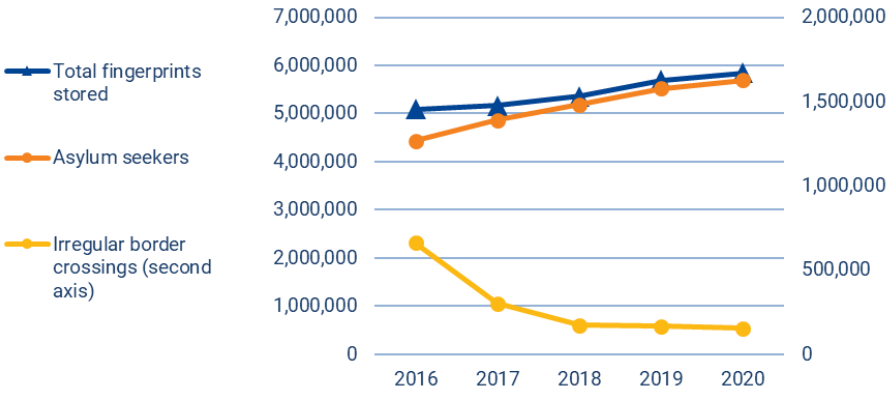
Figure 1: Data traffic in the Eurodac Central System by year, 2016-2020



In terms of the fingerprints stored in the Eurodac Central System, by the end of 2020 there were **5,844,329 sets of fingerprints stored**, representing a slight increase of 3% compared to 2019. Since 2016, the amount of data sets stored continued to grow, at a random rate (see Figure 2).

In December 2020, there was an increase of 15% in the sets of fingerprints stored compared to December 2016. It is worth mentioning here that the two types of data sets stored – fingerprints of asylum seekers and fingerprints of irregular border crossings – have a different retention policy. The former are stored for 10 years, and the latter are automatically deleted after 18 months.

Figure 2 - Fingerprints stored in the Eurodac Central System by year, 2016-2020



Similar to what was observed in previous years, in 2020 the set of fingerprints for asylum seekers continued to increase by 3%, compared to 2019, while the set of fingerprints for irregular border crossing continued to decrease, -8% less

than in 2019. By the end of 2020, 97% of the data stored in the Eurodac Central System came from asylum seekers, representing an increase of 87% on 2016 (see Figure 3).

Figure 3 – Fingerprint sets stored in the Eurodac Central System in 2016 & 2020

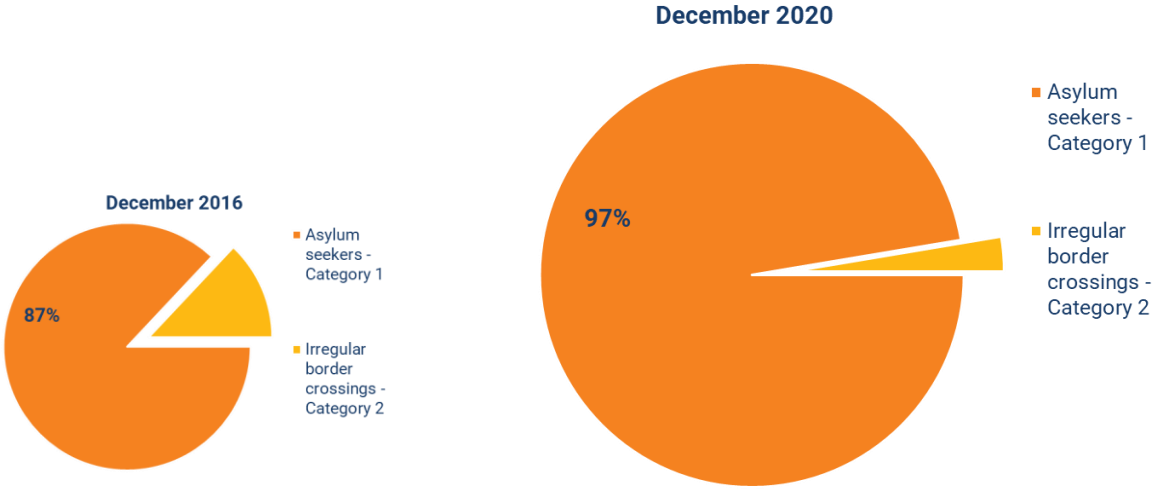
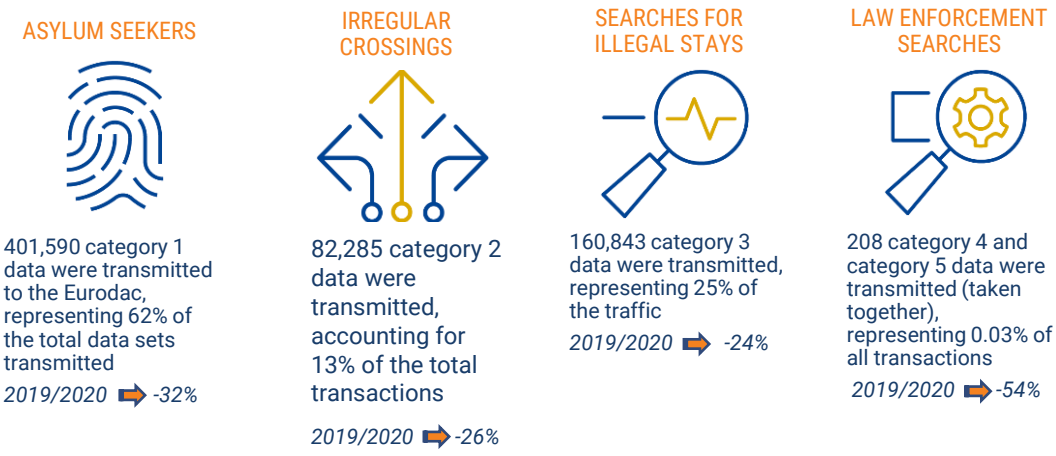


Table 1 (in Annexes below) provides a breakdown per member state of the fingerprint data sets stored in Eurodac, on 31 December 2020.

3.1. Data processed in 2020

In 2020, the Eurodac Central System processed a total of 644,926 transactions. All transaction types saw a substantial decrease compared to 2019.

Similar to previous years, also in 2020, Germany was the country that most used the Eurodac and accounted for 17% of all traffic sent to the Central System. Germany was closely followed by Spain with 15%, and France with 13% of the transactions sent.



Germany, France, Spain, the UK and Greece, taken together, accounted for over 70% of the 401,590 transactions sent for category 1 (see Figure 4).

Italy, Spain, Greece, Cyprus and Malta, taken together, accounted for 95% of the 82,285 transactions sent for category 2 (see Figure 5).

Germany, Greece, Belgium, Italy and France, taken together, accounted for 67% of the 160,843 transactions sent for category 3 (see Figure 6).

Germany, the Netherlands and Austria, taken together, accounted for 67% of the 206 transactions sent for category 4 (see Figure 7). Europol transmitted 2 category 5 transactions[8].

