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IMPACT ASSESSMENT

Accompanying the document

Proposal for a Regulation of the European Parliament and of the Council

on a computerised system for communication in cross-border civil and criminal proceedings (e-CODEX system), and amending Regulation (EU) 2018/1726

{COM(2020) 712 final} - {SEC(2020) 408 final} - {SWD(2020) 542 final}

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1. INTRODUCTION

1.1. Political and legal context

e-Justice is a key feature to enhance the access to and efficiency of justice in and across Member States. In the context of a Digital Single Market that aims for high-speed, secure and trustworthy infrastructures and services, solutions for fostering e-Justice[1] are part of the 2016 eGovernment Action Plan[2], most notably the e-Justice Portal[3] as a one-stop shop for judicial information in the EU. The EU's work on e-Justice is to a large extent based on a series of Strategies and Action Plans, the current ones being the 2019-2023 Strategy[4] and Action Plan for 2019-2023[5].

One of the objectives of e-Justice is to ensure the secure communication between judicial authorities in legal proceedings. e-CODEX (e-Justice Communication via Online Data EXchange) is a key IT tool to achieve this objective by allowing direct secure cross-border electronic messages exchange in the judicial area. The digital channel of communication has become increasingly relevant for ensuring the resilience of justice systems in the aftermath of the COVID-19 pandemic.

e-CODEX was developed between 2010 and 2016 by 21 EU Member States with the participation of other countries/territories and organisations[6]. Several Member States have installed and are actually using the system. The objective was to develop a system with which the 21 participating Member States were aligned. They did not all implement it nationally, but they were involved in its creation. The goal was to create a common and interoperable system to respond to common needs. The total cost of the project development was about 24 million EUR of which 50% were funded by EU grants[7] and 50% were funded by the participating Member States. The goal of the Member States consortium was reached with the development of the e-CODEX system. An additional 2 million EUR was awarded for maintaining e-CODEX between 2016 and 2018 by the Me-CODEX project and 3 million EUR for the period until mid-2021 (the currently ongoing Me-CODEX II project).

e-CODEX is currently supporting the electronic communication between citizens and courts, and between Member State competent authorities in civil cross-border proceedings. For instance, work is ongoing to use e-CODEX to enable citizens to electronically sign and send

1 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0313(01)

2 https://ec.europa.eu/digital-single-market/en/news/communication-eu-egovernment-action-plan-2016-2020-accelerating-digital-transformation

3 https://e-justice.europa.eu/home.do

4 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0313(01)&rid=7

5 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0313(02)&rid=6

6 Austria, Belgium, Croatia, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Jersey, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Romania, Spain, Turkey, United Kingdom, CCBE and CNUE.

7 From the Competitiveness and Innovation Framework Programme (CIP) ICT Policy Support Programme of DG CONNECT and through a DG JUST Action Grant via the Justice Programme.

applications for European payment orders[8] and small claims[9] via the European e-Justice Portal to competent courts in the participating Member States. It should be noted, however, that e-CODEX can only be used for this purpose if the applicable national law so allows[10]. Currently 12 Member States do not allow digital transmission of European payment orders; for small claims the number is 15. In addition, the Commission proposed legislation to provide for a mandatory digital channel for the purpose of service of documents and taking of evidence in civil and commercial matters in 2018[11]. On 30 June 2020, the co-legislators reached agreement on revising the two Regulations concerned, thus making the use of the digital communication channel mandatory, subject to justified exceptions[12]. E-CODEX is likely to be chosen as the means of digital transmission between the competent national authorities.

In the area of cooperation in criminal matters, e-CODEX could be applied to enable more efficient judicial cooperation between judicial authorities, thus enhancing the fight against cross-border crime, terrorism and cyber-crime. This covers mutual recognition procedures under various instruments[13], and other judicial cooperation procedures such as those under the Convention on Mutual Assistance in Criminal Matters between the Member States of the European Union, the corresponding provisions of which were replaced by the European Investigation Order[14]. In this context, in its June 2016 conclusions[15], the Council has requested the Commission to develop a platform with a secure communication channel for digital exchanges of requests for electronic evidence under the Directive on the European Investigation Order and replies between EU judicial authorities to improve criminal justice in cyberspace. Member State experts participating in the development of the platform reached the conclusion, after considering different options, that e-CODEX would be the most suitable system to be used for such an exchange of electronic evidence. On that basis, the Commission is developing the e-Evidence Digital Exchange System (eEDES), using e-CODEX as the communication channel. Member States are expected to connect to eEDES by 2021.

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8 In accordance with Regulation (EC) No 1896/2006 of the European Parliament and of the Council of 12 December 2006 creating a European order for payment procedure (http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32006R1896).

9 In accordance with Regulation (EC) No 861/2007 of the European Parliament and of the Council of 11 July 2007 establishing a European Small Claims Procedure (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02007R0861-20170714).

10 The use of e-CODEX could also be made mandatory in the EU legal instrument which provides the legal basis for the procedure.

11 Proposal for a Regulation amending Regulation (EC) No 1393/2007 of the European Parliament and of the Council on the service in the Member States of judicial and extrajudicial documents in civil or commercial matters (service of documents) (COM/2018/379 final). Proposal for a Regulation amending Council Regulation (EC) No 1206/2001 of 28 May 2001 on cooperation between the courts of the Member States in the taking of evidence in civil or commercial matters (COM/2018/378 final).

12 https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_20_1395

13 The EU has adopted several legislative instruments in accordance with the principle of mutual recognition: European Arrest Warrant – FD 2002/584; Freezing orders of property and evidence – FD 2003/577; Financial penalties – FD 2005/214; Confiscation orders – FD 2006/783; Transfer of prisoners and custodial sentences – FD 2008/909; Probation decisions and alternative sanctions – FD 2008/947; European supervision order in pre-trial procedures – FD 2009/829; Prevention and settlement of conflicts of jurisdiction – FD 2009/948; European Investigation Order – Directive 2014/41/EU; European Protection Order - Directive 2011/99/EU.

14 Directive 2014/41/EU of the European Parliament and of the Council of 3 April 2014 regarding the European Investigation Order in criminal matters, OJ L 130 of1 May 2014, p. 1.

15 Conclusions of the Council of the European Union on improving criminal justice in cyberspace, ST 9579/16.

Building on its current use and given its characteristics, e-CODEX has the potential to become the main digital solution for cross-border cooperation between judicial and other competent authorities in the European Union. The evaluation carried out by the Commission at the end of the project grant for the e-CODEX large-scale pilot, concluded indeed that this pilot in the field of e-Justice has provided for the key building blocks in achieving secure, reliable exchanges in the judicial domain[16]. Moreover, one of the components of e-CODEX has been taken up and maintained by the Commission as the eDelivery building block within the Connecting Europe Facility (CEF)[17], which is testimony of its reusability not only for justice but also in other areas. The reuse of the CEF building blocks has been adopted as a policy by the Commission's IT Board[18]. The European e-Justice Portal is one of the Digital Service Infrastructures (DSIs) in the context of CEF, using the building blocks, including eDelivery and e-Signature in the implementation of a connection to the e-CODEX network on the Portal.

The Council has requested in repeated conclusions a permanent solution for the management of e-CODEX, most recently in October 2020[19]. Moreover, the Justice Ministers of France, Germany, Austria, the Netherlands and Estonia have written to the Commission, asking that the sustainability of e-CODEX is ensured, preferably by handing over the management to the European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice (eu-LISA).

The eu-LISA agency initially operated only the Schengen Information System (SIS II), the Visa Information System (VIS) and the asylum and irregular migration database Eurodac. However, its mandate has been extended and the agency has been tasked with the development and future management of a number of new systems in the area of home affairs, namely the Entry/Exit System (EES), the European Travel Information and Authorisation System (ETIAS) and the European Criminal Records Information System for third-country nationals (ECRIS-TCN). It is also in charge of modernising the Schengen Information System (SIS) and the Visa Information System (VIS). Moreover, under Regulation (EU) 2019/817 on establishing a framework for interoperability between EU information systems[20], eu-LISA was given the task of ensuring technical interoperability between these systems.

The present impact assessment aims to support a policy decision by the Commission on whether the e-CODEX project should be provided with a specific legal basis, and which are the operational management options for it. While the support from the Council and its Member States for maintaining the e-CODEX system is strong, as set out above, this impact

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16 Evaluation by the Commission (three external experts) of the e-Justice Communication via Online Data Exchange project (e-CODEX) submitted in the ICT Policy Support Programme within the Competitiveness and Innovation Framework Programme (CIP), grant agreement n° 270968.

17 The CEF building blocks (eDelivery, eID, eInvoicing, eSignature and eTranslation) are cross-sector software solutions to ensure interoperability in public administration. See https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/About+CEF+building+blocks for details.

18 Operational conclusions on the 10th IT Board meeting on 19 September 2016. The commitment to using the building blocks also follows from the eGovernment Action Plan of 2016 (https://ec.europa.eu/digital-single-market/en/news/communication-eu-egovernment-action-plan-2016-2020-accelerating-digital-transformation)

19 Council Conclusions "Access to Justice – Seizing the Opportunities of Digitalisation" (OJ C 342 I, 14.10.2020, p.1)

20 Regulation (EU) 2019/817 of the European Parliament and of the Council of 20 May 2019 on establishing a framework for interoperability between EU information systems in the field of borders and visa and amending Regulations (EC) No 767/2008, (EU) 2016/399, (EU) 2017/2226, (EU) 2018/1240, (EU) 2018/1726 and (EU) 2018/1861 of the European Parliament and of the Council and Council Decisions 2004/512/EC and 2008/633/JHA

assessment will attempt to assess independently the options for the permanent management of the system against the baseline where the system is not maintained at central level and thus is allowed to develop in an uncoordinated manner.

1.2. The e-CODEX system

e-CODEX is a system that can be used in or between Member States to support cross-border operation of procedures in the field of justice. Through e-CODEX, the participants have jointly developed interoperable software building blocks and have implemented them in real life settings through piloting work. This package of software building blocks can be used to set up and operate an e-CODEX access point irrespective of the intended business context.

The technical architecture chosen in e-CODEX is a decentralised four corner model realised by implementing the OASIS ebMS3.0 / AS4[21] standard. This means:

- Every participant hosts its own e-CODEX access point on the basis of the software package and consisting of a gateway and a connector (see below); no central component is involved in the communication. The participant is also responsible for hosting and running these components.
- The connection to the national backend systems is channelled by a so-called "gateway" (DOMIBUS / eDelivery Access Point). An e-CODEX message flow would be: backend application A sends to gateway A, which in turn sends to gateway B, and then further to backend application B.
- Some functionalities necessary for the message exchange within the justice domain are not part of the ebMS3.0 / AS4 standard. These were realised in a software component called the "connector" (DOMIBUS), which builds the bridge between the Gateway and the backend applications.

[21] To enable the use of products of different vendors as well as open source products, ebMS 3.0 / AS4 were chosen as technical standards for communication between gateways. Link to OASIS standard: http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/profiles/AS4-profile/v1.0/AS4-profile-v1.0.html

The picture below presents a high-level view of the e-CODEX architecture:

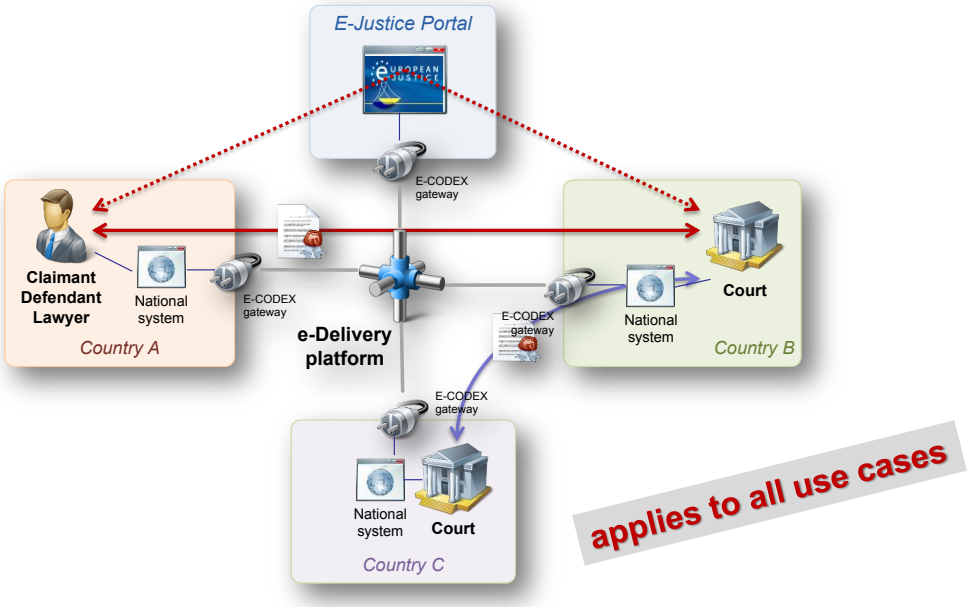

Figure 1: e-CODEX overview

End users do not need to install e-CODEX to use it. They access it through national or European systems available to them. From an end-user perspective, the use of e-CODEX is therefore transparent. Its "hidden infrastructure" ensures the secure communication between all user-facing systems (such as the European e-Justice Portal or the national system to which, e.g., all lawyers are given access).

Annex 4 provides a full description of the e-CODEX system and explains how it functions.

In summary, the objective of e-CODEX is to enable any stakeholder/authority in Member State A to communicate via national gateways with any other stakeholder/authority in Member State B as depicted below:

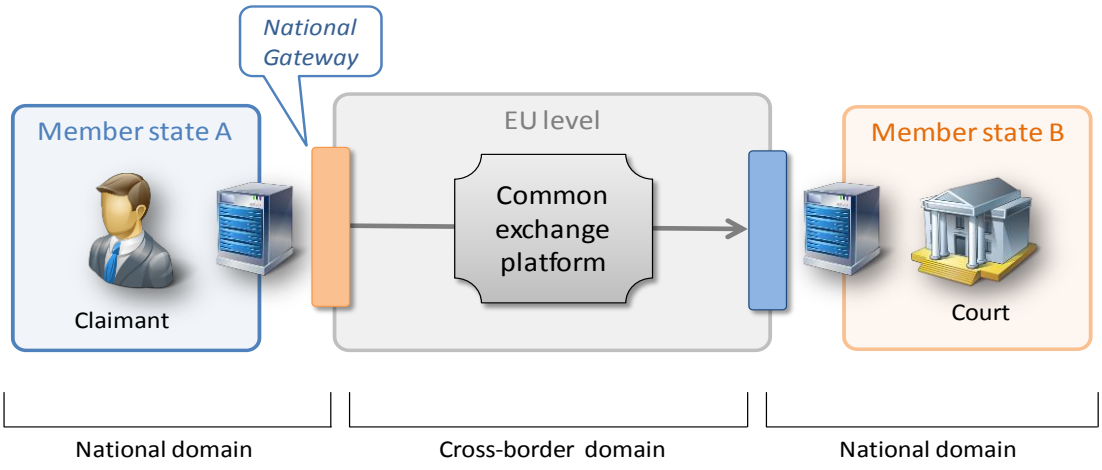

Figure 2: Communication from claimant to court

Figure 1 depicts the usage of e-CODEX. However, it has to be distinguished clearly between the usage of e-CODEX and the responsibility of the entity (agency or the Commission)[22] which ensures the management and maintenance of the e-CODEX components. This entity shall be solely responsible for the operational management of the e-CODEX components, and not for setting up these components and running them in the different Member States that use e-CODEX. Similarly, the e-Justice Portal is also a user of e-CODEX, similarly to the Member States – it operates and runs its own installation of the e-CODEX components. Consequently, the activities and the costs to be considered for the entity managing e-CODEX are the ones for the operational management of these components at central level, but not for running and operating them for the different users of e-CODEX.

The e-CODEX system provides standard components for a communication system for the justice area, but it is more than that - it provides for all the necessary standards to allow legal electronic communication between Members States or authorities in specific cross-border legal procedures, as described in Annex 1 to the legal proposal. Figure 3 describes the three main components of the system. The e-CODEX access point software package consists of the DOMIBUS Gateway on the one hand, which has been transferred to the Commission and has evolved into the eDelivery building block within CEF, and on the other hand the DOMIBUS Connector, which includes security functionalities like signature verification, a secure container for message transportation, and the workflow for message sending, including evidence handling. While eDelivery, as part of the CEF building blocks, can be used across sectors, the functions of the Connector are tailor-made for the needs of the justice sector. In addition, e-CODEX also provides the templates for digital forms (XSD schemas) for specific judicial procedures as its third element. Presently, only the justice-specific components, i.e. the Connector and the digital templates remain under the responsibility of the Member State consortium and require a permanent solution for their management.

[22] The options for management of e-CODEX (agency or Commission) are described below in section 5.

