D3.2 Final Report

Assessment of ICT impacts of the Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative

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Executive Summary

Based on the Treaty provisions, Regulation (EU) No 211/2011 on the citizens' initiative[1] (so-called ECI Regulation) set out the procedures and conditions required for a citizens' initiative. This Regulation entered into application on 01.04.2012.

Since the ECI Regulation entered into force on 01.04.2012, the Commission has handled 51 requests for registration from ECI organisers, among which:

- 3 proposed citizens' initiatives are currently collecting[2];
- 18 reached the end of the collection period[3]: among them 12 did not get enough support[4] while 3 have been submitted as successful to the Commission and received an answer[5] from the Commission[6];
- 10 were withdrawn[7] by organisers (among them 4 have only withdrawn in order to re-register);
- 20 requests for registration have been refused by the Commission[8].

Three years after the ECI Regulation started to apply, it is time to further analyse its implementation and any potential improvements needed on the current situation, and in particular with regard to the online collection process. For that purpose, KURT SALMON was mandated by DG DIGIT and Secretariat-General (SG), to perform this study, which is twofold:

- Analysis of the online collection process, as currently in place ("AS-IS");
- Production of a comparative analysis identifying the main advantages and disadvantages of existing citizens' initiative or e-petition solutions already used at European and national level and other existing market solutions.

The analysis of the online collection process currently in place in the context of the ECI is based on the inputs received from a limited sample of 26 stakeholders. This is due to limited experience gathered to date with regards to the tool. A similar limitation applies even more for the comparative analysis, as its results are based on the consultation of 11 stakeholders only. The results displayed in this study should thus be interpreted accordingly, i.e. based on a sample size, which may not always be representative.

The analysis finalised in May 2015 is based on the data collected between October 2014 and January 2015, and thus reflects the situation at that time, except where explicitly stated in the report.

[1] Regulation 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative, OJ L 65/1, 11.03.2011.
[2] http://ec.europa.eu/citizens-initiative/public/initiatives/ongoing
[3] http://ec.europa.eu/citizens-initiative/public/initiatives/finalised
[4] http://ec.europa.eu/citizens-initiative/public/initiatives/obsolete/conditions_not_fulfilled
[5] http://ec.europa.eu/citizens-initiative/public/initiatives/finalised/answered
[6] For the three other closed initiatives, no information is available on whether they have reached the required number of statements of support or not.
[7] http://ec.europa.eu/citizens-initiative/public/initiatives/obsolete/withdrawn_by_organiser
[8] http://ec.europa.eu/citizens-initiative/public/initiatives/non-registered

Analysis of the online collection process, as currently in place

In order to analyse the online collection process as currently in place for the ECI, KURT SALMON decomposed the main elements of this process (i.e. Register, Online collection software, hosting service, certification procedure, and support throughout the whole online collection process) and analysed them with the stakeholders concerned: SG, DG DIGIT.B.2, C.2 and C.3, MS authorities competent for certifying the Online Collection Systems, ECI organisers, Civil Society Organisations and IT experts having supported ECI organisers in the setting-up and running of their system.

The AS-IS (baseline) process is composed of two main scenarios:

- Scenario 1: The original architecture of the online collection systems, as defined in the ECI Regulation and related Commission Implementing Regulation No 1179/2011[9] (hosting to be found and borne by the organisers who can use the software developed by the Commission or any other software).
  This scenario when necessary is further articulated according to whether organisers use the software developed by the European Commission (1a) or private software (1b).
- Scenario 2: The temporary solution proposed by the Commission (hosting on the Commission's servers, using the software developed by the Commission). This solution, although not foreseen in the ECI Regulation, has been implemented under the current legislative framework with which it is thus compliant.
  The use of software other than the one developed by the European Commission is not possible under Scenario 2. Contrary to Scenario 1, Scenario 2 is thus not articulated around sub-scenarios.

Based on the outcomes of 15 interviews and 16 responses received to two online questionnaires[10], KURT SALMON was able to draw the following conclusions on the main components of the online collection process, as currently in place:

Component N°1 – the Register:

As stated in Article 4 (1) of the ECI Regulation, "information [set out in Annex II, in particular on the subject matter and objectives of the proposed citizens' initiative] shall be provided in one of the official languages of the Union, in an online register made available for that purpose by the Commission ('the Register')."