Figure 4 – Top 5 users for Category 1 (asylum seekers)

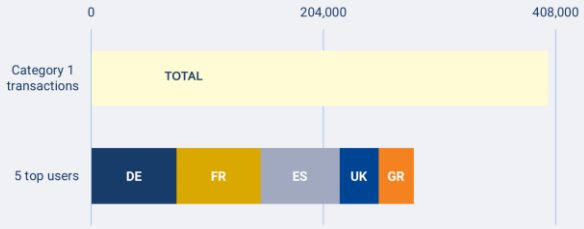


Figure 5 – Top 5 users for Category 2 (irregular crossings)

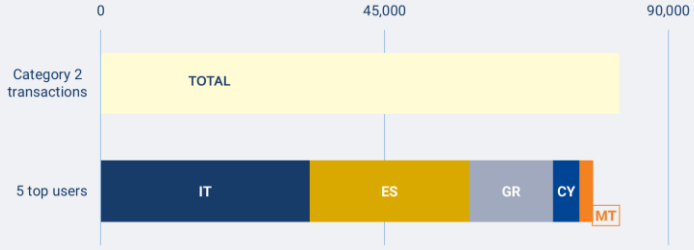


Figure 6 – Top 5 users for Category 3 (searches on irregular stays)

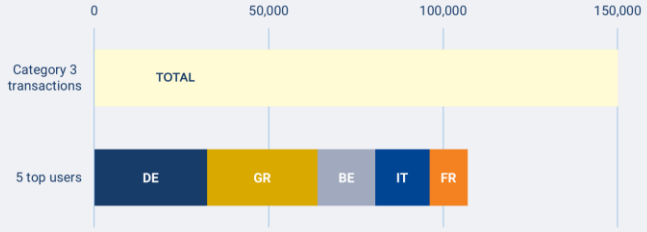


Figure 7 – Top 3 users for Category 4 (law enforcement searches)

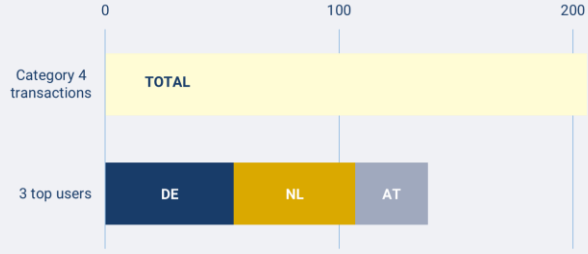


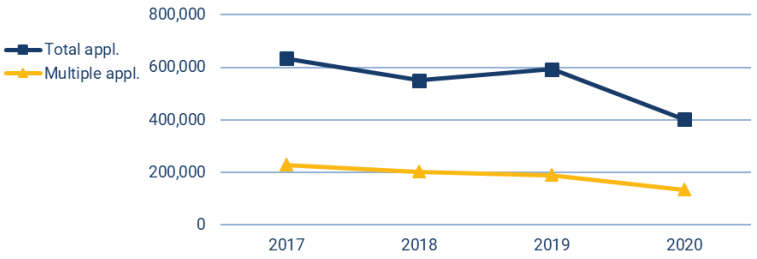
Table 2 (in Annexes below) provides a breakdown per member state of fingerprint data sets transmitted to the Eurodac in 2020.

3.2. Hits generated in 2020

Multiple international protection applications

When a Category 1 data set of fingerprints of an applicant for international protection is entered into the Eurodac Central System, this automatically generates a search against all Category 1 data sets already stored in the Eurodac.

Figure 8 – Trends, total applications and multiple applications 2017 - 2020



Hits generated while comparing a new Category 1 data set with already stored data will show cases of multiple international protection applications. In addition, Category 1 data sets have a retention period of 10 years; therefore, the results show all previous international protection applications from the last 10 years. Repeat international protection applications may show up as a local or a foreign hit depending on the previous registration circumstances.

[8] Europol relies on the Dutch connection and infrastructure in order to transmit data to the Eurodac, in line with Article 19 of the Eurodac Regulation and on agreement with the Dutch authorities.

For example, when the application has been registered in the same Member State, it generates a local hit[9]; whereas if the earlier application was registered in another Member State, it generates a foreign hit.

In 2020, the Eurodac processed a total of 401,590 applications for international protection. Of these, 33% were multiple applications (134,456), meaning that the persons had applied for international protection more than once. Figure 8 shows the trends for all applications for international protection and the multiple applications made in the last four years.

Hits against unmarked data sets

Data sets transmitted to the Eurodac are for storing and/or for search purposes. Not all data sets transmitted are stored by default, this depends on the purpose of the transmission (on the type of category), and not all data sets transmitted are searched by default.

In 2020, all types of hits registered a decrease compared to the levels in 2019.

- Hits generated by a category 1 search against a category 1 data set:
  - 232,133 hits in a category 1/category 1 search were registered, among those 166,874 were foreign hits.
  - France accounted for 28% of the foreign hits, mainly in relation to international protection applicants who had previously lodged applications in Germany and in Italy.
  - Germany accounted for 24% of the foreign hits, mainly in relation to international protection applicants who had previously lodged applications typically in Greece and in the Netherlands.
  - The UK accounted for 12% of all foreign hits, mainly in relation to international protection applicants who had previously lodged applications mostly in France and in Germany (see Figure 9);
- Hits generated by a category 1 search against a category 2 data set:
  - 68,775 hits in a category 1/category 2 search were registered, among those 33,314 were foreign hits.
  - Germany registered 29% of the foreign hits, mainly in relation to international protection applications from applicants who had previously irregularly crossed external borders in Greece or Italy.
  - France registered 24% of the foreign hits, mainly in relation to international protection applications from applicants who had previously irregularly crossed external borders in Spain or Italy.
  - The UK accounted for 14% of the foreign hits, mainly in relation to international protection applications from applicants who had previously irregularly crossed external borders in Italy and Greece (see Figure 10).

Figure 9 – Foreign hits category 1/1

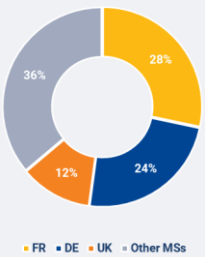


Figure 10 – Foreign hits category 1/2

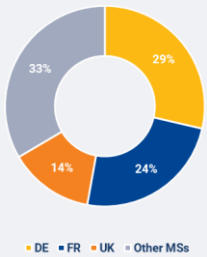
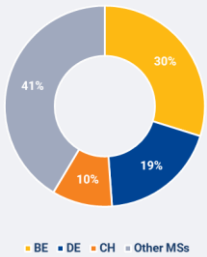


Figure 11 – Foreign hits category 3/1



[9] The Member States have the option to exclude their own searches. In such cases, when performing searches, local hits will not be returned and will not be included in the results. This is valid for all types of hits.

- Hits generated by a category 3[10] search against a category 1 data set:
  - 122,576 hits in a category 3/category 1 search were registered, among those 91,007 were foreign hits.
  - Belgium registered 30% of the foreign hits, identifying persons illegally staying in Belgium, including those who first applied for international protection mainly in Germany and the Netherlands.
  - Germany registered 19% of the foreign hits, identifying persons illegally staying in Germany, including those who first applied for international protection mainly in Italy and Greece.
  - Switzerland accounted for 10% of the foreign hits, identifying persons illegally staying in Switzerland, including those who first applied for international protection mainly in Germany (see Figure 11).