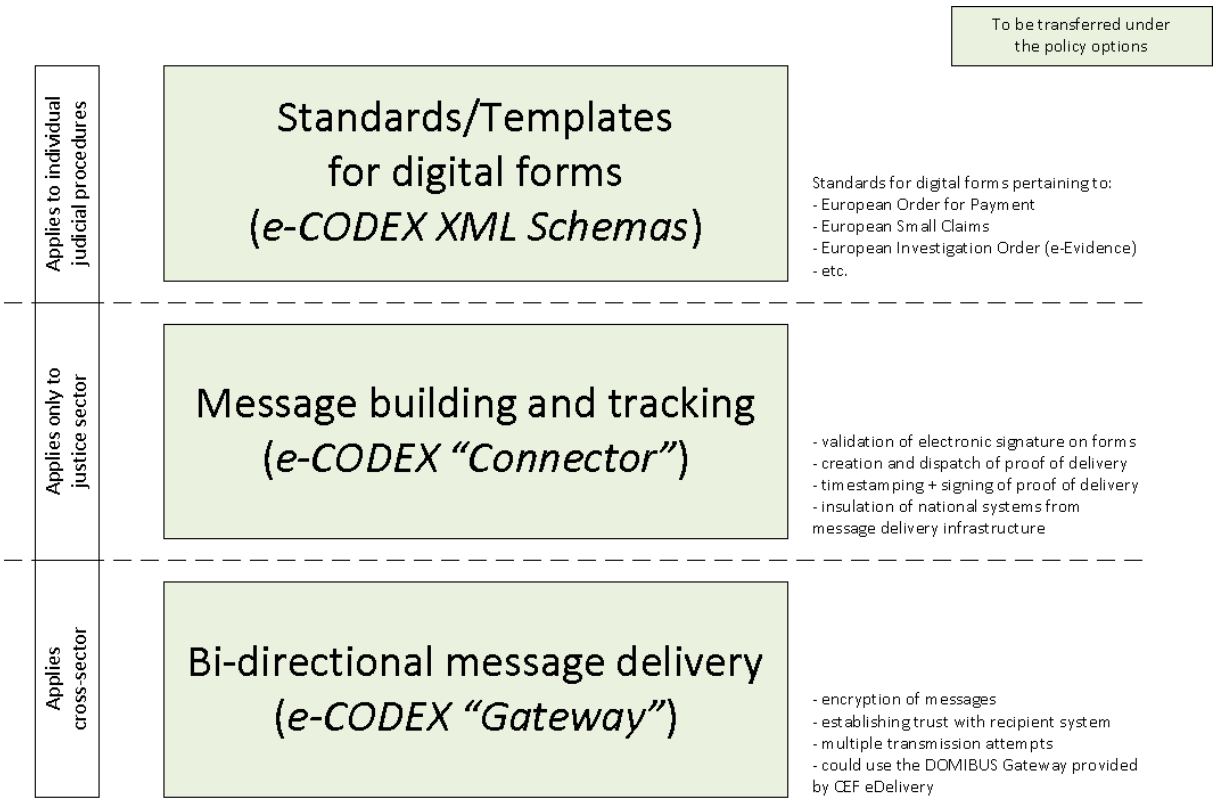

Figure 3: Main e-CODEX components and their functions

The e-CODEX system is future-proof since it is interoperable by design and works with national systems, without requiring changing those systems. The e-CODEX Connector will allow connection to the e-CODEX system from any system (current or future). The entity entrusted with the management of e-CODEX will be tasked with updating the system and ensuring its compatibility with industry standards etc.

2. WHAT IS THE PROBLEM AND WHY IS IT A PROBLEM?

2.1. The problems

2.1.1. Current inefficiencies in cross-border communication in civil and criminal matters due to narrow use of e-CODEX

Currently, where national IT solutions exist for judicial authorities they have often been developed in an uncoordinated manner, leading to different, fragmented IT systems across the Member States. This leads to multiple systems being developed for similar procedures, as well as to data being non-compatible or non-exchangeable between legal procedures.

The e-CODEX system has been developed exactly for this purpose, i.e. to overcome a fragmented incompatible variety of national IT-tools for secure electronic transmission of information in cross-border proceedings, where such transmission is allowed under national law. It has been in use since 2013, but only by a limited number of Member States and for piloting only certain legal procedures. This limited use of e-CODEX means that its potential to overcome the inefficiencies resulting from fragmented national IT systems is not fully

exploited. One of the stakeholders responding to the inception impact assessment has pointed out the need to further extend the e-CODEX system to cover more Member States[23].

- ***The problem drivers***

So far, e-CODEX has been maintained thanks to EU financing. This approach does not provide for the much-needed sustainability. The consortium of 21 Member States that participated in the development of the system will not provide for the long-term management of the system. They consider that managing the system on the basis of temporary grants is not a sustainable solution – in order to ensure that e-CODEX could become the default system for judicial procedure in the future. The Member States believe that it must have a more permanent base that could ensure its operational management, as witnessed by several Council conclusions (e.g. from 2014, 2015 and 2016[24]).

Moreover, among the Member States participating in the e-CODEX consortium, only about half have so far decided to participate in an e-CODEX pilot relating to a specific procedure[25]. There are several reasons for this, including inadmissibility of electronic exchanges under national procedural law, lack of available tools at national level to fulfil the system requirements, national priorities and available resources. According to a study carried out by the e-CODEX consortium[26], the uncertainty of obtaining a return on investment if the e-CODEX project was not maintained in the long-term was quoted as a reason for Member States not to join the piloting. In one case, a Member State[27] joined a pilot for the EPO, but discontinued its participation later, due to the small amount of eligible cross-border cases. In general, the reasons for piloting are: the return on investment (for instance the re-use of the developments and/or amount of expected cases), an already existing national solution, improvement of existing procedures, the targeted user–group and promoting the aim of the use case.

Moreover, without a recognised EU system for digital communication, there is less incentive for Member States to move towards digitalisation of the judiciary. Except for a few recent developments, EU legislation does not mandate the use of the digital communication and does not define a common system for the justice area. The e-CODEX system cannot be referenced in EU legislation as long as it has not been given a proper legal basis.

It is not only the uncertainty in financing that calls into question the stability and permanence of e-CODEX as a system. The current consortium-based management, where governance is regulated by agreement between Member States authorities of uncertain legal value, is not adequate for a permanent system. A transparent decision-making process, which ensures the involvement of Member States and other relevant stakeholders, is lacking. Any permanent base for e-CODEX must therefore include an appropriate governance framework.

Without a sustainable solution for the long-term operational management of e-CODEX, the uncertainty about the future management, both in terms of governance and of ensuring the

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23 Response by Deutscher EDV-Gerichtstag e.V.

24 Most recently at the JHA Council in December 2016 (http://data.consilium.europa.eu/doc/document/ST-14465-2016-INIT/en/pdf)

25 All Member States, however, have taken part in the drafting of the Multiannual e-Justice Action Plan 2019 - 2023, that identified e-CODEX as a key project for European e-Justice.

26 Study carried out within Work Package 3 of the e-CODEX project.

27 Estonia.

financing for the ongoing functioning and further development of the e-CODEX system, is likely to contribute to the so far low uptake of the (voluntary) system among the Member States.

- ***The size of the problem***

The current use of e-CODEX in different judicial procedures

Digital procedures have changed the way people work. Therefore, many countries have chosen a gradual geographical deployment and effort is being put into communication activities to raise the general awareness of the judicial tools, especially within civil and family law. In this context, the e-CODEX system is an essential tool for interconnecting national systems, primarily at cross-border level. So far, the Member States participating in the e-CODEX consortium have launched seven use cases or pilots to apply e-CODEX to a specific legal procedure. In general, while activities on extending the geographical coverage and the number of connected users are continuing, the actual uptake by Member States remains rather low.

Eight Member States [28] (and the Commission through the European e-Justice Portal) participate in the **European Order for Payment (EPO)[29]** pilot. The connection mediated 1795 electronic cross-border messages in 2016. In terms of potential annual number of exchanges, in the year 2016 the Austrian court "Bezirksgericht für Handelssachen Wien", competent for EPO for the whole of Austria, received a total number of 3328 cases. The German district court "Amtsgericht Wedding" in Berlin, competent for EPO for the whole of Germany, received in the same year a total number of 3624 cases. Both courts are connected to their national legal communication system and to e-CODEX. The Austrian court received 1503 cases in electronic form (mainly from Austrian lawyers who can file in electronic form). The German court received 182 cases in electronic form (mainly from Austrian lawyers via e-CODEX, which interlinks the Austrian and German national communication system). Numbers are expected to increase as from 2021 when the e-Justice Portal will enable electronic submission of EPO applications to all participating authorities with e-CODEX connection for all European citizens and companies.

The **Small Claims (SC)[30]** pilot connects eight Member States[31] (and the Commission through the European e-Justice Portal). The procedure has great potential since it allows citizens to directly file claims. However, it is not yet a well-known legal instrument and its use is hampered by practical barriers (need for paper submissions, finding the competent court in another Member State, etc.). Seeing its usefulness, an effort is being made within Me-CODEX [32] to create more visibility. This activity, coupled with further actions by the Commission, should contribute to raising the number of cases in general and the ones exchanged via e-CODEX in particular.

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28 AT, DE, EL, FR, CZ, IT, MT, PL - at various level of readiness.

29 Regulation (EC) No 1896/2006 of the European Parliament and of the Council of 12 December 2006 creating a European order for payment procedure

30 Regulation (EC) No 861/2007 of the European Parliament and of the Council of 11 July 2007 establishing a European Small Claims Procedure

31 AT, DE, EL, FR, CZ, FR, MT, PL – at various level of readiness.

32 See above section 1.1.

Three Member States[33] and the European Chamber of Judicial Officers/ Bailiffs (CEHJ) are working on interconnecting in the **European Account Preservation Order (EAPO)**[34] pilot. In cooperation with other projects, an effort is being made within Me-CODEX to link the different entities involved in this procedure, for instance through the use of directories. For the EAPO procedure, which frequently requires urgent action, the use of the digital channel for lodging Preservation Orders can greatly facilitate creditors and courts.

Three countries [35] participate in the pilot on **Matrimonial Matters and Parental Responsibility**. Around 18 million couples of mixed nationality live in Europe. This also means a high number of people who need to deal with issues regarding children, properties and pensions. The availability of electronic tools would make it easier to address these issues, which entail contact with authorities across borders.

The procedure for **Mutual Legal Assistance (MLA)** under the Convention on Mutual Assistance in Criminal Matters between the Member States of the European Union has been piloted by seven Member States [36] through e-CODEX, with 768 cross-border requests processed in 2016 between Germany and the Netherlands. As of 22 May 2017, the Directive on the European Investigation Order replaced the corresponding provisions of the Convention, but not all Member States have yet transposed it. Responding to a request from the Council, the Commission has built the **e-Evidence Digital Exchange System (e-EDES),** which enabled the digital exchange of European Investigation Orders between the national competent authorities. The first wave of countries are expected to be connected by the end of 2020[37], and all Member States should be connected by this system, based on e-CODEX.

The **Mutual Recognition of Financial Penalties** pilot connects two Member States[38]. The objective is to facilitate the recognition and enforcement of a financial penalty (traffic fines) that has been imposed in one Member State on an individual from another Member State. The execution takes place in the Member State, where the individual is domiciled or habitually resident. Taking alone the number of eligible cases France would send to the Netherlands and Spain (about 20.000/year, respectively), this is a pilot with potentially a very high volume of expected exchanges.

There is also the **iSupport** system[39] for the cross-border recovery of maintenance obligations under the EU 2009 Maintenance Regulation[40] and the 2007 Hague Child Support Convention, which makes use of e-CODEX for communication. So far, three Member States and the State of California (USA) are connected. Several other Member States are preparing to join this system.

The e-CODEX consortium carried out an evaluation of the pilots in 2016. Overall, the users in the piloting countries reported positive experiences with using e-CODEX. In the case of EPO, the use of e-CODEX was considered to lead to time savings – e.g. in Greece, the

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33 FR, NL, PL

34 Regulation (EU) No 655/2014 of the European Parliament and of the Council of 15 May 2014 establishing a European Account Preservation Order procedure to facilitate cross-border debt recovery in civil and commercial matters

35 IT, FR, PL

36 DE, NL, and AT, BE, ES, EL, FR, PT testing

37 Planned readiness in 2020: AT, BE, LV, PT, FI

38 DE, NL, FR (in progress)

39 https://www.hcch.net/en/instruments/conventions/specialised-sections/child-support/isupport1

40 Council Regulation (EC) No 4/2009 of 18 December 2008 on jurisdiction, applicable law, recognition and enforcement of decisions and cooperation in matters relating to maintenance obligations

lawyers surveyed estimated that the necessary time on a case had been reduced by 1/3 with e-CODEX. The Austrian lawyers, who used e-CODEX to send applications to Germany, judged after six months of piloting, the solution to be "a good beginning", but missed, in terms of user-friendliness, a better link between the technical description and the practical use. For small claims, at the time of evaluation no real cases had been transmitted between the participating countries Austria and Poland. However, the Polish legal professionals who have been introduced to the e-CODEX solution expect it to speed up the delivery, and also highlighted the fact that the forms are presented in a friendly way in the national language. For the MLA pilot, the users in DE and NL considered that the provision of structured data speeds up the administration for incoming requests. However, getting acquainted with the new system, which in some cases has required an alignment of the usual workflow, takes time and requires training of staff and all the benefits of e-CODEX may therefore only materialise in the future. Overall, although high expectations from all categories of users to the benefits of e-CODEX were identified in the evaluation, the user uptake has been limited except for the Austrian lawyers.

The evaluation carried out by the Commission at the end of the project grant for the e-CODEX large-scale pilot confirmed that overall good progress had been made in developing the pilots and in particular in defining a methodology for ensuring semantic interoperability for each of the pilots[41].

Level of digitalisation in the Member States and use of e-CODEX

The low uptake of e-CODEX among the Member States mirrors to some extent the varying level of digitalisation in the Member States.

Several of the Member States, which have implemented and used e-CODEX, belong to the countries scoring the highest in terms of digitalisation of the judiciary in accordance with a study carried out by the Council of Europe's European Commission for the Efficiency of Justice (CEPEJ) in 2016[42]

The diverging uptake of IT in the judiciary in Europe is also illustrated by the 2020[43] EU Justice Scoreboard, which measured the availability in the Member States of electronic means for submitting and following a claim online (figure 27 of the Scoreboard). The 2018 Scoreboard contains in addition a comparison of the possibilities to use online means in the context of small claims proceedings in the Member States (figure 29)[44]. This Scoreboard illustrated also the use of ICT services in exchanges between courts and lawyers (figure 30):

41 See footnote 16.

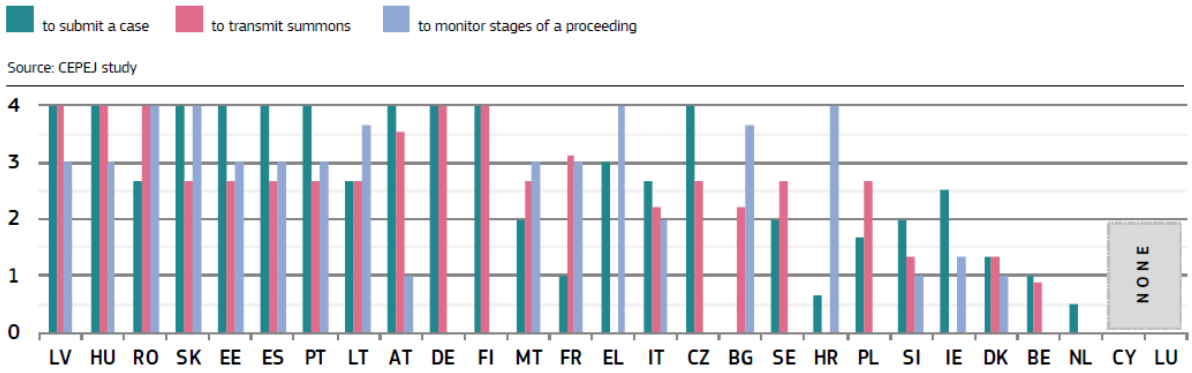
42 CEPEJ Study on the use of information technology in European courts (http://www.coe.int/t/dghl/cooperation/cepej/evaluation/2016/publication/CEPEJ%20Study%2024%20-%20IT%20report%20EN%20web.pdf)

43 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0306

44 https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=CELEX:52018DC0364

Figure 27

Availability of electronic means, 2018 (*) (0 = available in 0% of courts, 4 = available in 100% of courts ([61]))

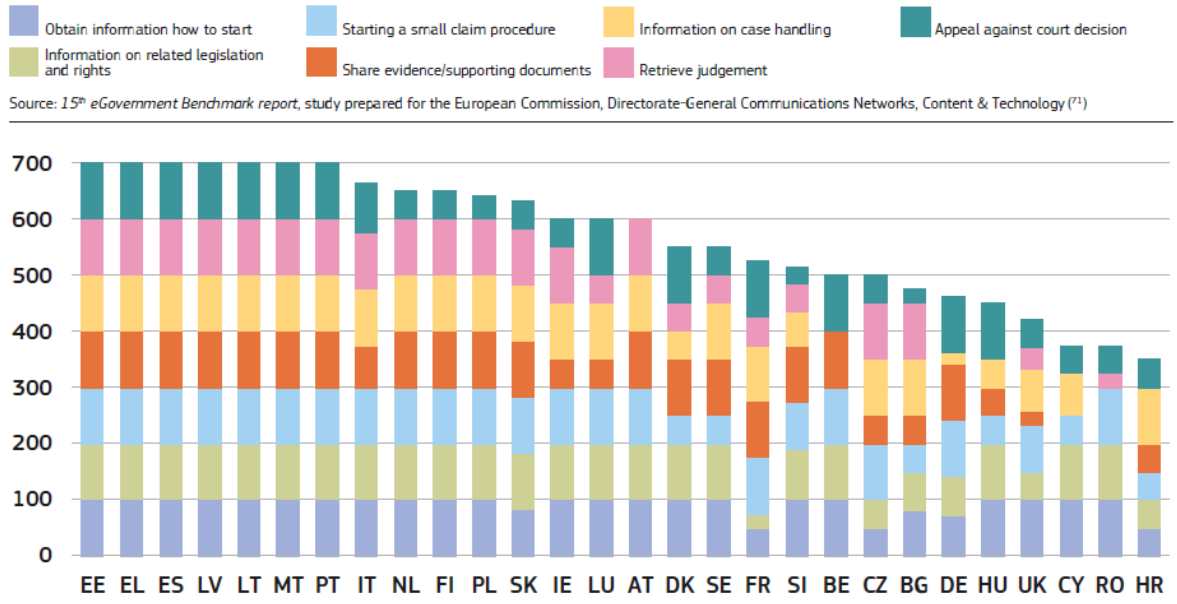


Source: CEPEJ study

(*) New methodology, data is not comparable to past years. **DK** and **RO**: cases may be submitted to courts by email

Figure 29

Benchmarking of small claims procedures online (*)

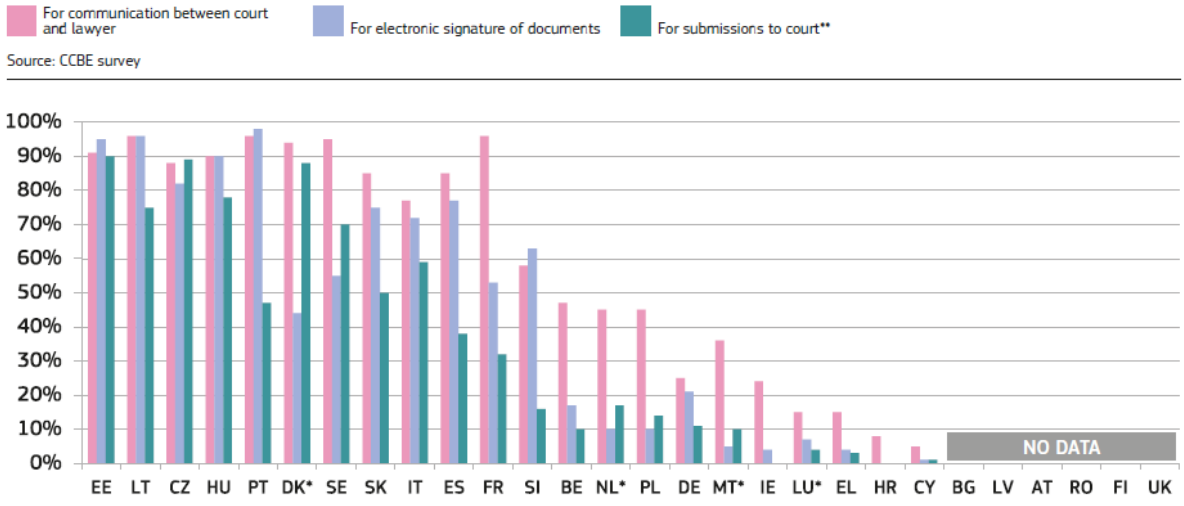


Source: *15th eGovernment Benchmark report*, study prepared for the European Commission, Directorate-General Communications Networks, Content & Technology ([71])

(*) Member States only received 100 points per category if the service was fully available through a central portal.