Overall, stakeholders are satisfied with the Register developed by the European Commission as it is considered as a great tool to enhance transparency to all actors concerned in the implementation of the ECI. It indeed provides general information on how to conduct an ECI, from the registration to the submission of the statements of support to the European Commission but also displays the core information related to each ECI (including their stage). In general, stakeholders would however be in favour of a greater integration between the Register and the ECI Online Collection Software.

[9] Commission Implementing Regulation (EU) No 1179/2011 laying down technical specifications for online collection systems pursuant to Regulation (EU) No 211/2011 of the European Parliament and of the Council on the citizens' initiative, OJ L 301/3, 18.11.2011.

[10] In total, 15 interviews were conducted by KURT SALMON with ECI organisers (6), Civil Society Organisations (3), the European Commission (1), IT experts (2), national authorities competent for certifying ECI online collection systems (2) and online collection software provider (1). Additionally, 11 responses were received to the questionnaire addressed to hosting providers and 5 responses were received to the questionnaire addressed to the ECI organisers that had not been interviewed but whose initiatives have been registered by the European Commission.

Component N°2 – the ECI Online Collection Software:

As stated in Article 6 (2) of the ECI Regulation, "by 1 January 2012, the Commission shall set up and thereafter shall maintain open-source software incorporating the relevant technical and security features necessary for compliance with the provisions of this Regulation regarding the online collection systems."

Overall, the main advantage of the ECI Online Collection Software is the fact that it is already set-up in compliance with the ECI regulatory requirements; in particular, the statements of support generated by the ECI Online Collection Software are aligned with the data requirements of each EU Member State as set out in Annex III to the ECI Regulation. Moreover the software is free of charge for ECI organisers. The fact that the ECI Online Collection Software is the only solution available in the market for the purpose of the ECI was also recognised as an advantage by respondents, as it allows ECI organisers to become familiar with a unique tool (making it easier for them to use it). In addition, if this solution did not exist, it would have been difficult for ECI organisers to conduct any ECI. Even though the ECI Online Collection Software has the merit to exist, the solution needs to be further improved to meet ECI organisers' needs, e.g. its default look and feel interface should be improved by the European Commission, the audio captcha system should be made available in all official EU languages to ensure access to all citizens, including visually impaired people.

The Commission continues its work to improve its software and thus many among the improvements requested by the organisers (concerning in particular the look and feel and the direct connection with social media) have already been implemented in the version 1.6 of the software[11] released in March 2015 (not used by the organisers interviewed).

Component N°3 – Hosting service:

ECI organisers have the choice to either find a suitable hosting provider (and bear the related costs of the hosting service to host their online collection system) or to use the temporary solution proposed by the Commission as a response to the initial difficulties encountered by organisers to find suitable host providers (hosting free of charge on the Commission's servers, using the software developed by the Commission).

The hosting service provided by the European Commission satisfies a wide community of ECI organisers. At the time of this report, the hosting service was used or intended to be used by almost all the organisers of registered initiatives (26 ECIs out of 31). While 19 managed to have their online collection system up and running and certified (19 certificates have been produced by the authority competent for certifying the online collection systems in Luxembourg), two were currently in the process of having their system certified at the time of the report and five withdrew their ECI before getting their system ready. Not only free of charge for ECI organisers, the service provided by the European Commission significantly reduces the administrative burden of the certification process for organisers and is ensured to meet the ECI regulatory requirements. Its main drawbacks are the compulsory use of the ECI Online Collection Software and the remaining need for certification.

Conversely, only four ECI organisers have set up and certified systems based on the hosting service provided by private vendors (two registered initiatives and two others for which registration was refused by the Commission and who have thus never used the systems they got certified). Out of these four, three have set up their online collection system at a time when the service of the European Commission was not yet operational.