Tables 3, 4 and 5 (in Annexes below) provide data on the hits per Member State.

Hits against marked data sets

As soon as international protection status is granted, the Member States have to mark all the data sets (categories 1 and 2) linked to the initial record. The marked data sets remain available in the system for comparison, and hence are subject to generating hits.

- Hits generated by a category 1 search against a marked data set: 19,148 hits were generated against marked category 1 data sets, and 1,337 hits were generated against marked category 2 data sets.
- 6,572 hits were generated by a category 3 search against a marked category 1 data set.

Those hits give an indication of secondary movements of persons who were granted international protection, and subsequently re-apply for international protection in the same or another Member State, or were found illegally staying within the territory of a Member State.

Tables 8, 9 and 10 (in Annexes below) provide data on marked, unmarked, blocked[11] data sets, and hits on marked data sets per Member State.

Hits following law enforcement searches

Law enforcement searches performed by Member State authorities (category 4 searches) or by Europol (category 5 searches) are executed on all data sets stored in the system, except on blocked data sets[12]. In the case of hits, law enforcement authorities are not notified whether the data set hit is marked or unmarked.

Hits generated by a category 4 search against a category 1 or category 2 data set:

- 79 hits were generated by category 4 searches against a category 1 data set.
- 6 hits were generated by category 4 searches against a category 2 data set.
- Germany accounted for the majority of foreign hits, identifying to law enforcement authorities, mainly persons who lodged a request for international protection in Italy and Finland.

Tables 6 and 7 (in Annexes below) provide data on hits per Member State.

False hits

After a hit, when the final verification reveals that the result of the comparison does not correspond to the fingerprint data sent for comparison, the Member States must immediately erase the result of the comparison and report the false hit to eu-LISA and to the European Commission. Following such notifications, any necessary technical measures are

[10] Under Article 17 of the Eurodac Regulation, the Member States are not obliged to make use of this transaction. Therefore, not all the Member States make systematic use of this functionality.
[11] Once the granted status for international protection is more than 3 years old, the data set will be blocked and will no longer be available for law enforcement searches, under Article 18(2) of the Eurodac Regulation.
[12] Data sets are blocked when the international protection status was granted prior to 1 January 2017 (thus more than 3 years old). Those data sets are not available for law enforcement searches.

taken to unlink the relevant records in the Eurodac database. 86 false hits were reported in 2020. Figure 12 shows the false hits reported in the last 4 years.

Figure 12 – False hits by year, 2017 - 2020

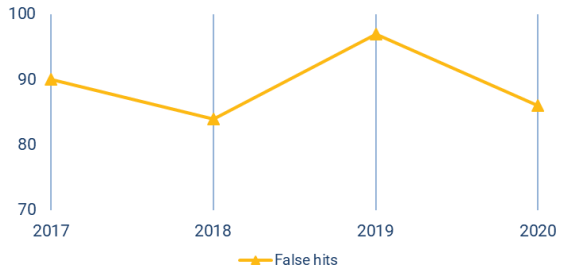


Table 12 (in Annexes below) provides a breakdown of false hits per Member State.

3.3. Transactions sent with over 72-hour delays

Delays in the transmission of fingerprint data sets to the Eurodac Central System might result in incorrect designations by the Member State responsible for the data subject, as per the provisions of the Dublin Regulation. Therefore, the Member States have a maximum of 72 hours[13] to take fingerprints and transmit them to the Eurodac following the lodging of an application for international protection or the apprehension of a person.

In 2020, 5 Member States transmitted more than 10% of their category 1 data with over 72-hour delays. For example, Switzerland sent 43.77% of its category 1 data to the Eurodac Central System with a delay of over 72 hours (see Figure 13).

Figure 13 — Percentage of data sent with a delay of over 72 hours

Member State	Category 1 > 72h
Switzerland	43.77%
Liechtenstein	39.13%
Portugal	24.29%
Germany	24.22%
Lithuania	12.94%

Those delays were responsible for producing 1,300 wrong hits[14], most of these (74% of the wrong hits) were due to data registered by Hungary.

With regard to category 2 data, 7 Member States transmitted more than 10% of their data with over 72-hour delays. This means that, for example, Portugal sent 67.16% of its category 2 data to the Eurodac Central System with a delay of over 72 hours (see Figure 14).

Those delays were responsible for producing 67 missed hits[15]. Half of them – 35 missed hits – related to data that were submitted late by Spain.

[13] Under Articles 9(1) and 14(2) of the Eurodac Regulation. In the event of serious technical problems, an additional 48 hours are allowed.
[14] An example of a so-called 'wrong hit': a third-country national lodges an international protection application in Member State A, whose authorities take the person's fingerprints. While those fingerprints are awaiting transmission to the Eurodac (Category 1 transaction), the same person could go to Member State B and lodge another application. If Member State B sends the fingerprint data before Member State A, the fingerprint data sent by Member State A would be registered in the Eurodac later than the fingerprint data sent by Member State B. This would result in a hit from the data sent by Member State B against the data sent by Member State A (a wrong hit). Member State B would therefore be deemed responsible instead of Member State A, where the application was first lodged.
[15] An example of a so-called 'missed hit': a third-country national or stateless person is apprehended in connection with an irregular border crossing and the person's fingerprints are taken by the authorities of Member State A. While those fingerprints are awaiting transmission to the Eurodac (Category 2 transaction), the same person could go to Member State B and lodge an application for international protection. At that time, fingerprints are taken by

Figure 14 — Percentage of data sent with a delay of over 72 hours

Member State	Category 2 > 72h
Portugal	67.16%
Poland	56.7%
Malta	47.25%
Romania	23.79%
Sweden	15.38%
Italy	11.03%
Spain	10.96%

Tables 13 and 14 (in Annexes below) provide data on wrong and missed hits per Member State.

3.4. Rejection rate

To be accepted by the Eurodac Central System, the transactions and the fingerprints sent should be of sufficient quality and in line with the Interface Control Document (ICD) that sets out the rules for data exchange between the Member States and the Central System.

Fingerprint sets are rejected due to insufficient quality or sequence check failures, as they cannot be used for comparisons. In 2020, the average rejection rate for fingerprint data sets was 4.4% (i.e. 22,410 data sets were rejected, and only entries to categories 1 and 2 are considered). This rejection rate shows a slight increase for the last few years.

Transaction errors may occur due to data validation issues (incompatibility with the ICD) or wrong formats. In 2020, 85,679 transactions (transactions here include entries, updates, and deletions) were rejected due to errors, representing 8.8% of transactions overall. The transaction error trend for the last few years is slightly increasing, just like the fingerprint rejection rate.

3.5. Access rights to own data

Any person whose data are processed by the Eurodac has the right to access their data on request. This transaction type is called a Category 9 search. In 2020, 102 Category 9 searches were performed. As in the past years, more than half of the searches were performed by France. Figure 15 shows the trend for Category 9 search requests in the last four years.