Figure 30

Use of ICT between courts and lawyers (*)



(*) Data for DK, NL, MT and LU from 2016. Submissions to court covers: 'electronic submission of a claim', 'electronic submission of summons to appear in court' and 'electronic submission of evidence/supporting documents'.

(**) Submissions to court covers the following answer options:' electronic submission of a claim', 'electronic submission of summons to appear in court', 'electronic submission of evidence/supporting documents'.

([71]) Data concern 2017. To be published end of 2018 at: https://ec.europa.eu/digital-single-market/en/reports-and-studies

([72]) Figures 30 and 31 are based on a CCBE survey conducted among lawyers.

More recently, the "mapping exercise" carried out in 2020 by the Commission demonstrates that a number of Member States have already made certain progress in the digitalisation of their justice systems. However, the level of digitalisation depends on the particular context in which the technology is used. Furthermore, as regards the digitalisation of the cross-border cooperation, Member States do not share a common approach on the use of the electronic means of communication, for instance some allow plain e-mail and others require more stringent level of communication, or do not permit such means at all. The existence of country-specific conditions, e.g. on the use of specific IT systems or electronic signatures adds additional complexity to the overall picture. The absence of appropriate digital channels to communicate with the relevant JHA agencies and bodies is also confirmed by the data[45].

e-CODEX can play a role not only in improving the efficiency of cross-border proceedings but also creating an incentive to help Member States lagging behind in terms of digitalisation to catch up. The evaluation carried out by the e-CODEX consortium on the e-CODEX pilots highlighted the positive effects on the national justice system in Greece, as underlined by legal practitioners and courts in the country[46].

National legislation may also prevent Member States from using digital means of communication with judicial authorities. For example, in the case of the European Small Claims Procedure (ECSP), the decision on whether or not to allow electronic submissions of claims is left to the Member States. 12 Member States have notified that this is not allowed by their national legislation. Similarly, for European Order for Payment procedure (EPO), 15 Member States have notified that electronic submission is not legally possible. The benefits

45 COMMISSION STAFF WORKING DOCUMENT Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Digitalisation of justice in the European Union A toolbox of opportunities – SWD(2020) 540

46 e-CODEX D3.5/D3.7/D3.8 WP3 Final Report

provided by e-CODEX could serve as a stimulant for Member States to remove such legal barriers to digital submission of claims.

2.1.2. Risk of inefficiencies in cross-border communication in civil and criminal matters due to expiry of e-CODEX

If e-CODEX is not maintained, a common tool for digitalising cross-border legal procedures will be lost, resulting in a lost opportunity to improve judicial cooperation in Europe and the functioning of the Digital Single Market. Moreover, the benefits of the current uses of e-CODEX in civil matters, e.g. for exchange of EPOs, small claims or criminal matters, such as exchange of ML/EIO requests, will be lost if e-CODEX is not maintained. The lack of a common interoperable communication system for the judiciary would reduce the efficiency of information exchange in the procedures currently covered by e-CODEX.

The e-CODEX consortium has delivered the system as foreseen and it is being used in a number of pilots as indicated above in section 2.1.1. It is important to note that once the IT system was developed, the mandate and the funding for the functioning of the consortium has ended. Therefore, for the operational management and future extension to other judicial procedures a solution has to be found to ensure the proper financing and governance. This is actually a pre-requisite for the adoption by the Member States that have not piloted the system so far.

Lack of maintenance of e-CODEX also means that electronic exchange of MLA/EIO requests provided by eEDES will be endangered. An important tool delivering on the Council's request of June 2016 to establish a platform for online exchange of electronic evidence[47] would no longer be available.

- ***The problem drivers***

Like for the narrow use and low uptake of e-CODEX, the uncertainty about financing and the absence of a clear governance framework are the main drivers behind the problem of inefficiency in cross-border judicial communication, which would be the result of the expiry of e-CODEX.

Moreover, over time, the progressive divergences between IT systems in the Member States would lead to these systems being no longer able to communicate with each other. In turn, this will exacerbate the inefficiencies in cross-border judicial cooperation. The process of interoperability will go into reverse.

- ***The size of the problem***

The potential of the Digital Single Market is an estimated EUR 415 billion a year[48]. Easy access to justice is crucial to allow businesses and consumers to reap the full benefits of the Digital Single Market. The availability of easy access to cross-border justice will have a

47 http://www.consilium.europa.eu/en/press/press-releases/2016/06/09-criminal-activities-cyberspace/

48 https://ec.europa.eu/commission/presscorner/detail/en/IP_17_1232

positive influence on cross-border commerce. Citizens and companies need to have access to effective cross-border justice when dispute resolution fails. Without maintenance of e-CODEX, one valuable instrument to facilitating access to justice will no longer be available.

Inventory of instruments / procedures where e-CODEX could be used

In order to understand the magnitude of unrealised potential in case e-CODEX is not maintained, it is useful to provide a list of instruments or procedures where e-CODEX could be applied as a dedicated online communication tool:

Civil law instruments:	Full name:	Use:
European Payment Order (EPO)	Regulation (EC) No 1896/2006 of the European Parliament and of the Council of 12 December 2006 creating a European order for payment procedure	Ongoing pilot since 2013 AT, DE, EL, FR, CZ, IT, MT, PL
European Small Claims Procedure (ESCP)	Regulation (EC) No 861/2007 of the European Parliament and of the Council of 11 July 2007 establishing a European Small Claims Procedure	Ongoing pilot since 2015 AT, DE, EL, FR, CZ, FR, MT, PL
European Account Preservation Order (EAPO)	Regulation (EU) No 655/2014 of the European Parliament and of the Council of 15 May 2014 establishing a European Account Preservation Order procedure to facilitate cross-border debt recovery in civil and commercial matters	Ongoing pilot since 2016 FR, NL, PL (testing)
Matrimonial Matters and Parental Responsibility	Council Regulation (EC) No 2201/2003 of 27 November 2003 concerning jurisdiction and the recognition and enforcement of judgments in matrimonial matters and the matters of parental responsibility	Ongoing pilot since 2015 IT, PL, FR (testing)
Maintenance obligations (iSupport)	Council Regulation (EC) No 4/2009 of 18 December 2008 on jurisdiction, applicable law, recognition and enforcement of decisions and cooperation in matters relating to maintenance	Ongoing pilot since 2016 DE, PT, FR, California (USA)

	obligations	
Service of documents	Regulation (EC) No 1393/2007 of the European Parliament and of the Council of 13 November 2007 on the service in the Member States of judicial and extrajudicial documents in civil or commercial matters (service of documents)	Possible solution of choice application in the revised Regulation
Taking of evidence	Council Regulation (EC) No 1206/2001 of 28 May 2001 on cooperation between the courts of the Member States in the taking of evidence in civil or commercial matters	Possible solution of choice application in the revised Regulation
Criminal law instruments:		
MLA request / European Investigation Order (EIO)	Directive 2014/41/EU of the European Parliament and of the Council of 3 April 2014 regarding the European Investigation Order in criminal matters	Ongoing pilot (MLA) since 2015 In development (EIO) Planned readiness in 2020: AT, BE, LV, PT, FI Planned readiness in 2021: DK, HU, LT, BG, DE, MT, SE, ES, IT, LU and EE Readiness in 2021+: SI, SK, PL, FR, CZ, HR, EL, IE, RO, CY and NL.
Mutual Recognition of Financial Penalties	Council Framework Decision 2005/214/JHA of 24 February 2005 on the application of the principle of mutual recognition to financial penalties	Ongoing pilot since 2016 NL, FR
Transfer of prisoners and custodial sentences	Council Framework Decision 2008/947/JHA of 27 November 2008 on the application of the principle of mutual recognition to judgments and probation decisions with a view to the supervision of probation measures and alternative sanctions	Possible future application
Freezing orders of property and evidence	Council Framework Decision 2003/577/JHA of 22 July 2003 on the execution in the European Union of orders freezing property or evidence	Possible future application

Confiscation orders	Council Framework Decision 2006/783/JHA of 6 October 2006 on the application of the principle of mutual recognition to confiscation orders	Possible future application
Probation decisions and alternative sanctions	Council Framework Decision 2008/947/JHA of 27 November 2008 on the application of the principle of mutual recognition to judgments and probation decisions with a view to the supervision of probation measures and alternative sanctions	Possible future application
European supervision order in pre-trial procedures	Council Framework Decision 2009/829/JHA of 23 October 2009 on the application, between Member States of the European Union, of the principle of mutual recognition to decisions on supervision measures as an alternative to provisional detention	Possible future application
Prevention and settlement of conflicts of jurisdiction	Council Framework Decision 2009/948/JHA of 30 November 2009 on prevention and settlement of conflicts of exercise of jurisdiction in criminal proceedings	Possible future application
European Protection Order	Directive 2011/99/EU of the European Parliament and of the Council of 13 December 2011 on the European protection order	Possible future application

As can be seen from the table, there are a number of instruments / procedures where e-CODEX could be used to digitalise the information exchange necessary for adequate judicial cooperation, where admissible in accordance with the procedural rules of the Member States. Section 6.2 explains the positive impacts this could have, e.g. in terms of cost savings for businesses. As it has been evaluated as an adequate communication system for the judiciary and formed the basis for the eDelivery building block within CEF, e-CODEX has the potential to become the default system for online communication with and between judicial authorities.

Examples of more imminent forthcoming applications of e-CODEX include the extension of the EIO/MLA eEDES system to enable the exchange of electronic evidence and allow for direct electronic communication with Internet Service Providers. Another example are the Regulations on service of documents and taking of evidence, for which a switch to

digitalisation and the use of electronic means of communications will save costs at the level of the individual proceedings (see below in section 7.2). If the e-CODEX system expires, the tailor-made communication system for communication in the judicial area would no longer be available.

2.2. The effects of the problems

The absence of digital communication tools in the judicial area affects, on the one hand the judicial authorities involved in cross-border judicial cooperation, and on the other hand legal practitioners, SMEs and citizens wishing to submit claims in another country. For the latter group, the lack of easy accessible online tools for cross-border disputes may act as a deterrent to claim their rights. Many small and medium sized enterprises making use of the single market face difficulties with cross-border debt collection. Similarly, citizens face problems with goods purchased in another EU country.

For judicial authorities, the non- or low existence of online communication tools for cross-border communication has several consequences for the capacity to fight cross-border criminality in an efficient way. Here are some examples:

- Use of informal unsecure communication channels (e.g. personal e-mail, Skype…) to transmit highly sensitive information, for instance related to criminal investigation procedures.

- Risk of loss (of confidentiality) of documents and attachments which could contain highly sensitive data, or tampering thereof – with, as a result, the risk that the documents could not be accepted as evidence.

- Language barriers due to the need to send documents in a language accepted by the receiving authority. With an online communication tool, an authority can use a predefined form (defined in the relevant EU legal act) in its own language and, before sending it, the static text of this form is automatically translated into the language of the receiving authority.

- In most cases, no confirmation of receipt is sent by the responsible authorities of the receiving Member States[49], and thus no clear indication of the person in charge (thus no contact details) which hampers the subsequent communication regarding the request.

The lack of interoperability between existing national systems has several negative effects for cross-border justice:

- Low or no trust in terms of authentication and signature.

- Lack of semantic interoperability between forms and data elaborated in one system by another system.

- No guarantee for the authenticity and integrity of the documents.

[49] According to Article 16 of the Directive on the European Investigation Order, the executing authority has to send an acknowledgement of receipt to the issuing authority without delay.

- Mutual misunderstanding of the execution of procedures because of diverging rules and traditions between the countries. Since there is no common IT system, no mutual understanding of the procedure through business process modelling has been achieved. Through business process modelling (as has been done in the different e-CODEX pilots), the required business process is described through the analysis of actors, their roles and expected output of each actor's activity. Concrete example: thousands of cross-border fines related to road offences are not collected due to the costs and difficulties of exchange of the cases between countries, and the lack of digital communication tools contributes to this problem[50]. This does not only have a financial impact, but also an impact on the road safety in Europe, because drivers in many cases go unpunished for violating rules in another country.

- Without interoperable systems, incoming requests need to be manually entered into the national case management system. This process not only takes time, but also involves a high risk of human error, which could have serious consequences for the treatment of the request.

2.3. How the problems will evolve

The consortium of Member States that participated in the development of the system is reluctant to continue carrying out maintenance functions on the basis of EU grants. In any event, such a consortium could not provide for the long-term operational management of the system, even if funding is ensured.

Even the several Member States who currently use e-CODEX in production are likely to withdraw from the project over time – if the underlying software building blocks are not maintained and adapted to required technical and legal changes or common European data formats for the business documents (legal forms) of the different legal cross-border instruments are not adapted to legal changes which happen quite often. The positions expressed by the Member States, in the roadmaps adopted in Council and in the e-Justice Council group, clearly indicate that continued consortium-based management is not an acceptable option for the long-term. The aim for e-CODEX was from the very beginning to develop the system on the basis of an action grant co-financed by the Commission, and then hand over the results for permanent management to a stable organisation or institution. While several Member States are committed to e-CODEX and have engaged in pilots, they are also not prepared to coordinate and manage the system on a permanent basis, especially in view of potential future growth, even if they see its many benefits.

It is clear that the absence of a long-term solution for e-CODEX will raise the cost of cross-border cooperation within the European justice community, in particular since no up-to-date model system for electronic cross-border communication will be available. The time between finalising the drafting of a European legal procedure and its digital implementation in all Member States will be longer, if a common and accepted ready-for-use IT solution is not available.

[50] See below in section 6.2 and example of unpaid traffic offences in France.

2.4. Baseline scenario

The e-CODEX system is maintained through action grants by a consortium of Member State authorities.

If no sustainable solution is found for the operational management of e-CODEX system, and if the system is not extended to support additional cross-border legal instruments, then Member States and the Commission will lose their initial investment of 24 Million EUR in the e-CODEX project.

If there is no sustainable maintenance of the underlying software building blocks, it is highly likely that no additional Member States will connect to e-CODEX or invest in the adaptation of their national justice IT systems.

Under these circumstances, a sustainable solution for the long-term operational management of e-CODEX needs to be found both with regards to its governance and ensuring the operational management and further development. All stakeholders responding to the inception impact assessment support the objective of ensuring the long-term operational management of the e-CODEX system, including representatives of the major legal practitioner organisations – the Council of Bars and Law Societies of Europe (CCBE), the European Chamber of Bailiffs (CEHJ), the International Union of Judicial Officers (UIHJ) and the European Network of Councils for the Judiciary (ENCJ).

In the absence of a long-term solution for e-CODEX, there will be no maintenance or evolution of the e-CODEX system. This would lead to divergences between the systems in the Member States that currently apply e-CODEX, with eventually the result that domestic IT systems will no longer be able to communicate with each other. Without a common secure communication system for cross-border exchanges between judicial authorities, the benefits of e-CODEX, such as allowing online submission of small claims or exchange of electronic evidence in criminal cases, could not be realised.

If the e-CODEX system is not managed in a coordinated way, certain applications/pilots may continue, but the systems may eventually end up not being interoperable. There will be no common system that can be adapted to serve the needs of different judicial procedures and diverse national systems. If interoperability cannot be ensured, the overall costs for Member States will increase due to the need to develop individual IT solutions.

Digital transmission e.g. of EPOs and small claims could continue between the countries having implemented e-CODEX, as long as the systems remain compatible with each other. In the longer term, these pilots are likely to be discontinued without coordinated maintenance of the e-CODEX system.

2.5. Intervention logic

Drivers	Problems	Consequences	Objectives
Maintenance of the e-CODEX system through grants is not a sustainable solution for the long term	Risk of inefficiencies in cross-border communication in civil and criminal matters due to expiry	More complex cross-border legal procedures leading to restricted capacity to	General: Efficient functioning of a common area of security and justice

Lack of sustainable solution for governance Evolving divergences between systems in MS that currently use the e-CODEX system will lead to systems no longer able to communicate with each other	of e-CODEX Current inefficiencies in cross-border communication in civil and criminal matters due to narrow use of e-CODEX	- Fight cross-border crime - Enforce civil claims	Specific: - Prevent inefficiencies in cross-border communication by ensuring sustainable maintenance of the e-CODEX system - Improve the efficiency and resilience of cross-border communication by wider use of e-CODEX

Figure 4: Intervention logic

3. WHY SHOULD THE EU ACT?

Legal basis

Since the e-CODEX system would facilitate judicial cooperation both in civil and criminal matters, the legal basis for the system would be a combination of Article 81 and 82 TFEU. More specifically, the e-CODEX system would facilitate access to justice in civil matters in line with Article 81(2)(e). In criminal matters, Article 82(1)(d) is the legal basis for the Union's right to act in the field of judicial cooperation to facilitate cooperation between judicial or equivalent authorities of the Member States in relation to proceedings in criminal matters and the enforcement of decisions.