[11] https://joinup.ec.europa.eu/asset/ocs/asset_release/ocs-16

Finally, 21 ECI organisers did not set-up any online collection system at all: 18 of them were in fact not registered by the Commission and three registered initiatives did not set up an online collection system at all (3)[12].

Based on the results of the vendor consultation, KURT SALMON detected a general lack of interest from private hosting providers: while 100 hosting providers representing 23 different Member States were contacted to participate in the consultation, only two initially answered. After having performed follow-up calls with each of them, KURT SALMON managed to get this rate increased to 11%.
Despite this increase, the response rate remains low, demonstrating a lack of interest from vendors on the subject and confirming the difficulties mentioned by ECI organisers to find a (suitable) hosting provider for their system.

Component N°4 – Certification procedure:

As stated in Article 6 (1) of the ECI Regulation "Where statements of support are collected online, the data obtained through the online collection system shall be stored in the territory of a Member State. The online collection system shall be certified […] in the Member State in which the data collected through the online collection system will be stored. The organisers may use one online collection system for the purpose of collecting statements of support in several or all Member States".

Whether for the national authorities competent for certifying online collection systems or for ECI organisers, the certification procedure generates a significant amount of paperwork and administrative burden. As a result the procedure quickly becomes very costly and time-consuming, in particular given the lack of expertise or IT skills from both parties. IT skills are indeed necessary for setting-up, operating and getting an online collection system certified in all cases. While the European Commission provides this expertise for free to ECI organisers hosting their system on the European Commission server, ECI organisers need external IT experts' support when they choose to host their system on private servers.

While certification was a well justified choice under the original scenario foreseen under the Regulation (Scenario 1), its necessity is questionable in the context of Scenario 2 not foreseen in the Regulation, but much more used in practice.

Component N°5 – Support:

Whether they decide to implement Scenario 1 or Scenario 2, ECI organisers may be assisted to install, operate and/or get their online collection system certified.

In addition to the assistance of the European Commission and/or IT experts, Civil Society Organisations also support ECI organisers in the preparation and during the lifecycle of their initiatives. However the requests for support received from Civil Society Organisations are not directly related to the online collection process. While some ECI organisers consulted them for getting specific inputs on the certification procedure, most rather need their support to acquire a better knowledge on the ECI overall and be more informed (general information but also legal advice) so as to 'pass' the registration process in particular.

To a lesser extent, support has also been provided by the Civil Society Organisations to help organisers translating their ECIs in additional official EU languages[13] and building strong networks.

[12] "EU Directive on Dairy Cow Welfare", "Central public online collection platform for the European Citizen Initiative", "Kündigung Personenfreizügigkeit Schweiz"

Based on the analysis of the main components of the online collection process and feedback from stakeholders on Scenario 1 and 2, KURT SALMON further assessed each ECI scenario based on two evaluation criteria: 'efficiency', and 'effectiveness'.

With regards to efficiency, Scenario 2 would be the least costly scenario to implement compared to Scenario 1, independently of the number of ECI online collection systems certified and hosted per year. The (direct) cost of hosting and getting 1 ECI online collection system certified under Scenario 2 would indeed amount in average to €129,784 against €161,259 under Scenario 1a (i.e. €31,475 cost difference between the two scenarios) and €191,259 under Scenario 1b (i.e. €61,475 cost difference between the two scenarios).

The implementation costs differences increase proportionally to the number of ECIs concerned. For example, to host and get 15 ECI online collections systems certified, the yearly costs would be €1,946,765 under Scenario 2 against €2,418,890 under Scenario 1a and €2,868,890 under Scenario 1b (i.e. €472,125 and €922,125 cost difference between the scenario 2 and scenarios 1a and 1b respectively).

With regards to effectiveness, even though results vary from the different stakeholder groups' perspectives, overall, Scenario 2 appears to be the favoured scenario with regards to (i) Improvement in the allocation of resources (availability of resources), (ii) Improvement in the allocation of resources (responsibility of stakeholders), (iii) Improvement in the allocation of resources (expertise of the resources), (iv) Cost savings, (v) Citizens' satisfaction.