Figure 15 – Category 9 searches, 2017 - 2020

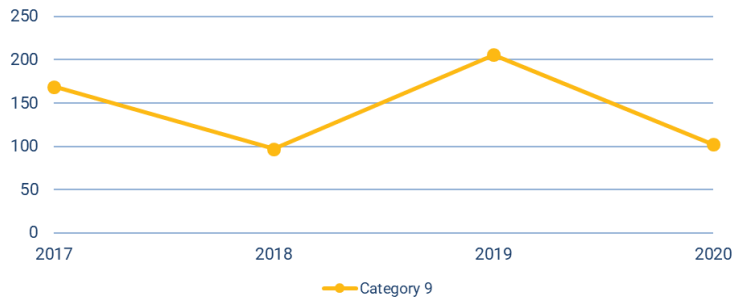


Table 15 (in Annexes below) provides a breakdown of Category 9 transactions per Member State.

the authorities of Member State B. If Member State B sends the fingerprint data (Category 1 transaction) before Member State A, the Eurodac would register this as a Category 1 transaction and Member State B would have to handle the application instead of Member State A. When the Category 2 transaction arrives later, a hit will be missed, because Category 2 data are not searchable.

Conclusions

2020 was an exceptional year for the entire world, including eu-LISA and the Member States. The Agency together with the support of the Member States successfully handled the circumstances to minimise the impact of the COVID-19 pandemic on the Eurodac, and in particular on the operational management of the Central System. There were some delays in relation to non-critical requests in the first half of the year which were absorbed by the end of 2020.

During the reporting period, the Eurodac Central System performed as expected in line with the service level agreement, and the legal requirements. In 2020, the Eurodac was available for 99.87% of the time. The Agency remains strongly committed to keeping the Eurodac Central System operating on a 24/7 basis, with appropriate 24/7 operational monitoring support.

To conclude and looking to the future, eu-LISA has started working on the redesign of the Eurodac as some of the crucial components of the system have reached the end of their lifecycle, and this poses significant challenges for system maintenance and support. The redesign project will introduce a new flexible architecture that will facilitate at the same time the implementation of future modifications as may be required by law.

4

ANNEXES

4. Annexes

Table 1. The Eurodac Central System: overall data on 31 December 2020

Member State	Category 1 data	Category 2 data	Total
AT	197,620	132	197,752
BE	194,973	0	194,973
BG	58,367	270	58,637
CH	165,062	0	165,062
CY	35,247	7,726	42,973
CZ	10,429	1	10,430
DE	1,830,711	1,249	1,831,960
DK	64,197	0	64,197
EE	856	0	856
ES	238,270	38,314	276,584
FI	53,009	0	53,009
FR	697,937	648	698,585
GR	275,684	55,925	331,609
HR	5,799	2,658	8,457
HU	177,374	183	177,557
IE	25,562	0	25,562
IS	4,269	4	4,273
IT	646,767	41,731	688,498
LI	555	0	555
LT	3,170	6	3,176
LU	14,380	2	14,382
LV	2,104	1	2,105
MT	14,889	4,245	19,134
NL	188,704	513	189,217
NO	67,550	55	67,605
PL	44,951	121	45,072
PT	7,650	67	7,717
RO	22,176	260	22,436
SE	325,650	22	325,672
SI	12,570	0	12,570
SK	2,709	25	2,734
UK	300,852	128	300,980
Total	**5,690,043**	**154,286**	**5,844,329**

Table 2. Data sets sent in 2020[16]

Member State	Category 1 data	Category 2 data	Category 3 data	Category 4 CPS	Category 4 MPS	Category 5 data	Total
AT	10,671	70	9,320	26	5	n/a	20,092
BE	13,522		31,705	6		n/a	45,233
BG	3,203	186	1,390		11	n/a	4,790
CH	7,037	1	9,617			n/a	16,655
CY	6,267	4,198	35	1		n/a	10,501
CZ	1,035		3,122			n/a	4,157
DE	75,036	808	32,297	35	20	n/a	108,196
DK	1,485		1,907			n/a	3,392
EE	34		715			n/a	749
ES	69,517	25,319	303	14	2	n/a	95,155
FI	2,552	1	100			n/a	2,653
FR	73,828	394	10,940	7	5	n/a	85,174
GR	30,855	13,219	16,529		1	n/a	60,604
HR	1,177	1,683	22			n/a	2,882
HU	96	128	3,227	1		n/a	3,452
IE	2,208					n/a	2,208
IS	517	2	19			n/a	538
IT	25,722	33,147	15,538			n/a	74,407
LI	23					n/a	23
LT	201	2	70			n/a	273
LU	977		1,424			n/a	2,401
LV	121	1	2			n/a	124
MT	2,229	2,220	30			n/a	4,479
NL	15,523	353	8,058	5	47	n/a	23,986
NO	1,229	29	2,909			n/a	4,167
PL	1,763	97	914			n/a	2,774
PT	881	67	187			n/a	1,135
RO	5,821	248	1,320	19		n/a	7,408
SE	10,550	13	741	1		n/a	11,305
SI	3,205	3	4,525			n/a	7,733
SK	278	24	1,147			n/a	1,449
UK	34,027	72	2,730			n/a	36,829
Europol	n/a	n/a	n/a	n/a	n/a	2	2
Total	**401,590**	**82,285**	**160,843**	**115**	**91**	**2**	**644,926**

[16] For Category 1, only initial entries are included.

Table 3. Category 1 hits against Category 1 data sets in 2020[17]