Subsidiarity

A mechanism for the secure exchange of cross-border information in judicial proceedings is best achieved at EU level. In the absence of EU action, there is a risk that Member States develop national systems independently, leading to a lack of interoperability between the systems. While management at EU level entails a cost, it is the only way to achieve an interoperable system for cross-border communication between judicial authorities.

e-CODEX offers an off-the-shelf solution which is easily extensible and adapted to different civil and criminal judicial procedures (e.g. European Payment Orders, Small Claims, exchange of electronic evidence). Connection to the system has to be done only once per Member State and can then potentially be used for all incoming electronic legal procedures. Having this system at EU level therefore leads to cost savings for the Member States.

In order to maintain and further implement e-CODEX, a governance function and permanent resource allocation are needed to ensure continuity and stable know-how. The best way to achieve this would be to ensure operational management at EU level. Uncoordinated management of the system by each Member State at national level would lead to inefficiency in resource utilisation and inconsistency, incompatibility and divergence between the different national systems. This will negatively affect interoperability.

As demonstrated in the mapping of the digitalisation of justice systems, the data show that the state of digitalisation of the judiciary varies considerably between the Member States.

Consequently, the readiness of Member States to integrate a system for secure online exchange between judicial authorities varies. So far, 21 Member States have participated in the development of the e-CODEX system for online exchange, while only several Member States have installed and put the system to practical use. In order for a common communication system like e-CODEX to reach its full potential, its use should be extended to cover a majority or all Member States across the EU. Establishing e-CODEX as the tool for communication in the justice area and ensuring its operational management at EU level, would allow referring to the e-CODEX system in EU legislation regulating specific cross-border judicial procedures, thereby ensuring that all Member States use it.

Member States have to a large extent already developed national systems for secure communication between judicial authorities. However, these are not always interoperable across borders. The advantage of the e-CODEX system lies in its ability to connect national systems with each other without there being a need to replace existing national systems. As described above in section 1.2, the e-CODEX "Connector" software allows the national backends to be connected via a standardised Gateway (eDelivery). In this way, the development of the e-CODEX solution respects the principle of subsidiarity by allowing the differences between the national systems continue to exist, while ensuring cross-border compatibility.

4. WHAT SHOULD BE ACHIEVED / OBJECTIVES

General objectives:

- Efficient functioning of a common area of security and justice

Specific objectives:

- Prevent inefficiencies in cross-border communication by ensuring sustainable maintenance of the e-CODEX system.
- Improve efficiency of judicial procedures in cross-border communication by wider use of e-CODEX.

5. WHAT ARE THE VARIOUS OPTIONS TO ACHIEVE THE OBJECTIVES?

5.1. Discarded options

The following options have not been retained for further in-depth assessment:

Creation of a new legal entity: In general, the option to create a new legal entity to further manage e-CODEX was discarded on account of the disproportionally high efforts required to create such an entity compared to its (limited) mandate. This would apply also to the creation of dedicated Agency, which compared to the relatively limited resources needed for the management of e-CODEX would be disproportionate.

Use of another system or development of an alternative system: This option was discarded since the current e-CODEX solution proved to be very effective and efficient for the procedures for which it is already used (see above under section 2.1.1 as regards the evaluation of the e-CODEX pilots). Choosing a different IT system for secure transmission will turn into direct loss the 24 million EUR already invested in creating e-CODEX. Also, using commercial solutions will raise issues regarding their long term sustainability and

regarding data integrity, as the owner of the solution could in theory have access to the data transferred using its solution. Moreover, the solutions available in the market are not adapted to the specific requirements of the EU judiciary, as opposed to e-CODEX, which has been developed specifically for this sector.

More specifically, one possible alternative to e-CODEX is **TESTA NG** (or its previous version, s-TESTA). The TESTA NG network is the EU's own private network, suited for secure information exchange between European and Member States public administrations. It is a European network similar to the Internet, but dedicated to inter-administrative requirements and providing guaranteed performance levels such as guaranteed bandwidth, which is not the case for the general Internet.

The TESTA NG solution is not a suitable replacement for e-CODEX for the following reasons. Firstly, TESTA NG is closed to non-public administration participants, something that e-CODEX allows (lawyer bars, bailiff associations and service and/or data providers). Secondly, e-CODEX offers further domain-specific functions that would be transferred to the entity taking over the management, (e.g. assessment of electronic signatures, provision of multi-level evidence of delivery, establishment of data exchange standards) for which there is no equivalent in TESTA NG. Thirdly, e-CODEX offers by default encryption of the data exchanged between partners over any kind of network, which might be Internet or TESTA NG. TESTA NG offers a secure network over which data may either be encrypted or not.

In addition, the very high security and availability guarantees offered by TESTA NG make it a very costly system to operate. To control this operational cost, its use should be restricted to those cases where very high security is objectively needed. Even in the more sensitive uses of e-CODEX (such as exchange of e-evidence), the stakeholders already deemed the level of security offered by e-CODEX as sufficient for their needs, making the use of a system providing higher security unnecessary.

Another alternative tool for communication between authorities is the **Internal Market Information System (IMI)**. IMI is a secure, multilingual online tool, facilitating the exchange of information between public administrations across the EEA that are involved in the practical implementation of EU law. IMI was designed as a generic solution that could be adapted, with very little or no development effort, to support communication relating to other policy areas (in addition to its original scope, the Services Directive and the Recognition of Professional Qualifications Directive). IMI was designed as a system for communication between human users – whereas e-CODEX is designed as a system to system interface without the need for human intervention to receive or send a message. The human interface is built into the back-end applications which can automatically receive messages and assign it automatically to either a new or an already existing court or prosecution case.

The main reason why IMI is not a comparable system with or suitable replacement for e-CODEX is that it was designed to operate as a centralised system, hosted by the European Commission. e-CODEX embodies a completely different philosophy, a decentralised one, where each Member State operates its own node in a network where there is no central element (such as e.g. a central server). Through this, the Member States retain full control of the data sent and received by the node and can also leverage all the data available in its national systems.

In cases such as the exchange of e-evidence, the Members States expressed clear views against an approach where the data is stored centrally, e.g. in the data centre of the European Commission.

Management by an EU Member State or a new consortium of Member States: As indicated above in section 2.1.1, the Member States consortium have clearly indicated that continued management of the e-CODEX system financed by action grants is not a sustainable solution for the long-term. Furthermore, if the decision was taken to finance e-CODEX fully with EU grants, it would be required to set up the e-CODEX consortium as a permanent legal entity at national level in order for it to be able to receive an operational grant. Indeed, the handover to a new group of Member States does not offer sufficient guarantee of continuity of operations over time. On the other hand, it is also unclear why a Member State or a group of them would accept to bear the burden of running such activities, which go beyond the interest of the group of the Member States involved. In addition, long-term sustainability financed with EU grants can lead to gaps in the continuation of the needed activities and might lead some Member States to not pick up the e-CODEX solution for fear of lack of support.

These are significant disadvantages with management by Member States, such as the need for continued funding and the uncertainty of obtaining Member State commitment for the long-term. Moreover, in terms of governance, Member State management would have the inconvenience of not ensuring proper involvement of the EU level, which is problematic for a system developed to be used for various cross-border EU procedures.

5.2. Option 1: Baseline scenario

Uncoordinated maintenance of the e-CODEX system means that there will be no sustainable common system for secure cross-border communication in the justice area. See further details in section 2.4.

5.3. Option 2: Non-regulatory option – Management by the Commission

In this option the Commission assumes the responsibility for the operational management of the e-CODEX system. This could be done either by DG Justice and Consumers or DG DIGIT.

The management tasks relating to e-CODEX that the Commission would take over would include technical maintenance and further development of the software components, data standards and security specifications that are part of the system, and in particular of:

- Web presence for the e-CODEX software modules, XML Schema Definitions (XSDs), related specifications and documentation, FAQ, issue-tracking database, support sections, etc.
- PModes and certificate trust stores, as well as coordination and distribution of these
- Bug fixing of the e-CODEX software modules and managing the corresponding software repository
- Business process models
- Data models, data repository and XSDs
- Project technical documentation
- Central testing capabilities
- Technical support for installation and configuration issues

The Commission would also be involved in the governance and coordination of e-CODEX and e-CODEX-related activities. Section 6.2 under "cost-effectiveness" sets out in more detail the tasks to be carried out.

5.4. Option 3: Regulatory option – Management by an existing EU Agency

The task of managing e-CODEX could be given to an EU Agency. The management tasks would be essentially the same as for Option 2. However, some tasks relating to relations with stakeholders and identification of business for new implementations of e-CODEX would remain with the Commission, as further developed in section 6.2.

Transfer of e-CODEX to an Agency would require the adoption of a legal act, which would establish and define e-CODEX, clarify the role of the Agency in the operational management, and regulate governance issues such as Member State representation in the Management Board of the Agency and in its other governance bodies. Corresponding adjustments would have to be made to the legal basis of the Agency, notably regarding the creation of an Advisory Group for e-CODEX and a Programme Management Board. The legal act would be limited to providing a legal basis for the management of e-CODEX; it would on its own not mandate the use of e-CODEX for specific legal procedures. Decisions on the use of e-CODEX for a specific procedure would have to be taken separately, e.g. through a revision of the relevant legal basis.

The scope of the legal act would cover judicial cooperation in the area of civil and criminal law, as well as European procedures such as for example the European Small Claims Procedure, the European Payment Order Procedure or the European Account Preservation Order. A list of the instruments on judicial cooperation and European procedures corresponding to the list in section 2.1.2 would be provided in an annex to the legal act.

In order to allow for the adoption of the legal act by the Council and the Parliament, and ensure an adequate handover between the consortium and the Agency, this option should be combined with an interim prolongation of the current Member State consortium for the period between 2021 and the handover to the new entity managing the e-CODEX system.

6. WHAT ARE THE IMPACTS OF THE DIFFERENT POLICY OPTIONS AND WHO WILL BE AFFECTED?

The three policy options are discussed and measured against the following criteria:

- Effectiveness: the extent to which the measure fulfils the objectives of the proposal;
- Technical and operational feasibility
- Legal feasibility
- Cost- effectiveness
- Impact on SMEs, competitiveness and competition
- Impact on the Digital Single Market
- Social impacts

- Fundamental rights
- Environmental impacts
- Impact on third countries

6.1. Option 1: Baseline scenario

Uncoordinated maintenance of e-CODEX would mean that a common secure communication tool for the EU judiciary could no longer be maintained. See further section 2 – Problem definition.

6.2. Common impacts of policy options 2-3

Policy options 2-3 cover different scenarios aiming at ensuring a stable operation of the e-CODEX system and its future use for legal procedures. They have in common a number of potential positive impacts resulting from the use of a secure digital system for communication to and between judicial authorities. It should be emphasised on the one hand that these positive impacts are the result of the introduction of a common digital system as such – which could be e-CODEX or another system – and on the other hand that there may remain legal constraints to using digital communication tools in the judicial area, which will not be removed solely because of the transfer of e-CODEX to a permanent entity. Nevertheless, if e-CODEX is managed by an EU entity, its concrete implementation for specific legal procedures will necessitate the removal of such legal obstacles.

The baseline costs of maintaining the system are, likewise, common to policy options 2-3 and expressed in Full Time Equivalents (FTEs). The coordination and/or overhead costs differ between the options. This variation is however difficult to assess in a quantifiable way. Therefore, for the purpose of this analysis, it was considered not to be a differentiating factor.

- ***Impact on SMEs, competitiveness and competition***

e-CODEX would have indirect positive economic impact on European businesses of all sizes as it simplifies and speeds up cross border judicial procedures and judicial cooperation, which in itself is of benefit to companies.

As an example of the positive economic impact of digital communication in judicial procedures in particular for SMEs, it is useful to mention the European Small Claims Procedure (ESCP). The replacement of postal services with digital communication generates potential savings, in terms of saved postage costs but more significantly by reducing the time for the procedure. Even though postal service is already cheaper than other methods of service used in ordinary proceedings in the Member States, such as bailiffs, it still generates comparably more costs and delays than the use of electronic service. If postal costs are estimated at between €2.78 and €7 for a given case[51], the total postal cost would amount to between €8 to €21 per case. In terms of delay in the procedure, each service/communication by post takes between 1 and 3 days, or for the whole procedure, between 3 to 9 days. As the

[51] Impact assessment accompanying the proposal for a Regulation amending Regulation (EC) No 861/2007 establishing a European Small Claims Procedure (http://ec.europa.eu/justice/civil/files/com_2013_794_en.pdf).

average length of the proceedings is between 3 and 6 months, this constitutes a non-negligible part of the process.

On average, if electronic communication with acknowledgment of receipt at a cost of €1 would be used instead of post, and only for the documents which need to be served according to the Regulation and not for all communications between the parties and the courts, a party is expected to save between €5 to €18 and 3 to 9 days. In practice however, because many more communications are effected by post, the costs to the parties are higher.

Similar cost savings as for small claims could also be realised in other procedures using e-CODEX. For example, for EPOs, for which e-CODEX provides the possibility for companies, and in particular SMEs, to enforce outstanding payment claims across borders. The use of e-CODEX could therefore lead to significant reduction of administrative burden for SMEs. Annex 6 sets out the potential savings for EPOs on the assumption that digitalisation of the procedure would lead to a reduction of postal costs of €8 to €21per case as well as a shortening of the procedure of 3-9 days. Using the available data on number of payment orders in the EU and length of proceedings[52], **overall the length of EPO proceedings would be reduced yearly between 35.301 and 127.836 days**. **The total savings on postage would amount to between € 94.136 and €298.284 for all the EPO cases**.

Moreover, digitalisation through a system like e-CODEX could achieve significant savings also in the area of service of documents by an improved administration of justice. If there was increased transparency of or better access to the information on the whereabouts of natural or legal persons, a large amount of cases could be avoided in which the defendant is currently notified of the proceedings against him/her by a fictitious method of service of documents (such as publication in a gazette). In addition, as a consequence of better, faster and more reliable judicial assistance in this field, the proceedings will be carried out and concluded faster with greater legal certainty and less grounds for challenges and problems at the later stage of enforcement (e.g. because deficient service is invoked as a ground of refusal). This will result in efficiency gains translating into cost savings both for parties and Member States.

As regards compliance costs / administrative burden, there will be no additional costs for SMEs (or other operators) following the implementation of e-CODEX for a specific legal procedure. The use of e-CODEX will simply entail filling in an online form as laid down in the applicable legal act to submit or respond to a claim, rather than a paper form.

Result of the SME test:

(1) Identification of affected businesses;

- All businesses and SMEs that could potentially engage in cross-border legal proceedings are affected by the use of digital means of communication in the judiciary, e.g. e-CODEX

(2) Consultation of SME stakeholders;

[52] Report on the application of Regulation (EC) 1896/2006 of the European Parliament and of the Council creating a European Order for Payment Procedure (https://ec.europa.eu/transparency/regdoc/rep/1/2015/EN/1-2015-495-EN-F1-1.PDF).

- SME stakeholders have been consulted together with the general public through the inception impact assessment[53]

(3) Measurement of the impact on SMEs;

- Examples of potential cost savings for SMEs as a result of implementation of digital communication tools are indicated above. There is no negative economic impact on SMEs

(4) Assessment of alternative mechanisms and mitigating measures.

- As there is no negative impact on SMEs, there is no need for alternative mechanisms or mitigating measures.

- ***Impact on the Digital Single Market***

By improving the efficiency of cross-border proceedings through increased use of digital communication tools, e-CODEX would contribute to improving the functioning of the Digital Single Market.

Ensuring permanent management of e-CODEX (which uses the CEF building blocks eDelivery and e-Signature, see above section 1.1) would ensure a spill-over effect: the Member States will use e-CODEX for cross-border procedures because it is a mature system supported in the long term. For reasons of interoperability and availability of support they are also likely to use the same solution nationally. This supports the gradual creation of the Digital Single Market.

- ***Social impacts / impact on public authorities***

By implementing European cross-border procedures for civil matters in an electronic way, a permanent e-CODEX would provide an easy access to justice for European citizens.

Criminal proceedings are speeded up due to a full electronic exchange of requests by avoiding undue delays, which are more likely in traditional ways of transmission. As a result, implementing e-CODEX could have a positive impact on the fight against cross-border crime.

There is also a positive impact of the use of e-CODEX to help enforce financial penalties such as traffic offences. A high number of traffic offences are committed by foreign nationals – for example in Austria, around 4 million road traffic offences (speeding) are detected per year, of which 20% to 25% are committed by foreign drivers[54]. Moreover, in France, 143 054 fines imposed on foreign residents remain unpaid each year. With an average fine of 280 EUR, this amounts to over 40 million euros of unpaid fines to be enforced by court proceedings[55]. If we assume that electronic procedures could increase the efficiency of cross-border proceedings by 20 %, an additional 8 million euros could be enforced in France every year. A full implementation of e-CODEX across the EU would considerably facilitate the recovery of these fines and more effective enforcement would also have a positive effect on the abidance by traffic rules across Europe.

53 No response was however received from SME stakeholders.
54 Data obtained from the AT Ministry of Interior.
55 Data on AFM fines the FR fine collecting agency.

Positive impact can also be expected on the efficiency of national courts. In an evaluation carried out by the e-CODEX consortium, it was estimated that the implementation of e-CODEX in Germany has led to a time saving of 5-10 minutes to process a case because the data no longer needs to be manually entered into the case management system[56].

- ***Fundamental rights***

The possibilities created by the e-CODEX electronic system would have a positive impact on the ability to exercise the right to an effective judicial remedy, and are therefore in conformity with Article 47 of the Charter of Fundamental Rights ´Right to an effective remedy and to a fair trial´ since electronic communication and document transmission enhances and reduces the time of the court proceedings. Stakeholders have pointed out that Article 47 also guarantees the right to an impartial and independent tribunal, and that in order be in conformity with that Article, future governance and coordination of e-CODEX and e-CODEX-related activities need to ensure that the independence of the judiciary is guaranteed.