The only criterion for which Scenario 1 is ahead of Scenario 2 is the (vi) Benefits from third-party compliance with legal rules, as Scenario 2 does not allow hosting and software providers to penetrate the ECI market, and only to a limited extent for IT experts.

Overall, based on the two evaluation criteria defined, Scenario 2 prevails over Scenario 1 both in terms of efficiency and effectiveness.

[13] Translation support is offered since spring 2015 by the European Economic and Social Committee to all organisers with regard to the title, the subject matter and the main objectives of the initiative.

Production of a comparative analysis among a predefined set of identified systems.

Based on the outcomes of 11 interviews with five online collection software providers having developed online collection software for the purpose of ePetition initiatives and six Member States having or planning to have online collection solutions in place in the context of national/local citizens' initiative or e-petition instruments, KURT SALMON was able to assess each system based on a set of 15 criteria:

- Criterion 1 – Cost for end-users.
- Criterion 2 – Technical solution in place for collecting statements of support.
- Criterion 3 – Type of data collected.
- Criterion 4 – Data validation process by public authorities.
- Criterion 5 – Liability of the organisers towards the data collected.
- Criterion 6 – Disclosure of and access to the data collected.
- Criterion 7 – Ability to integrate the solution with campaigning websites.
- Criterion 8 – Ability to integrate the solution with social media.
- Criterion 9 – Ability to integrate the solution with a national/local database of citizens.
- Criterion 10 – Possibility to combine both paper-based and online collection of signatures.
- Criterion 11 – Ability to sign an initiative using an advanced electronic signature/ identification.
- Criterion 12 – Accessibility.
- Criterion 13 – Multilingualism.
- Criterion 14 – Certification procedure.
- Criterion 15 – Hosting.

The solutions analysed in the comparative analysis are called 'comparative scenarios' throughout this report.

Based on the key findings from the assessment of the current situation and the outcomes from the comparative analysis, KURT SALMON was finally able to draw conclusions and recommendations to improve the online collection in the context of the ECI. The conclusions of the study also refer to the comparative scenarios that can be further explored and possibly re-used in order to implement the recommendations proposed.

The recommendations listed below are organised as they appear in the report and not articulated around the proposed technical scenario(s) to which they belong.

Recommendation N°1 – Integrate the ECI Online Collection Software and the Register:

While the ECI Online Collection Software and the Register are currently two independent and separate solutions, integration should be considered between the tools. While 'integration' is a broad term that includes all different types of connections between the two solutions, KURT SALMON has further analysed three types of connection in the course of this study. Depending whether the regulatory framework evolves or not, the three following levels of integration would indeed be possible and should be further investigated: (i) Integration of both tools into a single

solution; (ii) Integration through APIs[14]; and (iii) Option to redirect signatories from the Register directly to the signing pages of the ECI online collection systems. The first two options need changes in the current regulatory framework.

Recommendation N°2 – Continue to improve the ECI Online Collection Software:

The ECI Online Collection Software should continue to evolve in order to meet ECI organisers' needs: (i) should there be any alternative solution released, the European Commission should take their features into account as much as possible for a next release of the ECI Online Collection Software; (ii) the audio captcha should be made available in all official EU languages; (iii) the European Commission should continue working on an improved default look and feel interface of the software; (iv) the next version of the software should feature additional social media actions by default in the application.

Recommendation N°3 – Continue to encourage stakeholders' participation in the ECI process:

It is essential to foster the participation of European Commission officials, ECI organisers, IT experts and private vendors in the ECI process to ensure that solutions (technical or not) are developed based on a collaborative approach and contribute to the success of the ECI. For this purpose, KURT SALMON recommends to continue focusing the scope of the open-source community on Joinup to the IT aspects of the ECI implementation, in particular the ECI Online Collection Software (e.g. transparency on the improvements planned and the related schedule). In addition, for the non-technical aspects, a community of practice should be created by ECI organisers themselves, or Civil Society Organisations, to foster stakeholders' interactions.

Recommendation N°4 – A central platform should be made available to ECI organisers as a permanent solution:

Just like all the comparative scenarios available at national level allow the online collection of statements of support via a central platform provided by the public authority responsible for the initiative, a central platform should be made available to ECI organisers as a permanent solution.