Member State	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IS	IT	LI	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK	Local hits	Foreign hits	Total
AT	1,617	69	298	243	5	20	782	87	1	21	14	272	1,011	25	294	0	3	244	6	4	17	2	8	191	33	40	1	847	106	26	48	21	1,617	4,739	6,356
BE	487	6,400	297	315	8	12	1,901	105	0	365	33	1,541	1,119	86	205	7	11	836	2	3	58	8	42	649	56	87	20	294	251	119	13	59	6,400	8,989	15,389
BG	12	14	61	16	1	1	41	12	1	1	6	4	79	1	14	0	0	8	0	0	2	1	1	7	9	1	0	5	25	2	0	4	61	268	329
CH	395	179	70	804	0	9	1,271	122	0	72	26	475	1,090	115	127	1	6	405	6	5	66	4	14	567	58	28	15	119	192	119	8	20	804	5,584	6,388
CY	2	0	1	3	204	0	7	0	0	1	1	1	4	0	1	0	0	3	0	0	0	0	0	2	2	0	0	0	1	1	0	1	204	31	235
CZ	16	6	2	20	0	363	133	8	1	3	0	31	1	1	1	0	4	4	0	1	2	1	1	26	4	4	0	1	26	1	1	3	363	302	665
DE	2,170	1,807	930	1,654	35	160	9,706	718	16	705	361	4,057	11,049	657	1,113	15	56	4,748	3	144	171	51	233	2,806	327	857	65	1,521	2,685	439	71	150	9,706	39,774	49,480
DK	44	51	8	107	3	3	404	366	0	22	21	84	72	7	12	2	4	88	1	0	5	0	4	161	48	10	0	12	291	14	2	8	366	1,488	1,854
EE	7	2	0	2	0	0	4	0	2	0	2	0	1	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	2	22	24
ES	87	86	14	90	0	24	490	26	0	899	10	345	175	13	63	0	3	1,459	0	6	10	2	11	126	18	3	11	9	97	41	0	14	899	3,233	4,132
FI	16	19	7	25	23	4	277	53	0	8	2,701	83	179	0	49	0	3	113	0	0	6	0	14	29	31	6	3	5	161	2	0	12	2,701	1,128	3,829
FR	2,796	2,758	1,086	1,811	53	115	12,690	487	4	895	263	20,744	4,028	187	1,617	20	45	10,503	14	78	214	24	532	1,750	363	540	171	642	2,385	658	67	430	20,744	47,226	67,970
GR	72	31	63	37	0	1	387	15	0	9	26	63	2,667	6	56	1	5	37	0	2	4	0	0	40	19	4	0	13	84	2	1	20	2,667	998	3,665
HR	21	2	7	4	0	0	42	1	1	0	5	3	642	51	30	0	0	2	0	0	0	0	0	2	3	0	0	4	2	9	0	5	51	785	836
HU	4	1	9	0	0	0	2	0	0	0	0	0	5	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	27	22	49
IE	40	127	7	27	3	0	243	38	0	10	27	57	374	4	17	331	1	108	0	1	2	0	19	43	21	4	4	31	142	6	2	104	331	1,462	1,793
IS	15	57	2	7	1	0	53	7	0	4	12	12	194	0	62	1	24	27	0	1	1	0	2	22	5	0	2	2	36	1	2	4	24	532	556
IT	761	200	227	384	3	8	2,723	109	0	42	87	1,343	1,214	100	595	6	8	5,826	0	2	20	1	44	217	66	11	7	80	415	302	7	59	5,826	9,041	14,867
LI	7	1	1	10	0	0	8	0	0	0	0	3	0	0	3	0	2	4	6	0	4	0	0	3	0	0	1	0	2	0	0	0	6	49	55
LT	12	6	0	4	0	0	31	1	0	0	1	1	1	0	1	0	1	0	1	22	0	1	0	10	0	14	0	0	7	0	0	0	22	92	114
LU	26	74	0	81	0	0	183	20	0	5	7	81	123	6	9	0	1	63	3	0	55	0	9	117	10	0	0	4	34	8	0	5	55	869	924
LV	2	0	0	0	0	0	17	1	2	0	4	2	6	0	1	0	0	0	0	2	0	8	0	0	2	2	0	0	4	0	0	0	8	45	53
MT	10	1	5	10	0	0	52	2	0	0	0	14	54	1	1	0	1	171	0	0	0	0	45	9	2	0	0	3	9	5	0	2	45	352	397
NL	477	619	104	954	11	33	3,882	322	0	227	82	1,146	1,041	68	165	4	28	2,031	11	12	158	6	59	4,051	116	81	27	172	528	169	12	58	4,051	12,603	16,654
NO	26	10	5	23	2	0	94	54	0	5	8	12	70	3	3	1	1	37	0	2	5	0	1	29	86	1	1	5	113	5	0	4	86	520	606
PL	57	29	7	11	0	7	311	23	1	1	2	54	49	0	4	0	0	6	0	12	3	1	0	37	9	1,452	0	23	49	0	0	1	1,452	697	2,149
PT	13	21	0	41	0	1	194	8	0	11	4	99	80	0	6	0	2	347	0	0	4	0	12	52	9	0	13	0	15	2	0	1	13	922	935
RO	58	5	438	17	1	2	114	9	1	8	7	12	597	4	28	1	0	9	0	0	1	0	4	23	12	5	0	427	27	1	2	16	427	1,402	1,829
SE	88	101	33	143	7	5	653	400	2	50	139	167	448	13	60	3	13	249	2	10	10	14	22	183	183	31	12	38	2,666	10	5	20	2,666	3,114	5,780
SI	24	4	41	18	0	3	54	8	0	2	1	28	399	209	24	0	0	31	0	0	0	0	1	7	4	2	0	24	8	14	0	1	14	893	907
SK	18	3	4	3	0	1	14	1	0	0	0	1	16	0	3	2	0	3	0	0	0	0	0	1	0	1	2	17	2	0	30	1	30	93	123
UK	717	800	390	571	28	17	4,329	499	1	286	265	2,938	2,464	147	337	948	34	1,936	1	8	73	5	514	746	167	42	49	347	822	112	6	3,591	3,591	19,599	23,190
Total	10,097	13,483	4,117	7,435	388	789	41,092	3,502	33	3,652	4,115	33,673	29,252	1,704	4,928	1,343	256	29,298	56	316	891	129	1,592	11,907	1,663	3,227	404	4,645	11,187	2,068	277	4,614	65,259	166,874	232,133

[17] The Member States in column one have sent cases which have produced hits against the data of the Member States listed across the top of the table. Local hits are produced when the two data sets generating the hit are from the same country. The number of local hits depends on the Member State settings when performing a search on the Eurodac. The Member States have the option to exclude their own searches, which will filter out local hits from the results.

Table 4. Category 1 hits against Category 2 data sets[18]