Since e-CODEX is a decentralised system, there will be no data storage or data processing by the entity entrusted with the maintenance of the e-CODEX software components. The entities operating e-CODEX access points are solely responsible for the personal data transiting via their access points. Depending on whether an access point is operated by Union institutions, bodies, offices and agencies or other entities, either Regulation (EU) 2018/1725[57] or the General Data Protection Regulation will apply respectively.

The Commission or the Agency entrusted with the operational management of the e-CODEX system when undertaking further technical evolutions of software products, should implement the principles of security by design and data protection by design and by default, in accordance with Regulation (EU) 2018/1725 of the European Parliament and of the Council.

Options 2-3 are therefore neutral from a data protection point of view.

- ***Environmental impacts***

e-CODEX is a paperless system and saves therefore natural resources by reducing the use of paper, ink and postal delivery, to the extent that the use of digital communication is permitted by the relevant instrument and national law.

- ***Cost effectiveness***

The following e-CODEX product is proposed (all values are expressed as FTEs). The third column displays the resources necessary strictly for the maintenance of the existing e-CODEX with regard to its existing business uses. The fourth column displays resources *in*

[56] e-CODEX D3.5/D3.7/D3.8 WP3 Final Report

[57] https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32018R1725

addition to the ones for maintenance (which continue to be necessary) needed in case extensions of the system are envisaged, whether technology- or business-driven.

Position	Personnel Type	Maintenance e-CODEX (FTE)	Extending e-CODEX (FTE)	Indicative annual salary[58] (per 1 FTE)
Legal Officer	Temporary Agent	0.25	0.75	€150,000
Policy Officer	Temporary Agent	0.5	0.5	€150,000
HR / Financial and budget / Reporting	Contract Agent	0.75	0.25	€80,000
Stakeholder/business coordinator[59]	Contract Agent	0.75	0.25	€80,000
Project manager	Contract Agent	0.5	0.5	€80,000
Application/Enterprise architect	External provider	0.25	0.75	€143,000
Business analyst / Data modeller	External provider	0.25	0.75	€111,000
ICT Security Manager / Infrastructure System Engineer	External provider	0.5	0.5	€91,000
Support Manager	External provider	0.75	0.25	€105,000
Service desk Agent / User Documentation	External provider	0.75	0.25	€73,000

[58] Rates for internal staff based on BUDGWEB Legislative Financial Statement prices for 2020. For external staff the DIGIT XM framework contract was used as reference.

[59] This profile is also in charge of organising the various meetings with participants and stakeholders in the context of the Advisory Group and the Programme Management Board meetings.

and Training				
Quality Assurance Manager	External provider	0.5	0.5	€111,000
Application developer	External provider	0.5	1.5	€92,000
TOTAL		**6.25**	**6.75**	

The total amount of required human resources would therefore amount to **13 FTEs**. In addition to costs related to human resources, there are also:

- costs of travel and daily subsistence for organising (for one representative from each Member State at an estimated cost of €21,000 / meeting) approximately 15 meetings per year

- mission costs (estimated at €700 / mission) for personnel to attend meetings in Brussels and make presentations elsewhere (estimated at 4 missions / year in the first year and 8 missions / year thereafter) and for

- costs for hardware and software products, estimated at €50,000 initial costs and €10,000 yearly maintenance costs;

In all cases, the Commission will also require one additional FTE (estimated at €150,000 / year[60]) to be involved in the policy governance of the work, as well as in the preparation of the necessary implementing acts mandated by the Regulation. This entails mission costs - to attend meetings (estimated at average of 10 missions / year).

The total indicative costs for the period 2023-2027, based on the estimations above, amount to approximately 10 million EUR.

As regards the costs for Member States implementing e-CODEX, it can be considered that e-CODEX is also cost-effective. A Member State:

- needs to set up the gateway/connector to connect to their national system only once. Besides the usual maintenance costs, and additional costs resulting from changes in the national system, no further investments are required for connectivity;

- needs only to follow a described and proven method to achieve digital support for a cross-border legal procedure. In most cases a Member State will only have to realize the mapping between the national solution and e-CODEX as the work for several cross-border legal procedures will have been done jointly by the experts of several Member States;

- is assured of the continuity of its investments in IT solutions. e-CODEX seeks to connect existing national solutions instead of forcing Member States to install 'alien solutions' with all sorts of IT management and maintenance implications.

60 Per BUDGWEB rates for 2020.

The cost for Member States of installing e-CODEX in the Member States could be estimated to a maximum of 80-100 person-days (for further details see Annex 5).

- ***Impact on third countries***

e-CODEX, being a secure system for communication in the judicial area, has the potential to be used also in communications between European judicial authorities and authorities in third countries. The iSupport system developed by the Hague Conference has put in place an electronic case management and secure communication system, based on e-CODEX, for the cross-border recovery of maintenance obligations under the EU 2009 Maintenance Regulation and the 2007 Hague Child Support Convention. Portugal and the State of California (USA) have been using it since the autumn of 2016 and extension to other States is ongoing. The project was partly financed by an EU grant and supported by a number of Member States[61]. Non-EU members of the Hague Conference interested in using the system include Brazil, Norway, Switzerland and the USA.

The third countries, international organisations or other non-governmental stakeholders using e-CODEX would not be members of the governance bodies tasked with the management or maintenance of the system. Formal membership of such bodies would be reserved for EU institutions and Member State authorities. Nevertheless, the governance structure for e-CODEX should involve non-governmental stakeholders at different levels. In any event, the impact on third countries / institutions would be limited to the need to obtain updates of the e-CODEX system from the managing entity (Agency or Commission) rather than as currently from the e-CODEX consortium.

6.3. Option 2: Non-regulatory option – Management by the Commission

- ***Effectiveness***

While the Commission is currently managing some large-scale IT systems (e.g. DG TAXUD), the current trend is to externalise such systems (DG TAXUD has for instance been invited by the Council to identify a permanent future structure for the management of its systems). This is the approach taken with regard to the existing large-scale IT systems in the area of Justice and Home Affairs (Eurodac, the Schengen Information System (SIS II) and the Visa Information System (VIS)), which have been entrusted to the European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice (eu-LISA). Recently, eu-LISA been tasked with the development and future management of a number of new systems in the area of home affairs, namely the Entry/Exit System (EES), the European Travel Information and Authorisation System (ETIAS) and the European Criminal Records Information System for third-country nationals (ECRIS-TCN) If nevertheless the Commission would be given this task, in practice - aside from the operational resources that could be provided from operational credits – establishment plan posts would be needed for the management of the system.

One crucial element of the functioning of e-CODEX is the involvement of the stakeholders including Member States in the governance of the system. This will ensure that the subsequent development of the system will cater for the needs of the Member States using it.

[61] Austria, Belgium, Estonia, France, Germany, Italy, the Netherlands, Portugal and Italy.

A particular aspect of Member State involvement relates to the need to ensure that the system does not interfere with functioning of national judiciaries. Member States have repeatedly underlined the necessity that impact on the independent position of the judiciary is taken into account when the governance framework for e-CODEX is established[62]. The need to guarantee the independence of the judiciary when finding a permanent solution for e-CODEX has also been underlined by the European Network for the Councils of the Judiciary (ENCJ) in their response to the inception impact assessment[63]. The Council Working Party on e-Justice has also raised the issue of the independence of the judiciary on numerous occasions, most recently in September 2020, and considers that the governance framework for e-CODEX needs to take this into account, also with regard to the involvement of stakeholders[64].

The use of e-CODEX may have considerable influence on the judicial administrations, but also a significant impact on the judiciary by changing the working processes substantially. In order to meet these concerns, the Member States themselves should have the opportunity to provide input to the management of the e-CODEX system. An example that could be mentioned is the proceedings in cases of urgency. There could be different regulations in the Member States on how to deal with summary judicial proceedings. It could be necessary to have the possibility to use the e-CODEX system 24 hours 7 days a week and not only during the regular working hours from Mondays to Fridays. If this requirement is not met by the organisation in charge of e-CODEX, it could adversely affect the functioning of the judiciary, because the judge would not be able to act appropriately. This shows the importance of ensuring the possibility for representatives of the national judiciaries to be involved in the decision-making processes concerning the e-CODEX system.

An assessment of the possible options to maintain e-CODEX has been carried out by an independent accountancy firm, Deloitte, as author of a study ordered by DG CNECT on the sustainability of the Digital Service Infrastructures (DSI), included in the Connecting Europe Facility (CEF). Deloitte specifically assessed the options for sustainability of the e-Justice DSI which includes e-CODEX as an important element. The assessment in the study regarding the sustainability of the e-Justice DSI is therefore relevant also for the sustainability of e-CODEX. The assessment was done on the basis of four criteria: governance, operations, financing and architecture. In terms of governance, the study found that the Commission's organisational structure may not be flexible enough to accommodate new needs emerging from the community of users of e-CODEX. The e-CODEX Community may find it more difficult to raise emerging issues with the Commission compared to other structures such as a consortium of Member States or an Agency[65].

- ***Technical and operational feasibility***

Overall, management by the Commission is a feasible option from a technical and operational point of view. Indeed, DG DIGIT is already and will remain involved in maintaining the part of e-CODEX that has become the CEF eDelivery building block. It would therefore be theoretically possible to extend this management to the entire e-CODEX system. This may however encounter some difficulty since the full e-CODEX solution is specific to the justice sector, whereas DIGIT focuses its work largely on cross-sector initiatives.

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62 Roadmap on e-CODEX adopted by JHA Council on 8-9 December 2016 point 6 (c) - http://data.consilium.europa.eu/doc/document/ST-14465-2016-INIT/en/pdf.

63 See Annex 2.

64 Meeting of the e-Justice Council Working Party on 8 September 2020.

65 http://publications.europa.eu/resource/cellar/4374d088-c8ee-11e7-9b01-01aa75ed71a1.0001.01/DOC_1

Moreover, the development or uptake of a cross border legal procedure as a use case to be supported by e-CODEX quite often starts on an ad-hoc basis. This results from the 'needs based' approach of the legal domain towards digital support for their operations. The need for digital support is experienced as imminent by the professionals, mostly seconded by their hierarchy. For example, the use case on digitalising the Mutual Legal Assistance procedure (predecessor of the European Investigation Order and the e-Evidence project) started this way. This approach requires a flexible organisation that is fit to react to such unforeseen prioritised demands not listed in policy programmes of the Commission.

- ***Legal feasibility***

There are no legal obstacles to management by the Commission.

- ***Cost-effectiveness***

The estimation of costs detailed above in section 6.2 is valid for the option of Commission management.

6.4. Option 3: Regulatory option – Management by an existing EU Agency

- ***Effectiveness***

Handing over the management of e-CODEX to an agency would be an effective way of ensuring the sustainability of the system for the following reasons:

- The management structure of an agency is appropriate for the task of managing an IT system in the justice area such as e-CODEX;

- Operational management for a longer period of time can be planned and staffed to create stability.

An agency can count on continuous financing; it has the expertise to hire the proper resources and consolidate the necessary know-how. Engagement of such an agency would achieve the best possible return on the investment for e-CODEX. Proper management also ensures the broad and increasing usage of the e-CODEX solution by the Member States.

Furthermore, an agency can also ensure by its organisation to include and serve all Member States appropriately. The management board of the agency can represent all Member States and their interests and can also ensure that the interests of national judiciaries are duly taken into account. Some Member States, which support this approach from the beginning but are not using the e-CODEX system yet, could decide to join the (some of) the supported use cases.

An EU regulatory agency would also be able to react to evolving needs, since its governance procedures allow rapid assimilation of needs emerging from different communities, including

from the Member States and from users of e-CODEX[66]. An agency would therefore be a flexible solution, which would be well-suited to support future extensions of the system to new use cases or procedures.

Entrusting the management of e-CODEX to an agency by establishing a legal basis for the system would also be an effective way to increase the uptake of e-CODEX among the Member States. Providing the system with a legal basis, would allow making reference to it as the communication tool in future legislative initiatives. Moreover, the expectations of a sustainable operational management in the future by itself would lead to an increase in uptake, as evidenced by the planned deployment by Member States in the context of the preparations for the platform for exchange of electronic evidence (eEDES).

Among the 11 respondents to the inception impact assessment, four expressed views on the entity most appropriate to manage e-CODEX, and all of those preferred to give the responsibility to an agency. No respondent favoured another solution for the sustainability of e-CODEX.

- ***Technical and operational feasibility***

Considering the strong need to ensure continuity in the operational management of the e-CODEX system, the EU regulatory agency appears to be a particularly good option. In fact, an EU regulatory agency can provide stability and support to the operational management activities for an indefinite period. Moreover, this solution is perfectly able to attract the necessary human resources and scale up and down the activities as needed.

- ***Legal feasibility***

A legal act would be required to transfer the management of e-CODEX to an agency. In addition, the legal basis or mandate for that Agency would need to be amended in order to entrust e-CODEX to that agency.

This legal act would establish and define e-CODEX as well as the list of tasks relating to e-CODEX that the agency would have to carry out. It would modify the mandate of the relevant agency in the following way:

- the agency should be mandated to adopt reports on the technical functioning and use of the e-CODEX system
- as regards the Management Board, there should be a requirement that decisions do not interfere with the proper functioning of the judiciary

[66] Deloitte Study, http://publications.europa.eu/resource/cellar/4374d088-c8ee-11e7-9b01-01aa75ed71a1.0001.01/DOC_1.

- an Advisory Group on e-CODEX should be created as well as any other governance related bodies that could facilitate the handover of the e-CODEX system to the relevant agency and the subsequent operational management of the system.

- ***Choice of appropriate agency***

Following the Council conclusions and the Council's own assessment, the e-Justice Working Party made contacts with three different agencies: eu-LISA, INEA and ENISA.

The criteria applied for the identification of the appropriate agency considered both governance and technical aspects.

The agency chosen for the governance of e-CODEX must have a clear mandate, given the importance of the independent nature of the solution/s and the services required. The mandate must ensure the legal feasibility of the agency solution and be funded.

The agency must be able to operate for a minimum period of 7 to 10 years to provide an efficient and effective long-term solution. This minimum period will bring continuity for the services offered.

With regard to the technical aspects, the agency will need to meet various requirements, including willingness to maintain and further develop the components of the e-CODEX system.

The agency should be able to manage a diverse community of users. This is due to the fact that the e-CODEX project covers use cases from different domains and with different stakeholders. The agency should be able to manage relations with entities operating e-CODEX access points, i.e. mainly Member State authorities. These could be Ministries of Justice, courts, prosecutors or similar. It could also be organisations such as national bar associations.

The agency should already have the necessary expertise to hire the resources needed for the operational management of e-CODEX.

As regards INEA (Innovation and Networks Executive Agency), it is an executive agency tasked with the implementation of EU financial programmes, such as the Connecting Europe Facility (CEF). This agency does therefore not have any experience in managing large-scale European IT systems. ENISA (European Union Agency for Network and Information Security), on the other hand, is an agency working in the field of cybersecurity, providing recommendations on cybersecurity and supporting policy development and in this field. ENISA has therefore also no relevant experience in managing large-scale IT systems.

eu-LISA, however, fits well the requirements for ensuring the management of e-CODEX. The mandate of eu-LISA, as defined by Regulation (EU) 2018/1726[67], clearly indicates that it is an agency "*for the operational management of large-scale IT systems in the area of freedom, security and* ***justice***" (see Article 1). Since its mandate explicitly mentions that the management of IT systems in the justice area, eu-LISA is best placed among existing

[67] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02018R1726-20190611

agencies to take over the role of management of e-CODEX. In fact, eu-LISA already manages ECRIS, which is a decentralised justice system.

From the discussions between the e-CODEX consortium of Member States and eu-LISA, it emerged clearly that eu-LISA has the operational capacity and know-how required to manage a complex large-scale IT system like e-CODEX. In fact, while eu-LISA has until recently been entrusted with the management of centralised large-scale IT-systems, it is fully capable to assume the responsibility for a decentralised communication infrastructures like ECRIS or e-CODEX. The evaluation carried out by the Commission of eu-LISA's operational management of the systems currently within its mandate concluded that the Agency has the technical competence and capacity to deal with tasks relating to communication infrastructure[68].

eu-LISA has recently been entrusted the development and future management of a number of new systems in the area of home affairs, namely the Entry/Exit System (EES), the European Travel Information and Authorisation System (ETIAS) and the European Criminal Records Information System for third-country nationals (ECRIS-TCN). While these additional tasks for eu-LISA required substantial additional resources, it would be a more moderate effort to takeover e-CODEX, as it would require a limited amount of resources as per the cost calculations of the present impact assessment, for the period between 2023 and 2027.

e-CODEX is a large-scale IT system which, therefore, fits perfectly within the mandate of eu-LISA. It is large-scale because it is intended to connect the judicial authorities from all 27 Member States and in addition EU citizens, companies and legal professionals either via the European e-Justice Portal or the national legal communication systems.

On the basis of the feedback from the agencies consulted, the Council[69] concluded that eu-LISA was the only agency that met the required criteria on governance, know-how and continuation of the decentralised architecture. This is also supported by the stakeholders responding to the inception impact assessment - of the four stakeholders favouring handing over e-CODEX to an agency, three consider eu-LISA to be the most appropriate agency.

- ***Cost-effectiveness***

The costs detailed above in section 6.2 are valid estimations also for the option "management by an agency". However, because of its experience in managing large-scale IT systems such as SIS and VIS, as well as the new responsibilities and resources that will accrue to it as a result of its enlarged mandate, there should be possibilities for the eu-LISA Agency to identify opportunities for synergies with existing staff already working on the other IT systems in its portfolio. It should also be possible for the agency to subcontract parts of the management tasks.

[68] https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20170629_report_on_the_functioning_of_eulisa_swd_en.pdf

[69] http://data.consilium.europa.eu/doc/document/ST-14465-2016-INIT/en/pdf

7. HOW DO THE OPTIONS COMPARE?

In the following table the results of the assessment as described above under Section 6 are compared with option 1 representing the baseline scenario.

Effectiveness

The baseline scenario would mean that the e-CODEX system is no longer maintained centrally, leading to uncoordinated maintenance of the existing national systems. This scenario therefore runs counter to the specific objective of preventing inefficiencies and improving efficiency of judicial procedures in cross-border communication. It would deprive the EU of a common interoperable digital information exchange system for the common area of security and justice, which would run counter to the general objective of ensuring efficient functioning of that area by optimal use of judicial procedures.