Following the example of the Finnish citizens' initiative, Scenario 1 may remain an option for ECI organisers, so as to still allow private vendors to penetrate the ECI market and increase the chance to have an active open-source community. The efficiency of such solution remains however questionable given in particular the need to maintain the certification capacity of the Member States which would most likely be of a very limited use (this possibility was not used by organisers of Finnish citizens' initiatives, at the time of the report).

In this context, the need to maintain a certification procedure and a possibility of setting up private and decentralised online collection systems should be further assessed.

Indeed, should central platform be foreseen in the ECI Regulation as the only possible scenario, its overall cost could be probably optimised (unique IT tool for the register and the software, no need for the 28 MS competent authorities to be ready to certify systems, etc.)

[14] API stands for Application Programming Interface. In the context of the ECI, an integration through APIs would consist in a 'simple' automation between the Register and the ECI Online Collection Software allowing an automatic transfer of the XML files from the Register to the ECI Online Collection Software.

Recommendation N°5 – Review the online collection timeline:

In order to ensure that the online collection is in all cases available during the full 12 months collection period, the online collection timeline as defined in the Regulation should be reviewed by either (i) leaving ECI organisers choose the start of the data collection period; or (ii) considering that it starts when the request for registration of an initiative is validated and the related system certified.

Recommendation N°6 – Solutions to facilitate data entry and validation should be investigated:

Taking into account the heterogeneity on data requirements as well as on eGovernment maturity of European Member States, a one-size-fits-all approach for collecting statements of support may not be the most adequate.
In this regards, KURT SALMON identified a set of compatible options for identifying a person (when collecting statements of support) while facilitating data entry and data validation in the ECI Online Collection Software: (i) electronic Identification (eID); (ii) electronic Signature (eSignature); (iii) the European Commission Authentication System (ECAS). These options can be considered in the light of a revision of the data requirements: this recommendation would indeed require changes in the ECI Regulation, in particular Annex III. In this context, KURT SALMON suggests using the Core Person Vocabulary[15] to initiate these changes and obtain consensus among Member States, with regards to data requirements. It would also be important to reach an agreement on an application profile[16] for the ECI Online Collection Software.

These options may not only ensure harmonised data requirements for the ECI but also simplify the online collection process and lessen another burden faced by ECI organisers: their liability towards the data collected: (i) The use of eIdentification may lead EU Member States reconsidering the personal data they require from signatories and limit these to the data fields included already in the eIdentification card. (ii) In case data requirements are lowered and their processing reviewed, the liability of ECI organisers will reduce accordingly and the specifications on the system security (Commission Implementing Regulation N°1179/2011) may also be revised (lowered), facilitating the penetration of the ECI market by private providers.

In addition, solutions such as eIdentification may also greatly facilitate the verification of the signatories' statements of support by the competent national authorities.

Recommendation N°7 – Email addresses should be part of the data to be optionally provided when supporting an ECI:

An optional field should be included directly in the statement of support form to allow ECI organisers collecting signatories' email addresses in order to be able to keep signatories informed on the developments around the ECI. This would imply a change in the data protection rules of the ECI Regulation, allowing the collection of this data under strict conditions: up to the signatory to communicate this information, use of this data by the ECI organisers limited to the purpose of an ECI campaign, appropriate retention period and possibly authorisation to pass the data to researchers.

It should be noticed that the seven recommendations listed above are linked to the technical scenarios proposed by KURT SALMON to improve the implementation of the ECI.

[15] Detailed information on the Core Person Vocabulary available at https://joinup.ec.europa.eu/asset/core_person/description
[16] An Application Profile is a specification that re-uses terms from one or more base standards, adding more specificity by identifying mandatory, recommended and optional elements to be used for a particular application, as well as recommendations for controlled vocabularies to be used.

The technical scenarios proposed by KURT SALMON to improve the implementation of the ECI are called 'proposed technical scenarios' throughout this report.

The proposed technical scenarios have been defined (i) in case the current legal framework is not reviewed (i.e. what should remain/ be changed in the current baseline scenario) and (ii) in case the ECI Regulation and possibly ECI Commission implementing Regulation N°1179/2011 are modified.