Member State	AT	BG	CY	CZ	DE	ES	FR	GR	HR	HU	IS	IT	MT	NL	NO	PL	PT	RO	SE	SK	UK	Local hits	Foreign hits	Total
AT	7	9	0	0	3	14	1	1,333	61	12	0	71	4	0	0	1	0	23	0	2	0	**7**	**1,534**	**1,541**
BE	0	3	2	0	4	155	8	692	59	1	0	376	42	0	0	0	0	4	0	0	0	**3**	**1,343**	**1,346**
BG	0	114	0	0	0	0	0	77	0	0	0	0	0	0	0	0	0	0	0	0	0		**191**	**191**
CH	0	0	0	0	2	222	1	952	105	0	0	346	9	0	0	0	0	2	0	0	0		**1,639**	**1,639**
CY	0	0	3,775	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3,775**	**0**	**3,775**
CZ	1	0	0	0	0	0	0	3	2	0	0	1	0	0	0	0	0	0	0	0	0	**0**	**7**	**7**
DE	0	26	5	0	111	1,030	30	5,878	521	8	2	1,814	163	8	1	2	0	40	0	3	0	**111**	**9,531**	**9,642**
DK	0	0	1	0	3	14	1	67	4	0	0	24	0	0	0	0	0	3	2	0	0		**119**	**119**
ES	0	0	0	0	0	1,763	9	10	3	0	0	69	5	1	0	0	0	0	0	0	0	**1,763**	**97**	**1,860**
FI	1	0	17	0	0	0	0	168	4	0	0	12	8	0	1	0	0	0	0	0	0		**211**	**211**
FR	0	3	13	0	19	3,302	225	1,618	217	4	0	2,537	332	5	0	3	0	12	0	8	0	**225**	**8,073**	**8,298**
GR	0	0	0	0	0	3	0	18,805	3	0	0	1	0	0	0	0	0	0	0	0	0	**18,805**	**7**	**18,812**
HR	0	1	0	0	0	0	0	440	733	0	0	0	1	0	0	2	0	0	0	0	0	**733**	**444**	**1,177**
HU	0	0	0	0	0	0	0	6	2	2	0	0	0	0	0	0	0	0	0	0	0	**2**	**8**	**10**
IE	0	0	1	0	0	6	0	41	2	0	0	34	0	2	0	0	0	1	0	0	0		**87**	**87**
IS	0	0	0	0	0	0	0	39	0	0	0	0	0	1	0	0	0	0	0	0	0	**0**	**40**	**40**
IT	1	1	2	0	0	59	0	241	106	0	1	7,986	29	1	0	0	0	1	0	0	0	**7,986**	**442**	**8,428**
LI	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		**1**	**1**
LT	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		**1**	**1**
LU	0	0	0	0	1	9	0	121	4	0	0	52	10	0	0	0	0	1	0	0	0		**198**	**198**
LV	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0		**4**	**4**
MT	0	0	0	0	0	0	0	44	0	0	0	2	1,831	0	0	0	0	0	0	0	0	**1,831**	**46**	**1,877**
NL	2	0	1	0	9	331	7	1,577	68	6	0	526	59	26	0	1	0	11	0	1	0	**26**	**2,599**	**2,625**
NO	0	0	2	0	1	2	0	159	3	0	0	8	0	0	1	0	0	0	0	0	0	**1**	**175**	**176**
PL	0	0	0	0	0	0	0	28	0	0	0	0	1	0	0	30	0	0	0	0	0	**30**	**29**	**59**
PT	0	0	0	0	0	25	0	63	0	0	0	30	7	0	0	0	36	0	0	0	0	**36**	**125**	**161**
RO	0	5	0	0	0	2	0	622	45	4	0	2	4	0	0	0	0	103	0	0	0	**103**	**684**	**787**
SE	0	3	1	0	3	10	0	490	10	0	0	31	3	1	0	1	0	2	3	0	0	**3**	**555**	**558**
SI	0	1	0	0	0	2	0	300	235	1	0	0	0	0	0	0	0	0	0	0	0		**539**	**539**
SK	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	2	0	4	0	**4**	**22**	**26**
UK	1	18	9	1	16	94	23	1,524	157	9	0	2,111	577	14	0	1	0	8	0	0	17	**17**	**4,563**	**4,580**
Total	**13**	**184**	**3,829**	**1**	**172**	**7,043**	**305**	**35,323**	**2,344**	**47**	**3**	**16,034**	**3,085**	**59**	**3**	**41**	**36**	**213**	**5**	**18**	**17**	**35,461**	**33,314**	**68,775**

[18] The Member States in column one have sent searches which have produced hits in the data of the Member States listed across the top of the table. Local hits are produced when the two data sets generating the hit are from the same country. The number of local hits depends on the Member State settings when performing a search on the Eurodac. The Member States have the option to exclude their own searches, which will filter out local hits from the results.

Table 5. Category 3 hits against Category 1 data sets[19]

Member State	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IS	IT	LI	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK	Local hits	Foreign hits	Total
AT	1,403	92	139	359	6	26	1,185	81	1	25	21	297	482	28	258	3	3	1,176	4	7	29	3	11	227	46	22	1	278	145	43	36	27	1,403	5,061	6,464
BE	1,298	7,081	163	2,359	2	22	6,729	912	1	790	133	2,552	1,115	196	684	18	11	1,937	3	22	429	25	132	5,039	225	72	54	141	1,112	653	18	286	7,081	27,133	34,214
BG	8	12	27	11	0	0	32	8	0	0	1	6	51	0	9	0	1	6	0	0	2	0	1	9	4	0	0	1	13	0	0	2	27	177	204
CH	689	205	48	2,923	0	9	2,446	293	0	128	31	935	319	68	212	8	20	1,405	10	8	129	6	2	1,106	87	18	17	108	356	149	13	49	2,923	8,874	11,797
CZ	24	10	21	17	0	166	128	4	0	0	1	28	44	0	9	1	1	21	1	0	11	0	1	24	5	10	1	115	14	1	3	0	166	495	661
DE	1,236	704	293	1,091	18	71	7,298	446	3	329	240	2,226	2,341	179	462	10	14	2,609	5	39	120	19	45	1,512	193	217	21	832	1,676	224	45	104	7,298	17,324	24,622
DK	48	26	14	60	3	1	299	509	0	11	25	82	34	4	31	1	8	174	2	2	12	1	6	59	46	4	3	4	334	7	2	14	509	1,317	1,826
EE	3	0	0	2	0	0	8	3	5	0	14	3	1	0	0	0	0	7	0	0	0	0	0	2	1	1	0	0	8	0	0	0	5	53	58
ES	5	8	0	7	0	0	60	10	0	133	4	25	11	0	3	0	0	34	1	0	2	0	1	10	1	0	1	0	10	1	0	5	133	199	332
FI	4	0	0	6	0	0	17	5	0	0	17	5	8	0	1	0	0	19	0	0	0	0	0	6	3	0	0	1	16	0	0	0	17	91	108
FR	419	271	134	519	2	11	2,029	150	1	182	47	3,537	405	52	285	3	1	1,712	1	2	66	1	113	699	56	33	14	72	213	220	8	156	3,537	7,877	11,414
GR	49	26	64	35	0	1	299	11	0	5	19	48	2,370	6	49	1	10	32	0	2	6	0	0	31	12	5	0	12	61	3	1	15	2,370	803	3,173
HR	0	0	1	2	0	0	2	0	0	0	0	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	15	19
HU	52	11	84	20	1	8	113	2	0	6	5	41	202	1	85	0	3	20	0	0	0	0	0	23	2	1	0	355	19	0	0	14	85	983	1,068
IS	0	0	0	0	0	0	0	0	0	2	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	10	10
IT	727	151	282	443	3	10	1,982	109	0	42	46	882	1,616	231	400	11	7	2,568	3	3	35	2	30	332	65	9	8	113	265	396	10	49	2,568	8,262	10,830
LT	2	0	0	0	0	0	4	1	1	0	1	0	2	0	0	0	0	0	0	6	0	1	0	0	0	0	0	0	0	0	0	0	6	12	18
LU	94	136	8	252	0	2	597	85	0	20	21	253	107	7	34	3	5	205	6	0	198	0	10	376	39	7	4	15	128	14	4	18	198	2,450	2,648
MT	1	0	1	1	0	0	7	1	0	0	0	3	0	0	0	0	0	11	0	0	0	0	15	0	0	0	0	0	0	0	0	0	15	25	40
NL	191	316	59	368	3	15	1,451	165	5	87	29	529	253	14	95	12	8	449	5	5	63	6	21	1,864	53	19	7	24	230	51	1	106	1,864	4,640	6,504
NO	44	30	11	35	5	1	183	78	0	10	17	72	77	2	34	1	9	166	0	2	3	4	4	47	333	6	2	5	263	5	0	22	333	1,138	1,471
PL	24	17	14	10	1	10	142	10	1	2	3	39	58	0	8	0	0	9	0	4	1	1	0	29	9	150	0	51	23	2	0	2	150	470	620
PT	6	0	0	9	0	0	46	0	0	1	1	13	1	0	1	0	0	33	0	0	1	0	0	6	2	0	8	2	1	0	0	0	8	123	131
RO	26	3	8	1	1	0	38	2	1	0	6	1	134	2	7	0	0	0	0	0	0	0	0	4	4	0	0	336	11	0	0	0	336	249	585
SE	24	17	2	25	2	0	77	42	0	3	23	19	16	1	5	0	1	97	1	0	4	0	3	12	15	3	4	4	214	1	0	1	214	402	616
SI	58	16	92	41	0	1	127	12	1	5	7	55	748	356	55	0	0	68	1	1	2	0	0	30	8	2	0	29	34	36	1	2	36	1,752	1,788
SK	19	1	21	6	0	3	28	2	0	0	0	5	51	0	9	3	0	8	1	0	0	0	0	1	1	1	2	144	4	0	14	1	14	311	325
UK	17	29	12	23	2	0	168	10	1	4	4	99	37	1	26	157	1	87	0	0	3	1	5	33	1	2	2	3	30	3	0	269	269	761	1,030
Total	6,471	9,162	1,498	8,625	49	357	25,495	2,951	21	1,785	716	11,755	10,496	1,152	2,762	232	103	12,854	44	103	1,116	70	400	11,481	1,211	582	149	2,645	5,183	1,810	156	1,142	31,569	91,007	122,576