Management by the Commission may make it more difficult to ensure the involvement of the Member States in the process. The respect of the independence of national judiciaries calls for a formal involvement of Member States in the decision-making. This may be more difficult to ensure if the Commission is given the task.

Management by an agency would on the contrary ensure a sustainable long-term base at EU-level for the operational management of e-CODEX, allowing for involvement of the Member States. However, since it requires the adoption of a legal act, the agency solution requires that the management by a Member State Consortium continues until the handover to the new entity managing the e-CODEX system.

The transfer of e-CODEX-related tasks to eu-LISA would be appropriate, as eu-LISA is the European Agency for the operational management of Large-Scale IT Systems in the area of freedom, security and justice. The eu-LISA agency was created exactly for this purpose. The management, governance and operational model was designed to run IT systems in the JHA area for Member States with high degree of security and entailing a high degree of sensitivity for the data contained in/transferred through the systems.

Since the policy objective set for this initiative relates to the efficient functioning of the justice area, an only an agency with a mandate within that area would ensure the specific management of the components in line with that objective.

In view of the strong support for handing over e-CODEX to eu-LISA from Member States and stakeholders, this option has a better chance of operational success, and would overall be a proportionate solution to achieve the objective of an efficient functioning of a common area of security and justice.

Option 3 therefore appears as the option which is most effective in fulfilling the specific and general objectives.

Cost effectiveness

The costs over time of handing over e-CODEX management to the Commission vs an Agency are very similar. One important difference lies however in the fact that while the Commission does not manage large-scale IT systems for the Member States, the eu-LISA Agency has extensive experience of the management of such systems. There is therefore more scope for the eu-LISA Agency to identify opportunities for synergies and redeployment of existing staff already working on the other IT systems in its portfolio.

Technical and operational feasibility

Overall, the two management entities assessed (the Commission and an Agency) would both have the capacity to ensure the technical and operational management of e-CODEX. However, the Agency appears preferable in particular for the following reason: as the Deloitte study found, it is more flexible in taking into account the needs of stakeholders compared to the Commission.

	Option 1 **Baseline scenario**	**Option 2** **Management by the Commission**	**Option 3** **Handover to an Agency**
Effectiveness in preventing inefficiencies of judicial procedures in cross-border communication	0	++	+++
Effectiveness in improving efficiency of judicial procedures in cross-border communication	0	++	+++
Cost -effectiveness	0	0/+	+
Technical and operational feasibility	0	++	+++
Overall scoring	**0**	+/++	++/+++

Other impacts were not included, as it is considered that they will not, or only marginally, be affected by the choice of the option.

8. THE PREFERRED OPTION

Based on the analysis of the impacts of the different options the preferred option is:

Option 3 – Management by eu-LISA

Cost Savings – Preferred Option		
Description	***Amount***	***Comments***
Cost savings as a result of the use of digital communication (e.g. e-CODEX) for the	8-21 EUR, 3-9 days per case. Overall, the length of EPO proceedings would be	The savings are indicated in terms of costs of postage and shortening of the procedure

European Small Claims procedure or the European Order for Payment procedure	reduced yearly between 35.301 and 127.836 days. The total savings on postage would amount to between € 94.136 and €298.284.	thanks to the use of digital communication. These benefits would accrue both to businesses and citizens/consumers as parties to small claims proceedings.
Better enforcement of traffic fines	8 million EUR per year (France)	The benefits consist of increased enforcement of fines for cross-border traffic offences. These benefits would accrue to the national administration / judiciary
More efficient court proceedings	5-10 minutes per case (Germany)	The benefits correspond to estimated time savings due to the use of e-CODEX in German courts

9. HOW WOULD ACTUAL IMPACTS BE MONITORED AND EVALUATED?

For the first time two years after it takes over responsibility for the e-CODEX system, and every two years thereafter, eu-LISA shall submit a report to the Commission on the technical functioning and use of the e-CODEX system, including the security of the system. On the basis of this evaluation, the Commission will decide the appropriate follow-up.

For the first time three years after eu-LISA takes over responsibility for the e-CODEX system, and every four years thereafter, the Commission shall produce an overall evaluation of the e-CODEX system. That overall evaluation shall include an assessment of the application of the Regulation and an examination of results achieved against objectives, and may formulate any necessary recommendations. The Commission shall transmit the evaluation report to the European Parliament and the Council. To assess the effectiveness in achieving the objectives of the preferred option, the following core indicators have been identified. These indicators will serve as the basis for the evaluation, as well as possible targets to be achieved five years after the change of management.

Objectives	**Core indicators**	**Baseline**	**Target**
Prevent inefficiencies in cross-border communication by ensuring sustainable maintenance of the e-CODEX system beyond 2023 Improve efficiency by wider use of e-CODEX			
- Increase the number of EU Member states using e-CODEX	Number of Member States using e-CODEX	10 MS	27 MS

- Increase the number of judicial procedures using the e-CODEX system	Judicial procedures using the system	6 procedures	12 procedures

Moreover, e-CODEX can be a useful instrument to assist the monitoring of the different pieces of legislation in the field of judicial cooperation where it is applied. The use of a digital communication structure will make all steps of the relevant procedure traceable, and will facilitate the compilation of statistical data regarding the use of the procedure.

10. ANNEX 1: PROCEDURAL INFORMATION

Lead DG: Directorate-General Justice and Consumers

Agenda Planning

Reference AP N°	*Short title*	*Foreseen Adoption*
2017/JUST/794	**e-CODEX Regulation**	2 December 2020

Organisation and timing

An Inter-Service Steering Group (ISSG) was set up in July 2017.

The Inception Impact Assessment was validated by the First Vice President's Cabinet on 6 July and published on 17 July 2017.

The ISSG met two times before the submission of the Impact Assessment to the Regulatory Scrutiny Board on 8 November 2017. The ISSG made comments to the Impact Assessment at a meeting on 2 October. A revised version was then sent out for comments in writing. These comments are summarised in a document submitted together with the present Impact Assessment.

Consultation of the Regulatory Scrutiny Board

This Impact Assessment Report was submitted to the Regulatory Scrutiny Board for its meeting on 13 December 2017. The Regulatory Scrutiny Board delivered its opinion (positive with reservations) on 15 December 2017 indicating that the impact assessment should be adjusted in order to integrate the Board's recommendations on specific aspects. These related firstly to the description of the future of the e-CODEX system and considered that it was not sufficiently clear whether the choice of the hosting Agency had already been agreed between the Council and the Commission. Secondly, the report should better explain why the uptake of e-CODEX is low and how the proposed regulation would overcome the existing bottlenecks. Thirdly, the Board considered that the comparison between the two options on hosting e-CODEX should be more balanced and less partial. The Commission has updated the present report to respond to these main considerations and to address a number of other comments made by the Board.

11. ANNEX 2: STAKEHOLDERS CONSULTATION

1. Consultations carried out by the e-CODEX consortium and within the Council Working Party on e-Justice

All major legal professions have been consulted by the e-CODEX consortium on the possibilities to hand over the management of e-CODEX. The Italian and Dutch Presidencies specifically collected the feedback of the CCBE, the Notaries of Europe (CNUE), the CEHJ, and the European Law Institute (ELI). Moreover, the e-CODEX consortium evaluated the work by sending out questionnaires to stakeholders including piloting courts, consumer organisations and legal professionals.

The legal professions have considered e-CODEX as a possible way forward for their activities. At a meeting[70] of the European Network of Councils of the Judiciary (ENCJ) the president of ENCJ concluded that e-CODEX has to be considered a top priority by the national Councils as well as by the decision makers in Brussels.

The e-CODEX consortium maintained a regular dialogue with all important stakeholders and all Member States via the Expert Group on e-CODEX related issues of the Council Working Party on e-Justice, which meets 4-6 times per year.

Moreover, the Council Working Party on e-Justice has held two meetings within the so-called cooperation mechanism in 2016, 2017 and 2018 where stakeholders have been invited to discuss topics related to e-Justice. e-CODEX was on the agenda of all these meetings.

2. Feedback received on the inception impact assessment

The inception impact assessment was published on 17 July 2018. 11 respondents submitted comments, all of which expressed support for maintaining e-CODEX, i.e. options 2-4. Four respondents expressed views on the entity most appropriate to manage e-CODEX, and all of those preferred to give the responsibility to an Agency. Respondent stakeholders included legal practitioners, Ministries of Justice and an international organisation.

Summary of responses

Deutscher EDV-Gerichtstag e.V.

Deutscher EDV-Gerichtstag e.V. welcomes the Commission's initiative and supports the proposal to ensure a long-term use of the results of the e-CODEX project.

As the number of cross-border cases is increasing, there is a need for digital solutions for the judiciary. e-CODEX could fill this purpose, in order to allow for interoperable procedures between the Member States. There is a need to extend e-CODEX to all Member States.

Council of Bars and Law Societies of Europe (CCBE)

[70] ENCJ Digital Justice Seminar 31 March 2017, Amsterdam - https://www.encj.eu/images/stories/pdf/workinggroups/encj_digital_justice_report_ppt.pdf

The CCBE supports the initiative to seek for a sustainable solution of the operational management and further development of e-CODEX.

The CCBE stresses that it would like to see the e-CODEX model being used in all e-Justice projects based on interconnection of judicial systems, in order to avoid different models being developed.

Within this context, the CCBE wishes to stress the importance of securing an "electronic equality of arms and access to justice".

Therefore, regarding the future governance and coordination of e-CODEX and e-CODEX-related activities, the CCBE calls upon the EU institutions to ensure that all judicial actors, including lawyers, remain closely involved.

European Chamber of Bailiffs (CEHJ)

The CEHJ welcomes this initiative as e-CODEX is of utmost importance to an efficient justice system. The CEHJ has aligned its e-Justice strategy with e-CODEX and develops its project around the e-CODEX solution, because the CEHJ believes that e-CODEX is the only solution to create a strong European justice.

A solution for long-term management and a legal instrument confirming e-CODEX as the reference solution in the field of cross-border e-Justice is urgently needed. Without this, Europe runs the risk of missing the opportunity of a common efficient tool to strengthen cross-border judicial cooperation and an easy access to justice for citizens, business and their representatives. **The most suitable and coherent solution would be eu-LISA** and a governance model reflecting the characteristics of the e-CODEX solution and the strong involvement of the legal professions.

International Association of Legal Protection Insurance – RIAD

RIAD, the International Association of Legal Protection Insurance, supports the introduction of technology which assures that national judicial systems can work together effectively and safely. Responsibility for operational management must be centralised and **the most secure option seems to be to give responsibility to an EU agency**.

The introduction of binding rules at EU level to govern e-CODEX can benefit from past experience in the participating Member States:

• to cooperate more efficiently and securely in cross-border criminal matters;

• to pursue cross-border civil claims more effectively, e.g. small claims or order for payments procedures;

• to avoid the parallel implementation of divergent technologies in the different Member States.

Bundesministerium für Justiz (Österreich)

The Ministry of Justice supports the Commission's initiative.

It is urgent to find a sustainable solution for e-CODEX. **The best option is to hand over the maintenance of the software components to eu-LISA.** This should be done in 2018 already.

UIHJ International Union of Judicial Officers

The International Union of Judicial Officers welcomes the initiative. The possibilities created within e-CODEX in our opinion are of utmost importance to strengthen cross border judicial cooperation. A stable platform as it is developed under e-CODEX will have a positive effect in the creation of a European Judicial Area, including the field of civil enforcement.

European Law Institute

The e-CODEX system offers practical benefits and has substantial potential to impact cross-border judicial cooperation, not to mention the lives of ordinary individuals and enterprises. It addresses important aspects of several European legal instruments. The European Law Institute agrees that a stable synergetic platform is the best way to guarantee continuity and to realise the system's untapped potential. It is keen to be involved in finding the best solution going forward.

Hague Conference on Private International Law

The Hague Conference on Private International Law welcomes the initiative, as it is of paramount importance that e-CODEX be maintained.

The Hague Conference has developed its iSupport software to be used in conjunction with e-CODEX, as it is a secure, open-source tool. Portugal and the State of California have used iSupport and e-CODEX in a production capacity since 2016. This is proof not only of the reusability of e-CODEX but also of its ability to be used outside of the European Union, which creates an even bigger imperative for the constant smooth working of the e-CODEX solutions. In this respect, it is crucial that there be a smooth transition to long-term management in order to provide, in particular, rapid support to a growing number of users.

European Network of Councils for the Judiciary

We see that the proposal is assessed as being in full compliance with article 47 of the Charter of Fundamental Rights. The possibilities created by the e-CODEX electronic system would have a positive impact on the ability to exercise the right to an effective remedy, and are in conformity with Article 47 of the Charter of Fundamental Rights ´Right to an effective remedy and to a fair trial´ since electronic communication and document transmission enhances and reduces the time of the court proceedings.

The European Network of Councils for the Judiciary (ENCJ) would like to point out that Article 47 also guarantees the right to an impartial and independent tribunal. In relation to the future governance and coordination of e-CODEX and e-CODEX-related activities, we believe that **the independence of the judiciary needs to be guaranteed as well**. The ENCJ offers its co-operation to assess how this could be best organised.

Judicial Officer (Belgium)

This is a very important initiative. I am in favour of keeping e-CODEX at the European level and thus not to decentralise it.

It is indeed necessary that e-CODEX is maintained at European level in order to provide for a uniform way to transmit documents. e-CODEX could also form the basis of a recast of the EPO Regulation and the Small Claims Regulation by allowing that the whole procedure is managed at EU level rather than locally in each Member State.

Ministry of Justice of North Rhine-Westphalia, Germany

The initiative is expressly supported for the Ministry of Justice of the State of North Rhine-Westphalia (DE).

e-CODEX has developed, under the coordination of the local ministry, a technological architecture that can contribute significantly to the effective and secure communication between Member States' judicial authorities.

Given the increasing globalisation, Europe cannot afford the courts and public prosecutions of the Member States to exchange data and information among themselves and with the citizens on a slow and / or uncertain path.

The e-CODEX architecture developed here offers a technical solution for a wide range of needs. The high quality and efficiency of e-CODEX is already evident in the existing applications. Legal aid procedures (usually cross border) allow courts and public prosecutors to quickly and securely intervene with the authorities of the neighbouring country in order to ensure a targeted and efficient prosecution. If, in the future, evidence can still be exchanged via the technology (e-Evidence), the degree of efficiency is significantly increased again.

In civil cases, e-CODEX makes it easier for citizens to make claims in other European countries, whether through the EPO or small claims procedures.

In the area of the business registers, e-CODEX was used to establish a network of all Member States' registers (BRIS).

There is an urgent need to provide e-CODEX with a regulation as a relevant technology binding for transnational solutions and to **ensure the sustainability and further development of a competent agency (eu-LISA)**. On the other hand, there are isolated tendencies in the Member States to recognise parallel structures since e-CODEX is (still) not available. The great risk here is that the different techniques will not be compatible with each other in the future. This would not only prevent the progress of networking in the area of law enforcement and civil proceedings, but would even counteract them. An increasing inefficiency of European judicial cooperation would be the result.

12. ANNEX 3: WHO IS AFFECTED BY THE INITIATIVE AND HOW?

The foreseen options included in this initiative would affect the following stakeholders:

Citizens

Citizens will be affected by the implementation of e-CODEX to specific judicial procedures. The permanent management of the system will ensure improved access to justice to these procedures, once they are digitalised. While the current possibilities for submission of claims online using e-CODEX is limited to a few Member States, in the future it could be extended to cover most of or all Member States, if admissible in accordance with the procedural rules of the Member States. Using e-CODEX for the submission of small claims in accordance with the European Small Claims Procedure (Regulation (EC) No 861/2007) can reduce the barriers for citizens to take action e.g. as consumers against a trader.

National courts and other judicial authorities

e-CODEX will be used to facilitate judicial cooperation between national authorities and courts. e-CODEX can for instance be used to transmit European Investigation Order from a prosecutor in one EU Member State to one in another Member State, with the purpose of obtaining electronic evidence. Also in the civil field the taking of evidence across borders can be easier with e-CODEX, as recently agreed between the co-legislators.

Legal professionals

Lawyers will be able to use the European e-Justice Portal[71] to electronically sign and send applications for European payment orders[72] and small claims[73] to competent courts in the Member States by means of e-CODEX subject to this being admissible in accordance with the procedural rules of the Member States (see further section 2.1.1). Documents which need to be served on citizens in another Member States can be transmitted from one bailiff to another via e-CODEX.

I. Overview of Benefits (total for all provisions) – Preferred Option		
Description	***Amount***	***Comments***
Indirect benefits		
Cost savings as a result of the use of digital communication (e.g. e-CODEX) for the European Small Claims procedure or the European	8-21 EUR, 3-9 days per case Overall, the length of EPO proceedings would be reduced yearly between 35.301 and 127.836 days.	The savings are indicated in terms of costs of postage and shortening of the procedure thanks to the use of digital communication.

[71] https://e-justice.europa.eu/home.do

[72] In accordance with Regulation (EC) No 1896/2006 of the European Parliament and of the Council of 12 December 2006 creating a European order for payment procedure (http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32006R1896).

[73] In accordance with Regulation (EC) No 861/2007 of the European Parliament and of the Council of 11 July 2007 establishing a European Small Claims Procedure (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02007R0861-20170714).

Order for Payment procedure	The total savings on postage would amount to between € 94.136 and €298.284.	These benefits would accrue both to businesses and citizens/consumers as parties to small claims proceedings.
Better enforcement of traffic fines	8 million EUR per year (France)	The benefits consist of increased enforcement of fines for cross-border traffic offences. These benefits would accrue to the national administration / judiciary
More efficient court proceedings	5-10 minutes per case (Germany)	The benefits correspond to estimated time savings due to the use of e-CODEX in German courts

II. Overview of Costs (total for all provisions) – Preferred Option							
		Citizens/Consumers		Businesses		Administrations	
		One-off	Recurrent	One-off	Recurrent	One-off	Recurrent
Handover of e-CODEX to eu-LISA	Direct costs	0	0	0	0	-	Approx. 1.9 million (EU)
	Indirect costs	0	0	0	0		
Set-up of e-CODEX access point at national level	Direct costs	0	0	0	0	80-100 person-days	
	Indirect costs	0	0	0	0		
…							

13. ANNEX 4: THE E-CODEX SOLUTION

The goal of e-CODEX (**e**-Justice **C**ommunication via **O**nline **D**ata **EX**change) has been to improve the cross-border access of practitioners, citizens and businesses to legal means in Europe as well as to improve the interoperability between legal authorities within the EU.

Due to high mobility and European integration, procedures containing cross-border effects are increasing. These procedures require cooperation between different national judicial systems. With the use of ICT (Information and Communication Technologies) judicial procedures can be more transparent, efficient and economic. At the same time, ICT facilitates access to justice for citizens, companies, administrations and legal practitioners. This means both smoother access to information and the ability to process cross-border cases efficiently.

e-CODEX has designed a fully technically interoperable European e-Justice system. The solution respects both the principle of independence of the judiciary and of subsidiarity. The e-Services and infrastructure established in the Member States cover specific requirements of national legal systems. These national solutions are considerable investments and cannot be simply replaced by new centralised approaches. Consequently, e-CODEX has built a pan-European interoperability layer, consisting of XML Schemas to support the cross-border legal procedures, the necessary communication building blocks - DOMIBUS Gateway and DOMIBUS connector and of the security functionalities that allows the interconnection of the national solutions without changing them. The focus of e-CODEX has been on developing common approaches and standards.

The e-CODEX project has been implemented as part of the ICT Policy Support Programme (ICT PSP) as part of the Competitive and Innovation framework Programme (CIP) of the EU (ICT PSP CIP).

The e-CODEX "big picture"

In line with the general decentralised approach of the European e-Justice Portal, the technical architecture chosen in e-CODEX is a decentralised four corner model realised by implementing the OASIS ebMS3.0 / AS4[74] standard. In other words:

- Every participant hosts its own e-CODEX technical entry point; no central component is involved in the communication.

- The connection to the national backend systems is channelled by a so-called gateway. An e-CODEX message flow would be: backend application A sends to gateway A, sends to gateway B, sends to backend application B.

- Some functionalities necessary for the message exchange within the Justice domain are not part of the ebMS3.0 / AS4 standard. These were realised in a software component called Connector, which also builds the bridge to the backend applications.

The picture below presents a high-level view of the e-CODEX architecture:

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74 To enable the use of products of different vendors as well as open source products, ebMS 3.0 / AS4 were chosen as technical standards for communication between gateways. Link to OASIS standard: http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/profiles/AS4-profile/v1.0/AS4-profile-v1.0.html

Figure 1 e-CODEX Overview

The e-CODEX project has been designed along the lines of several technical work packages and pilots, ensuring both the creation of the needed Software building blocks and its validation in real-life cases. The pilots demonstrate that the functionalities developed enabled service interoperability across the Member States. The initial set of pilots was enlarged both in extensions of the project itself and in the framework of other projects. The e-CODEX pilots were designed to be operational using the functionalities developed by different technical work packages of the project:

- Identity and Signature: Developed the signature verification, and e-Evidences creation
- Exchange of Documents: Developed DOMIBUS Gateway, DOMIBUS Connector and Central testing platform
- Document Standards: Developed the XML Schemas for the pilots

The table below maps the functionalities developed their objectives and expected output. Each pilot has run with the core building blocks listed below.

	Topic	Objective	Expected output

Authentication	Identity: Signature and Trust	Enable secure electronic communication through the use of federated electronic identity and signature verification in cross-border e-Justice applications	The output is to establish a model for (1) the use of a European eIdentity framework in data exchange between e-Justice applications, (2) Discovery of Message recipients, (3) Signature verification and federation.
Transport	Transportation of documents and data	Summarise and utilise already existing European standards in order to route documents and data throughout the processes integrating the different constituents	The output is a set of interface descriptions (standards, concepts) as well as conception and a base implementation of an interoperable exchange mechanism for the pilot implementation.
Alignment	Business process modelling	Mutual understanding of the execution of legal procedures by means of actors, responsibilities and activities	The output is a multi-level description of the business process in - Actors - Roles - Business transactions - Business documents
Content	Document Standards	Handling of metadata-related documents	The output is a set of standards for mapping and interpreting document content and structured data (metadata) as a potential basis for implementing the pilot candidates.
Architecture	Architecture	Enable the integration of building blocks	The output is to set up an overarching governance structure, giving guidance on how to integrate these building blocks and best practices.

Table 1 Core building block description

The “big picture” below describes the process flow applicable to all use cases.

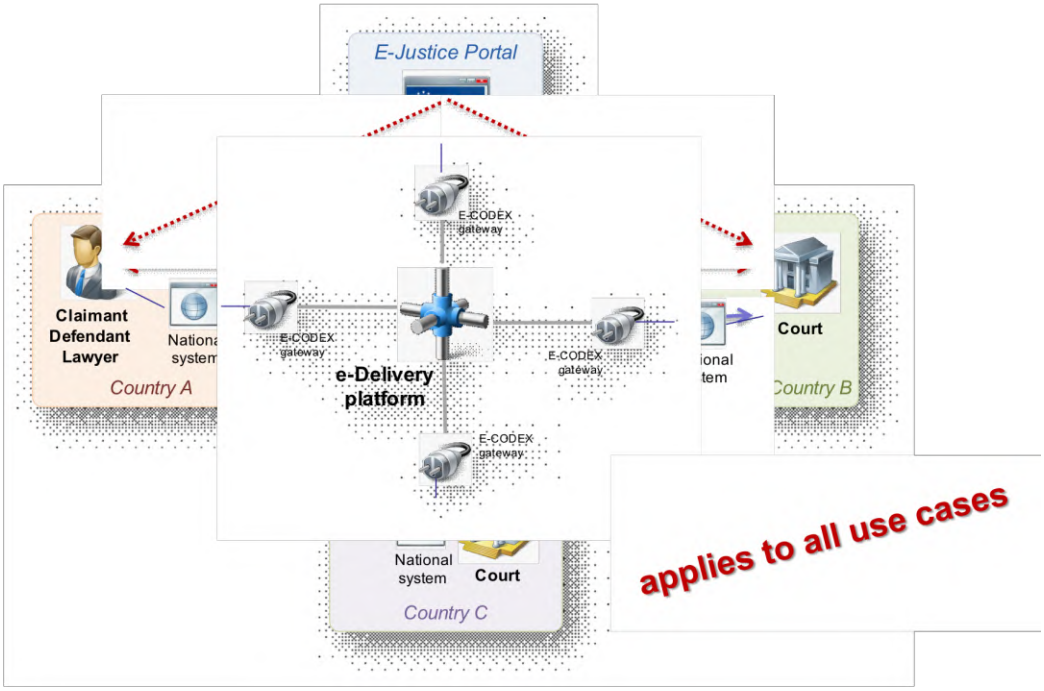


Figure 2 e-CODEX “big picture”

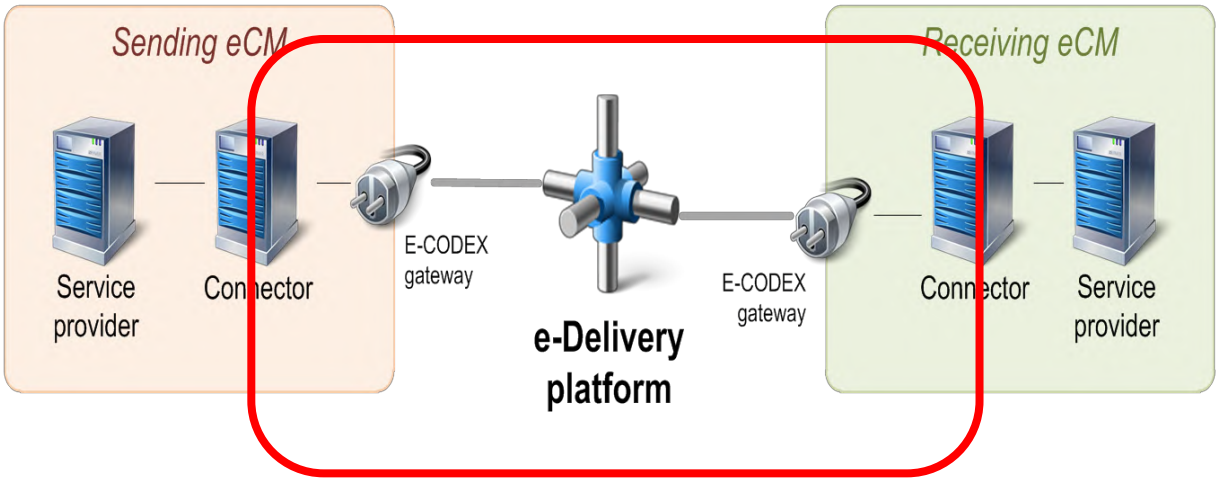
Technical Building Blocks to be sustained and supported:

Name	Description	Responsible (now and in the future)

DOMIBUS Gateway	The DOMIBUS Gateway is a piece of software that is responsible for the messaging based on the ebMS3.0 standard. • It transforms the National Message Format injected from the National Connector to the standard ebMS message format. • It signs and encrypts the communication between the different Gateways. • It implements Reliability and Quality of Service configurable behaviour. The DOMIBUS Gateway is currently maintained by CEF. As of 2021, its maintenance will likely be ensured under the Digital Europe programme. The full set of technical and architectural documentation can be downloaded from the CEF wiki at https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/Domibus	CEF
DOMIBUS Connector Framework	The DOMIBUS Connector Framework is the "glue" between the national backend system and the DOMIBUS Gateway. It basically implements the workflows for sending messages from the national backend system to the Gateway and the other partner Gateway in Europe (outgoing workflow) and one for receiving messages from the Gateway and forwarding them to the national backend system (incoming workflow). The DOMIBUS Connector Framework is currently maintained by the Me-CODEX Consortium.	Currently Me-CODEX, to be transferred in the future
e-CODEX Web Site	The e-CODEX Website maintains actual information on e-CODEX, the available building blocks, the supported pilots and all the links to JIRA, SW repositories and so on.	Currently Me-CODEX, to be transferred in the future

Standalone Connector	The Standalone Connector is a full implementation of the connector framework based on the file system, removing the need for national specific implementations. If a message is received it is just stored as files in a folder and there is no forwarding to a national application or eDelivery System. The same holds for sending a message, where the message content (PDF file, XML file and any attachments) is stored as files in a folder, from where it is automatically picked up and sent to the Gateway automatically. The standalone connector enables a Member State without any national electronic application or eDelivery system to participate in e-CODEX in a basic way.	Currently Me-CODEX, to be transferred in the future
Security Library	The Security Library is part of the DOMIBUS Connector. It analyses electronic signatures and generates an assessment thereof in the form of the Trust OK (or NOK) Token.	Currently Me-CODEX, to be transferred in the future
Evidence Builder	The Evidence Builder is part of the DOMIBUS Connector. It generates the ETSI REM Evidences (proof of delivery) for the electronic messages exchanged through e-CODEX at a number of delivery points from the sender to the recipient.	Currently Me-CODEX, to be transferred in the future
Administrative Interface	The Administrative interface for the DOMIBUS Gateway and DOMIBUS Connector provides a visual tool that enables a system administrator to: • Check the status of the Gateway and of the Connector (working or not working) • Check the pending messages (i.e., messages where no AS4 receipt of delivery has been received from the other side) • Retrieve statistics on sent/received messages and evidences, for both the Gateway and the Connector	Currently Me-CODEX, to be transferred in the future
Production environment	A real-use version of the (national) back end system, DOMIBUS Connector and Gateway	Member States

Test environment	A test version of the (national) back end system, DOMIBUS Connector and Gateway	Member States, to be transferred in the future
Development environment	A development version of the (national) back end system, DOMIBUS Connector and Gateway	Member States, to be transferred in the future
Documentation and supporting documents (manuals, specifications and test plans)	Documentation for DOMIBUS Connector and Gateway	Currently Me-CODEX, to be transferred in the future
PModes	The processing modes for the test and production systems, necessary to allow the DOMIBUS gateways to communicate with one another.	Currently Me-CODEX, to be transferred in the future
Truststores	The trust stores containing the certificates of the production and test systems, necessary to establish the trust (closed circle of communication) among the DOMIBUS gateways.	Currently Me-CODEX, to be transferred in the future
Central Testing Platform	The Central Testing Platform (CTP), a tool to support participants in e-CODEX obtain a functional system faster. The CTP provides a full e-CODEX test environment for sending and receiving test messages for all existing e-CODEX pilots.	Currently Me-CODEX, to be transferred in the future
XML structures and core legal concepts	The XML schemas for the underlying legal procedures, allowing documents produced by a system in one Member State to be understood by a system in a different Member State. The schemas form a common, shared data structure, a European standard for the exchange of forms.	Currently Me-CODEX, to be transferred in the future



e-CODEX costs are mainly driven by the personnel needed for the necessary activities. There are three main streams of activities required in the management of e-CODEX: the management of the e-CODEX community, the maintenance of the e-CODEX software, standards and methodology, and business and technical support for the use of e-CODEX.

Since some of these activities are policy-related, their transfer to an EU agency is not envisaged. Those that will remain in the joint competence of the European Commission and the Member State stakeholders are indicated as "non-transferable" below. They would not be transferred to an agency even in the case of policy option 3. For the European Commission, these tasks should be carried out with the resources currently devoted to e-CODEX implementation.

Stream 1. Management of the e-CODEX community

- Overall coordination of policy activities relating to e-CODEX including preparation of the necessary implementing acts (non-transferrable)
- Communication about the progress of the project, milestones, monitoring of uptake of e-CODEX
- Identification of business needs (non-transferrable)
- Coordination of the countries connected through e-CODEX
- Establishing and continuous development of a European e-CODEX community of legal practitioners (non-transferrable)
- Contact with e-CODEX-like communities in and outside Europe (non-transferrable)
- Collection of user feedback and change requests in a systematic way and translation thereof into technical specifications
- Active development of e-CODEX support in the new areas of application at a business level (non-transferrable)

Stream 2. Management of the e-CODEX software, standards and methodology

- Maintenance of the IT infrastructure for the development and distribution of e-CODEX software, standards and methodology
- Maintenance of the e-CODEX web site, mailing lists and technical sections (software releases, manuals, collaborative platforms)
- Maintenance, coordination and distribution of PModes (configuration of e-CODEX)
- Maintenance, bug fixing and continuous evolution of e-CODEX software modules
- Maintenance of Central Testing Platform
- Maintenance of e-CODEX software repositories, which are storing the code of the software modules
- Creation of business process models in new areas where the use of e-CODEX is introduced and maintenance of existing ones
- Provision of expert assistance for ensuring semantic interoperability and process modelling. This activity refers to helping stakeholder communities, in workshops or similar settings, articulate workflows, semantic differences and rules for interoperability, and later ensure modelling thereof
- Maintenance of data definition repositories/vocabularies, data models and XSDs and creation of new ones in new areas where the use of e-CODEX is introduced. This is a essential part of the electronic message exchange for the specific supported cross-border legal procedures.
- Support and coordination of testing for Member States using e-CODEX

Stream 3. Business and technical support for the use of e-CODEX

This stream refers to helping connect further Member States or organisations to the e-CODEX network, to the introduction of e-CODEX for use in additional legal procedures and to modifications of how e-CODEX is used in already supported cross-border procedures:

- Assistance in digital implementation of legislation and procedures adopted by the European institutions (non-transferrable)
- Digital awareness consultancy for legislative experts drafting European legislation (non-transferrable)
- Legal monitoring of horizontal legislation like eIDAS, Data Protection and of changes to legal procedures for which e-CODEX is used (non-transferrable)
- Active monitoring and participation in the work processes set up by the standardisation organisations relevant for e-CODEX. For the development and

maintenance of e-CODEX it is essential to monitor and implement the further developments in the used standards, for an example the changes in ebMS standard or the evolution of certificate technologies.

- Limited assistance to projects using e-CODEX which are not led by the European Commission. This refers mainly to the maintenance and bug fixing of the e-CODEX building blocks, like DOMIBUS Gateway, DOMIBUS connector or XML Schemas and process modelling

A *Product management team* ensures:

- governance

- the **specific knowledge** and expertise required to host and manage the **decentralised** architecture of e-CODEX. The required knowledge is in the area of the used standards (ebMS, ETSI REM, certificate handling) and in the usage of the developed building blocks (DOMIBUS Gateway, DOMIBUS Connector, CTP). Finally, knowledge in modelling XML vocabulary for the message exchange is essential for the support of the cross border legal procedures.

14. ANNEX 5: COST OF INSTALLATION OF E-CODEX AT MEMBER STATE LEVEL

Introduction

The project e-CODEX - a large-scale e-Justice pilot project co-funded by the EU Commission - has developed cross-border services for European citizens, companies and legal professionals to enable access to justice systems across Europe. Besides that, the services are also used to improve the cross-border collaboration between the courts and agencies through interoperability between the existing national ICT solutions.

Technical Aspects

In line with the general decentralised approach of the European e-Justice portal, the technical architecture chosen in e-CODEX is a decentralised four corner model realised by implementing the ebms3 / AS4[75] standard. In other words:

- Every participant hosts its own e-CODEX technical entry point; no central component is involved in the communication.
- The connection to the national backend systems is channelled by a so-called gateway. An e-CODEX message flow would be: backend application A sends to gateway A, sends to gateway B, sends to backend application B.
- Some functionalities necessary for the message exchange within the Justice domain are not part of the ebMS3 / AS4 standard. These were realised in a software component called Connector, which also builds the bridge to the backend applications.

Thus, the e-CODEX cross-border infrastructure is consisting of

(i) an e-CODEX Gateway,

[75] To enable the use of products of different vendors as well as open source products, ebms3 / AS4 were chosen as technical standards for communication between gateways. Link to OASIS standard: http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/profiles/AS4-profile/v1.0/AS4-profile-v1.0.html

(ii) an e-CODEX National Connector,

(iii) a National System (service provider)

eDelivery is the basic function of the **Gateway**. The e-CODEX Gateway establishes a secure and reliable as well standardized connection with any other Gateway on the Member State's side.