[19] The Member States in column one have sent searches which have produced hits in the data of the Member States listed across the top of the table. Local hits are produced when the two data sets generating the hit are from the same country. The number of local hits depends on the Member State settings when performing a search on the Eurodac. The Member States have the option to exclude their own searches, which will filter out local hits from the results.

Table 6. Category 4 hits against Category 1 data sets

Member State	AT1	BE1	BG1	CY1	DE1	ES1	FI1	FR1	GR1	HU1	IT1	NL1	PL1	RO1	SE1	Local hits	Foreign hits	Total
AT	10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	10	1	11
BE	0	6	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6	12
CY	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	2	3
DE	0	0	1	0	0	0	5	1	3	1	6	1	0	2	1	0	21	21
ES	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
FR	0	0	0	0	2	0	0	3	0	0	1	0	0	0	2	3	5	8
HU	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
NL	0	0	0	0	2	0	3	0	0	0	0	1	0	0	0	1	5	6
RO	2	0	0	0	4	0	3	0	1	0	0	1	0	0	0	0	11	11
Total	12	6	1	1	9	2	11	4	5	1	7	4	6	2	3	22	52	74

Table 7. Category 4 hits against Category 2 data sets

Member State	CY2	ES2	IT2	Local hits	Foreign hits	Total
CY	1	0	0	1	0	1
FR	0	1	1		2	2
RO	0	3	0		3	3
Total	1	4	1	1	5	6

Table 8. Marked, unmarked and blocked data sets in 2020

Member State	Number of marking as initiator	Number of marking following the initiator	Total
AT	4,776	1,321	6,097
BE	1,596	1,621	3,217
BG	312	1,116	1,428
CH	3,959	1,006	4,965
CY	600	90	690
CZ	52	29	81
DE	26,815	12,990	39,807
DK	362	544	906
EE	7		7
ES	1,839	446	2,285
FI	1,214	502	1,716
FR	14,723	4,289	19,012
GR	21,798	20,676	42,474
HR	14	201	215
HU		2,128	2,128
IE	326	104	430
IS		218	218
IT	31	3,069	3,100
LI	2		2
LT	23	8	31
LU	351	52	403
LV	12	9	21
MT	222		222
NL	3,729	1,571	5,300
NO	945	555	1,500
PL	173	306	479
PT		55	55
RO	429	315	744
SE	4,017	1,726	5,743
SI	72	165	237
SK	23	27	50
UK	5,154	2,300	7,454
Total	93,576	57,439	151,017

Member State	Number of unmarking as initiator	Number of unmarking following the initiator	Total
AT	426	39	465
BE	6	29	35
BG	3	27	30
CH	941	49	990
CY	1	1	2
DE	1,621	223	1,844
DK	32	22	54
ES	12	8	20
FI	12	4	16
FR	153	64	217
GR		45	45
HU		160	160
IT		62	62
MT	4		4
NL	58	54	112
NO	61	10	71
PL	3	10	13
PT		1	1
RO		5	5
SE	62	29	91
SI		1	1
SK	19	2	21
UK	13	31	44
Total	3,427	876	4,303

Member States	Blocked records for Law enforcement since 01/01/2020
AT	34,808
BE	25,572
BG	5,009
CY	831
CZ	421
DE	143,289
EE	75
ES	3,206
FI	5,243
FR	45,569
GR	9,533
HR	122
HU	14,128
IE	658
IT	5,382
LT	197
LU	402
LV	143
MT	326
NL	38,414
PL	1,443
PT	63
RO	1,736
SE	53,754
SI	145
SK	156
Total	390,625

Table 9. Category 1 hits against marked Category 1 data sets[20]

Member State	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IS	IT	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK	Local hits	Foreign hits	Total
AT	95	6	10	6			54	5		2		8	113		12			4				1	10	2			19	9			1	95	262	357
BE	17	334	13	18	2		132	7		49		58	441	5	9	1		11		2	1		31	3			35	17			1	334	853	1,187
BG		1	1	1			7	3		1			3		1									1				2				1	20	21
CH	7	10	2	72			58	7		2	3	17	104		10			8		1			19	2	1		1	10	1			72	263	335
CZ						7	2																									7	2	9
DE	111	502	220	97	15	4	687	83	6	101	55	110	6,301	38	60		11	55	8	10	11	2	228	37	10		122	176	28	1	2	687	8,404	9,091
DK	1	5	2	7			36	22		2	1	4	21		3			2					8	4			1	13				22	110	132
EE		1											1																			0	2	2
ES	2	1		1			10			2		3	1		5			4		1			2									2	30	32
FI	1	3	1	1			5				6	2	26		1			3					1	2			3	2				6	51	57
FR	53	214	20	73	6	1	413	22	1	99	16	297	933	3	41	1	1	97	2	4	2	4	59	10	5		48	49	7	4	9	297	2,197	2,494
GR	1	1		3			52	2				3	16		3	1							5	2				5				16	78	94
HR	2						3						19	1	2			1														1	27	28
HU							1																									0	1	1
IE	7	85		4	1		119	10		4	3	10	320	1	2		1	15	1				22	3	2		21	31			10	0	672	672
IS	3	46		2	1		24				2	4	180										11				2	6				0	281	281
IT	15	6	2	4			46	1				10	16	3	12			18		1			7	2			1	5	3	1	1	18	136	154
LI							1																										1	1
LT							1																									0	1	1
LU		4		2			11	2				2	19					1		2			2	2			1	2	1			2	49	51
MT	1		3				3						14										1				1					0	23	23
NL	24	51	18	41	3	1	228	14		9	4	34	273		15			29		5	1	2	118	6		2	8	18		1		118	787	905
NO		1	1	6			11	1		1		1	14					2					3	5			1	4				5	46	51
PL		1					4					1	2												2		1					2	9	11
PT		1					9			1		1			1			4					4	1		1		4				1	26	27
RO	2			1			6						36														5					5	45	50
SE	2	6	3	6	2	1	51	16		5	7	1	142		3			6					8	10	5		2	78				78	276	354
SI	1						2					2	7	4	1																	0	17	17
SK							1																									0	1	1
UK	29	241	12	48	3		613	84		22	22	141	978	6	16	15	4	145	4	1	4	4	82	13	2	2	37	59	11	1	110	110	2,599	2,709
Total	**374**	**1,520**	**308**	**393**	**33**	**14**	**2,590**	**279**	**7**	**300**	**119**	**709**	**9,980**	**61**	**197**	**18**	**17**	**405**	**15**	**27**	**19**	**13**	**621**	**105**	**27**	**5**	**309**	**490**	**51**	**8**	**134**	**1,879**	**17,269**	**19,148**