The **National Connector** handles the semantic mappings and enables the national systems to communicate with the e-CODEX Gateway. It is being customized by each participating country to fit its specific needs. Usually it is linked to a **National System** which is, in turn, used by the courts, lawyers, parties, etc.[76]

High Level Cost Estimate

The following calculation is based on the first experiences of piloting countries in e-CODEX. All of them are strongly involved in the e-CODEX project. Therefore it should be noticed that costs might be differ for other countries, especially if they were not involved in the project and/or have no or less experiences with the standards used.

In general, the costs for deploying and operating an access point based on the DOMIBUS Gateway and Connector compose of (personnel) costs for:

- Installation the DOMIBUS Gateway/Connector
- Integration of the national system, establishing the semantic mapping as well as creation of Trust OK Token via the connector
- Testing
    - Connectivity Testing
        - Gateway2Gateway
        - Connector2Connector
    - End2End Testing

Since the personnel costs most likely will differ from country to country, the estimates are given on basis of person days (PD).

Regarding the setup of a DOMIBUS Gate and Connector, the efforts (carried out by an experienced team) in person days is estimated as follows:

What to do	effort estimated	comment
Preconditions for the server used: OS: Unix based or Windows AS: Tomcat, WebSphere (with adaptions), BEA (with adaptions) DB: Oracle, MySQL (tested and scripted)		• No effort for setup of the server included here. It is assumed that the server infrastructure is available. • No costs included for the certificates used; • No efforts for tests with another partner included here
Download "Domibus eCodex Gateway" from https://secure.e-codex.eu/nexus/content/repositories/releases/eu/domibus/domibus-distribution/2.0-FINAL/ You can choose there between different packages depending on your server infrastructure	0,5 PD	Effort only 1 time foreseen, not per instance

[76] The gateway and connector developed in e-CODEX got the name DOMIBUS (Domain Interoperability BUS).

Installing DOMIBUS and adapt configuration	1 PD	Effort per instance, 1 instance is e.g. a test instance of DOMIBUS
Create and install database environment for Domibus using the sql scripts	2 PD	Effort per instance, 1 instance is e.g. a test instance of DOMIBUS
Get certificates for generating ASIC-S secure container and SSL-connection	2 PD	Effort per instance, 1 instance is e.g. a test instance of DOMIBUS
Trigger DE (respectively the organisation handling the pmodes) for generating new pmodes with new target URL	0,5 PD	Effort per instance, 1 instance is e.g. a test instance of DOMIBUS
Download ECodexConnector Framework from https://secure.e-codex.eu/nexus/content/repositories/releases/eu/ecodex/connector/ECodexConnectorDistribution/2.0.3/	0,5 PD	Effort only 1 time foreseen, not per instance
implement NationalConnector integrating the ECodexConnector FW and overwrite interfaces for NationalBackend, SecurityToolkit and NationalContentMapping	10 -15 PD	Effort only 1 time foreseen, not per instance, effort might also depend on the national backend solution, especially for the mapping
Create and install database environment for the connector using the SQL scripts	2 PD	Effort per instance, 1 instance is e.g. a test instance of DOMIBUS
SUM	**18,5 - 23,5 PD**	Sum for 1 instance

On the operational level at least one additional national instance - besides the live system - for testing should also be set up. The costs for this are expected to be lower than for the first instance due to the gain in experience.

SUM setup of another instance	**7,5 PD**	Sum for another instance

Besides it might be valid to add additional 25 PDs for preparation and project management on the Member States side.

Efforts to be expected for testing activities – especially the Gateway2Gateway and Connector2Connector – can be only roughly estimated with **20 PDs** due the dependencies from to many factors. The availability of the e-CODEX Central Testing Platform has surely a positive impact on the efforts to be considered here.

Conclusion

As a rough estimation all the aforementioned cost factors adds up to 76 PDs in total.

The efforts needed for process analysis, data modeling and analysis of a new e-CODEX European schema for a new use case are not included.

15. ANNEX 6: YEARLY BENEFITS OF DIGITALISATION OF THE EUROPEAN PAYMENT ORDER PROCEDURE

	Number of applications						Length of proceedings						
Column1	Weighting Number of applications lower value	Number of applications lower value	Weighting number of applications (average 2012/2013 AT, PT)	Number of applications (average 2012/2013 AT, PT)	Weighting number of applications higher value	Number of applications higher value	Length of proceedings	Weighted length of proceedings lower value	Length of proceedings lower value	Weighted average length of proceedings	Average Length of proceedings	Weighted length of proceedings higher value	Length of proceedings higher value
BE	2,7%	319	2,5%	319	2,2%	319	1-2 weeks	0,5%	7	0,5%	10,5	0,6%	14
BG	0,9%	109	0,8%	109	0,8%	109	30 days	2,2%	30	1,6%	30	1,2%	30
CZ (2013)	3,0%	358	2,8%	358	2,5%	358	2 weeks t	1,0%	14	5,0%	97	7,3%	180
DE	35,1%	4130	31,8%	4130	29,1%	4130	2-3 weeks	1,0%	14	0,9%	17,5	0,8%	21
EE	0,1%	6	0,0%	6	0,0%	6	1 week to	0,5%	7	4,1%	78,5	6,1%	150
IE	1,6%	189	1,5%	189	1,3%	189	2 weeks t	1,0%	14	5,0%	97	7,3%	180
EL	1,4%	168	1,3%	168	1,2%	168	1-2 month	2,2%	30	2,3%	45	2,4%	60
ES	0,5%	63	0,5%	63	0,4%	63	8 months	17,3%	240	12,4%	240	9,7%	240
FR	2,8%	335	2,6%	335	2,4%	335	2 months	4,3%	60	3,1%	60	2,4%	60
CY (2013)	0,1%	11	0,1%	11	0,1%	11	2 weeks -	1,0%	14	4,2%	82	6,1%	150
LT	0,1%	9	0,1%	9	0,1%	9	30 days	2,2%	30	1,6%	30	1,2%	30
LU (2013)	1,9%	218	1,7%	218	1,5%	218	1-2 month	2,2%	30	2,3%	45	2,4%	60
HU (2013)	3,8%	442	3,4%	442	3,1%	442	0-3 month	1,9%	26,3	3,7%	70,6	4,7%	115,6
MT	0,0%	1	0,0%	1	0,0%	1	1 week	0,5%	7	0,4%	7	0,3%	7
NL	3,2%	372	2,9%	372	2,6%	372	5 months	10,8%	150	7,8%	150	6,1%	150
AT	18,0%	2119	25,0%	3243	30,7%	4367	1,5-4 mon	3,2%	45	4,3%	82,5	4,8%	120
PL	15,3%	1800	13,9%	1800	12,7%	1800	4.5 month	9,7%	135	7,0%	135	5,5%	135
PT	2,5%	296	3,0%	390,5	3,4%	485	5 months	10,8%	150	7,8%	150	6,1%	150
SI	0,1%	12	0,1%	12	0,1%	12	5 months	10,8%	150	7,8%	150	6,1%	150
SK	0,7%	86	0,7%	86	0,6%	86	1-9 month	2,2%	30	7,8%	150	10,9%	270
SE	0,8%	91	0,7%	91	0,6%	91	142 days	10,3%	142	7,4%	142	5,7%	142
FI	5,4%	633	4,9%	633	4,5%	633	2 months	4,3%	60	3,1%	60	2,4%	60
UK				208			no data	100,0%	**1.385**	100,0%	**1.930**	100,0%	**2.475**
HR				.			.						
IT				.			.						
LV				.			.						
RO				.			.						
sum	100,0%	**11.767**	100,0%	**12.986**	100,0%	**14.204**							
Average no. of applications		534,9		590,3		645,6			63,0		87,7		112,5 Average length of proceedings

	Number of applications lower value	Number of applications (average 2012/2013 AT, PT)	Number of applications higher value	
				baseline (total no. applications * average length of proceedings)
	740.946	817.672	894.399	short duration - days of proceeding
	1.032.064	1.138.936	1.245.809	medium duration - days of proceeding
	1.323.564	1.460.623	1.597.681	long duration - days of proceeding
Reduced days of proceedings total, p.a.	35.301	38.957	42.612	3 days time reduction
35 301 days - 127 836 days	105.903	116.870	127.836	9 days time reduction
				3 days time reduction
	705.645	778.716	851.787	short duration - 3 days less of proceeding
	996.763	1.099.980	1.203.197	medium duration - 3 days less of proceeding
	1.288.263	1.421.666	1.555.069	long duration - 3 days less of proceeding
				9 days time reduction
	635.043	700.803	766.563	short duration - 9 days less of proceeding
	926.161	1.022.067	1.117.973	medium duration - 9 days less of proceeding
	1.217.661	1.343.753	1.469.845	long duration - 9 days less of proceeding

	Number of applications lower value	Number of applications (average 2012/2013 AT, PT)	Number of applications higher value	
Total savings on postage p.a. EUR 94 136 - EUR 298 284	€ 94.136	€ 103.884	€ 113.632	8 Euro postage
	€ 170.622	€ 188.290	€ 205.958	14.5 EURO postage (average)
	€ 247.107	€ 272.696	€ 298.284	21 Euro postage
Average savings on postage p.a./MS EUR 4 279 - EUR 13 558	€ 4.279	€ 4.722	€ 5.165	8 Euro postage
	€ 7.756	€ 8.559	€ 9.362	14.5 EURO postage (average)
	€ 11.232	€ 12.395	€ 13.558	21 Euro postage

16. GLOSSARY

e-CODEX	"e-Justice Communication via Online Data Exchange"- a communication system for secure exchange of information developed for the judicial area
BRIS	Network of Member States' business registers
CCBE	Council of Bars and Law Societies of Europe
CEHJ	European Chamber of Bailiffs
EIO	European Investigation Order
EPO	European Order for Payment
iSupport system	IT system for the cross-border recovery of maintenance obligations under the EU 2009 Maintenance Regulation and the 2007 Hague Child Support Convention, which makes use of e-CODEX for communication
Me-CODEX	Maintenance of e-CODEX project – the project(s) with EU funding ensuring the maintenance of e-CODEX
MLA	Mutual Legal Assistance

Acronym	Explanation
API	Application programming interface
AS	Applicability Statement AS1[77], AS2[78], AS3[79] and AS4[80] are a family of protocols specifying how to transport data securely and reliably over the Internet.
DES	Data Encryption Standard
DGP	Delivery Gateway Protocol
DGJUST	Directorate General for Justice
DNIe	Documento Nacional de Identidade Electrónico (National ID card / Spain)
DPC	Data Protection and Confidentiality
Driver	Software allowing computer programs to interact with a hardware device
DSP	Delivery Service Provider
DSS	Digital signature Standard (NIST)
Domibus	ebMS3 Access Point based on the AS4 profile.
DSI	Digital Service Infrastructure

[77] AS1 specification, RFC 3335, http://www.ietf.org/rfc/rfc3335.txt

[78] AS2 specification, RFC 4130, http://www.ietf.org/rfc/rfc4130.txt

[79] AS3 specification, RFC 4823, http://tools.ietf.org/html/rfc4823

[80] AS4 conformance profile, http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/profiles/AS4-profile/v1.0/csprd03/AS4-profile-v1.0-csprd03.odt

DSL	Dynamic Service Location
ebBP	ebXML Business Process Specification Schema
ebCore	ebXML Core
ebMS	ebXML Messaging Service Specification
	Project to use XML to standardise the secure exchange of business data.
Eclipse	A platform for developing software applications. It can be downloaded at http://www.eclipse.org/
ECMA	European Computer Manufacturers Association
eDelivery	CEF building block to allow public administrations to exchange electronic data and documents with other public administrations, businesses and citizens, in an interoperable, secure, reliable and trusted way. eDelivery is based on the concept of a four corner model, where the end entities (corners one and four) exchange messages via Access Point intermediaries (corners two and three). eDelivery standardises the communication only between these Access Point intermediaries. Communication between Access Points and end entities may use any communication protocol.
E2EE	End-to-End Encryption
ebBP	ebXML Business Process, part of ebXML stack
ebMS	ebXML Messaging Services
ebXML	Electronic Business using eXtensible Markup Language, commonly known as e-business XML
e-CODEX	e-Justice Communication via Online Data Exchange
ED-GW	Electronic Delivery Gateway
eID	Electronic Identity
eIDM	Electronic Identity Management
EPO	European Payment Order
GW	Gateway
HW	Hardware
ICT	Information and Communications Technology
ID / eID	Identity Document / electronic Identity Document
IOP	Interoperability
ISSP	Information System Security Policy
JHA	Justice and Home Affairs Council
LSP	Large Scale Pilot
OCSP	Online Certificate Status Protocol, see “RFC 2560” http://www.ietf.org/rfc/rfc2560.txt
PEGS	Pan-European e-Government Services
PEPPOL	Pan-European Public Procurement Online (http://www.peppol.eu/)
PEPS	Pan-European Proxy Services (STORK)
P-Mode	Processing Mode
QC	Qualified Certificate
SHA	Secure Hash Algorithm (NIST)
SOAP	Simple Object Access Protocol
SP	Security Policy
SPOCS	Simple Procedures Online for Cross- Border Services (http://www.eu-spocs.eu/)
SSCD	Secure Signature Creation Device
SSL V3+	Secure Sockets Layer v3
SSO	Single Sign-On Profile
STORK	Secure idenTity acrOss boRders linked (https://www.eID-stork.eu/)
SW	Software
TAN	Transaction Authentication Number

Time Mark	Timestamp alternative defined in XAdES specification
Token	Physical device that an authorized user of computer services is given to ease authentication.
TSL	Trust-service Status List, published by ETSI as TS 102 231
TSP	Trusted Service Provider
TTP	Trusted Third Party
UC	Use Case
VIdP	Virtual IDP. A system component helping to abstract Pan-European eID interoperability. It either serves as a delegation component between the SP-MW or S-PEPS and the needed SPware (appropriate MW server Component) or enables SP-MW to communicate with other C-PEPS.
WP	Work Package
WP29	Article 29 Data Protection Working Party
WP4	Work Package 4 of the e-CODEX project, Identity (eID for natural and legal persons, roles, mandates and rights) and eSignatures
WSDL	Web Services Description Language
WS-I	Web Services Interoperability[81]
W3C	World Wide Web Consortium
XACML	eXtensible Access Control Markup Language http://saml.xml.org/xacml-oasis-standard
XAdES	XML Advanced Digital signatures, published by ETSI as TS 101 903

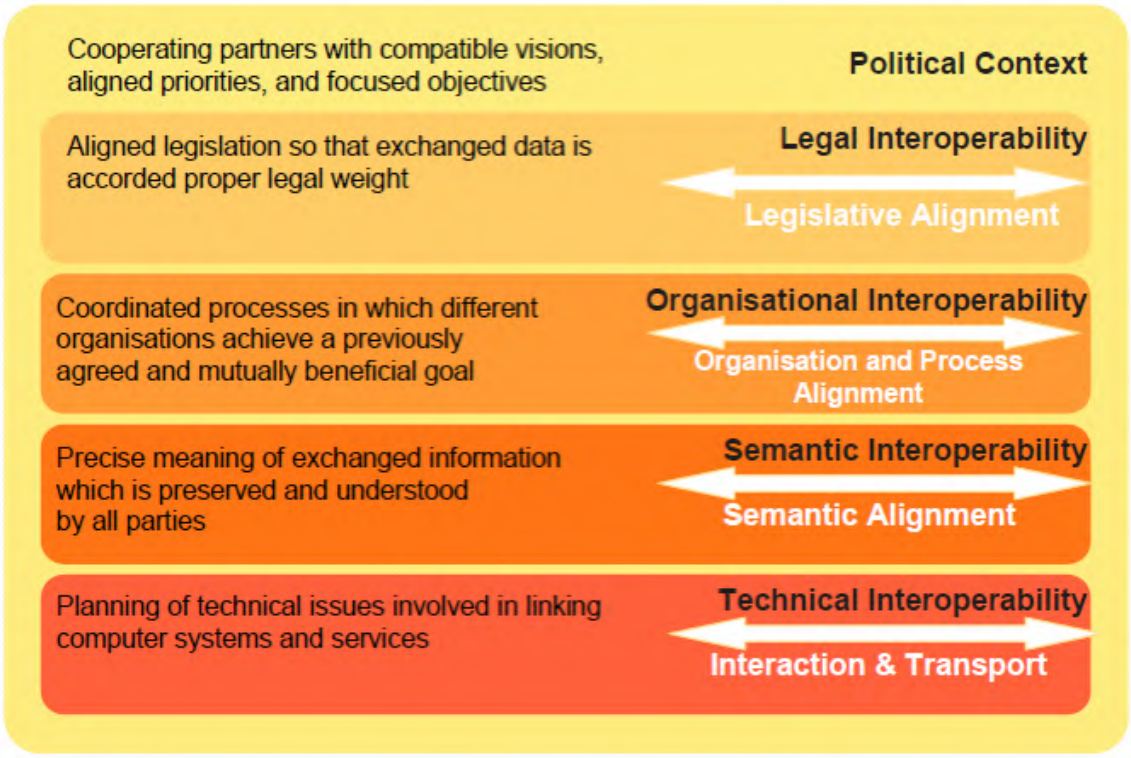
'Interoperability, within the context of European public service delivery, is the ability of disparate and diverse organisations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between the organisations, through the business processes they support, by means of the exchange of data between their respective ICT systems.'

Source: European Interoperability Framework (EIF) for European public services, page 2 Chapter 1.2.2

The European Interoperability Framework distinguishes four levels of interoperability.

Each deserves special attention when a new European public service is established. The practical implementation of the conceptual model for cross-border/cross-sector services requires each of these levels to be taken into account.

81 http://www.oasis-ws-i.org/


Cooperating partners with compatible visions, aligned priorities, and focused objectives
Political Context
Aligned legislation so that exchanged data is accorded proper legal weight
Legal Interoperability
Legislative Alignment
Coordinated processes in which different organisations achieve a previously agreed and mutually beneficial goal
Organisational Interoperability
Organisation and Process Alignment
Precise meaning of exchanged information which is preserved and understood by all parties
Semantic Interoperability
Semantic Alignment
Planning of technical issues involved in linking computer systems and services
Technical Interoperability
Interaction & Transport