[20] The Member States in column one have sent Category 1 searches which have produced hits in the marked data sets of Member States listed across the top of the table. Local hits are produced when the two data sets generating the hit are from the same country.

Table 10. Category 1 hits against marked Category 2 data sets

Member State	BG	CY	ES	FR	GR	HR	IT	NL	RO	Local hits	Foreign hits	Total
AT	2				35						37	37
BE					70	2			1		73	73
BG					2						2	2
CH					16						16	16
DE	10	2			778	9		4	3		806	806
DK					4						4	4
FR			1		124	2	1		2		130	130
GR					6					6	0	6
HR					14	1				1	14	15
IE					15						15	15
IS					32			1			33	33
IT					1	1					2	2
LU					5						5	5
MT					4						4	4
NL				1	46						47	47
NO					4						4	4
PL					1						1	1
RO					22						22	22
SE					32						32	32
SI					5	2					7	7
UK					75			1			76	76
Total	12	2	1	1	1,291	17	1	6	6	7	1,330	1,337

Table 11. Category 3 hits against marked Category 1 data sets

Member State	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IS	IT	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK	Local hits	Foreign hits	Total
AT	57	9	10	10			80	3		2	2	14	55		17			27		1			15	2			3	8	1		4	57	263	320
BE	43	378	5	56	1		512	32		25	3	95	270		29	1		167	4	7	10	2	114	9	2	4	11	55	2	2	20	378	1,481	1,859
BG	1		1	1			8	1					3		1			1						1				2				1	19	20
CH	14	8	2	137			125	8		5		39	44		6			28		2			33	7	1		3	9	1		2	137	337	474
CZ				1		6	2													1							3	1				6	8	14
DE	55	84	20	52	1	1	439	24	2	11	15	80	800	11	28		1	41	1	4	4		64	17	8		17	51	1	1	2	439	1,396	1,835
DK	2	4	2	2			32	34			1	3	8	1	6			1					4	5				22			2	34	95	129
EE											2		1																				3	3
ES		6		2			33	2		36		3	7					4													3	36	60	96
FI											1	1	4					1									1	1				1	8	9
FR	8	13	2	12	1		92	8		3	2	67	46		6	1		22		1			11	6	3		1	11	1		4	67	254	321
GR	3	3	4	4			40	2				1	45		4					1			6	2				4				45	74	119
HU	10	4		1			19						14		5								3				4					5	55	60
IS													2																				2	2
IT	17	6	4	11			48	8			2	26	23	6	12			16		3			15	4			3	7	4		1	16	200	216
LU	6	12		13			67	6		2	1	12	26		6			22		3			15	4	1		2	12	1			3	208	211
MT			1																														1	1
NL	8	17	2	13			139	7		7	3	22	120		11			12	2	2			100	3	1			16			3	100	388	488
NO	9	4	1	6	3		30	3		3	3	13	27		3			13					8	46	2		1	28			7	46	164	210
PL	1						4	1					2		1										1							1	9	10
PT							1																			1						1	1	2
RO							4						12														1					1	16	17
SE		5					3					2	8	1				2						2	2		1	7				7	26	33
SI	1	1					8					4	17	9	1			3					1										45	45
SK							4						5		2												5						16	16
UK	1	5		2			15	1				3	13			5		3			1						3	6			4	4	58	62
Total	**236**	**559**	**54**	**323**	**6**	**7**	**1,705**	**140**	**2**	**94**	**35**	**385**	**1,552**	**28**	**138**	**7**	**1**	**363**	**7**	**25**	**15**	**2**	**389**	**108**	**21**	**5**	**59**	**240**	**11**	**3**	**52**	**1,385**	**5,187**	**6,572**

Table 12. False hits

Member State	False hits
BE	1
BG	1
CH	7
CZ	1
DE	21
DK	4
ES	5
FI	1
FR	2
GR	6
IT	17
LU	1
NL	5
NO	1
PL	2
PT	1
SE	7
UK	3
Total	86

Table 13. Category 1 wrong hits against Category 1 data sets

Member State	AT	BE	BG	CH	DE	DK	ES	FI	FR	GR	HU	IE	IT	LU	NL	NO	PL	SE	SI	UK	Total
AT	0	0	0	0	5	0	0	0	0	0	8	0	0	0	0	0	2	0	0	0	15
BE	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	5
CH	1	0	0	0	9	0	0	0	3	0	0	0	0	0	1	0	0	1	0	1	16
CY	0	0	1	0	9	0	1	0	0	0	1	0	1	0	0	0	0	4	0	2	19
DE	0	9	0	2	0	5	0	0	4	0	6	0	9	0	6	0	0	31	0	2	74
DK	0	0	0	0	6	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	9
ES	0	41	0	1	74	2	0	0	6	0	0	0	0	0	4	0	0	1	0	2	131
FI	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	0	4	0	0	9
HR	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
HU	381	6	0	5	475	5	0	4	10	0	0	0	57	0	1	3	0	16	0	1	964
IT	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
LU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
NL	1	0	0	0	7	0	0	0	0	1	2	0	0	1	0	1	1	0	0	2	16
PL	0	0	0	0	22	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	24
SI	0	1	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	8
UK	0	0	2	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	6
Total	383	58	4	9	615	13	2	4	25	1	19	1	73	1	14	4	3	59	1	11	1,300

Table 14. Category 1 missed hits against Category 2 data sets

Member State	AT	BE	CH	DE	FR	IT	NL	Total
ES	2	1	0	7	23	1	1	35
HR	0	0	1	0	0	0	0	1
IT	0	0	1	2	0	0	0	3
MT	0	0	0	5	8	0	0	13
RO	3	1	0	8	0	0	3	15
Total	5	2	2	22	31	1	4	67

Table 15. Category 9 searches performed in 2020

Member State	JAN	FEB	MAR	APR	MAI	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
BE			1										1
CY					1	1		1	2		1	3	9
DE					2								2
FR	10	14	2			2	3	5	2	2	6	9	55
GR	1		2		1	2	2				1	1	10
IS	1		3	7	3			1	1		3		19
SE				1					1	1	2	1	6
Total	12	14	8	8	7	5	5	7	6	3	13	14	102

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