The proposed technical scenarios are the following:

(i) In case the current regulatory framework is not reviewed, the European Commission should continue offering its hosting service for free to ECI organisers. Changes should however be performed on the software side to meet ECI organisers' needs [Recommendation N°2]. Moreover, stakeholders' participation should be encouraged in the ECI process: on the one hand, the scope of the open-source community on Joinup should continue being focused on the IT aspects of the ECI implementation, in particular the ECI Online Collection Software (e.g. transparency on the improvements planned and the related schedule). For the non-technical aspects, a community of practice should be created to foster stakeholders' interactions. [Recommendation N°3]. Furthermore, an option should allow signatories to be redirected from the Register directly to the signing pages of the ECI online collection systems, to rationalise the online collection process. [Recommendation N°1].

(ii) In case the current regulatory framework is reviewed, the changes requiring no specific review of the current regulatory framework should be implemented but also the hosting service offered by the European Commission should become a permanent offer, possibly still allowing in parallel hosting from private vendors [Recommendation N°4].

In case the current regulatory framework is reviewed, the following changes should also be performed on the ECI Regulation and related Commission Implementing Regulation N°1179/2011:

- The Register should be further integrated with the ECI Online Collection Software: it should be further investigated whether a full integration between the solutions or a simple integration of these through APIs is the most appropriate. [Recommendation N°1]
- The hosting service provided by the European Commission should be stipulated as a permanent option for ECI organisers to host their ECI online collection systems. [Recommendation N°4]
- The online collection process timeline should also be revised to ensure that the online collection period is not reduced due to certification hurdles[17]. [Recommendation N°5]
- Data requirements imposed by Member States should be reviewed. [Recommendation N°6].
- The online collection of email addresses should be allowed but their processing regulated. [Recommendation N°7].

[17] This change only applies if hosting by private vendors remains an option for ECI organisers, in parallel to the hosting service provided by the European Commission. In the latter case, the processes in place guarantee ECI organisers to have a 12-month data collection period (please refer to Figure 3).

Introduction

The Treaty on European Union[18] (TEU) reinforces citizenship of the Union and enhances further the democratic functioning of the Union by providing that every citizen is to have the right to participate in the democratic life of the Union by way of an ECI. As mentioned in its Article 11 (4), citizens may take the initiative of inviting the Commission to submit any appropriate proposal on matters where citizens consider that a legal act of the Union is required for the purpose of implementing the Treaties (so-called citizens' initiatives).

Based on the Treaty provisions, Regulation (EU) No 211/2011 on the citizens' initiative[19] (so-called ECI Regulation) set out the procedures and conditions required for a citizens' initiative. This Regulation entered into application on 01.04.2012.

As described in the ECI Regulation, prior to launch an ECI, organisers[20] shall form a citizens' committee of at least seven citizens of the Union, of the age to be entitled to vote in elections to the European Parliament and residents of at least seven different Member States. Once this committee is in place, organisers need to follow a five-step procedure.

- **Step 1: Registration by the European Commission** – Prior to initiating the collection of statements of support from signatories[21] for a proposed citizens' initiative, the organisers shall register it with the Commission providing the information set out in Annex II of the ECI Regulation[22], in particular the subject matter and objectives of the proposed ECI. The Commission has then two months to verify the compliance of the ECI with the ECI Regulation and register or refuse to register the ECI.

- **Step 2: Online Collection System - Certification by Member States** – Where statements of support are to be collected online, organisers must build an Online Collection System accessible through their website complying with the technical specifications set out in Commission Implementing Regulation No 1179/2011[23] ('Commission Implementing Regulation').

  An 'Online Collection System' can be defined as an information system, consisting of software, hardware, hosting environment, business processes and staff in order to accomplish the online collection of statements of support.

  This means, in particular, that ECI organisers need to choose online collection software incorporating the relevant technical and security features and to find a hosting provider ensuring that the data collected can be stored in the territory of a Member State (Art. 6 of the ECI Regulation).

  Organisers must then obtain the certification of their system by the competent authority in the Member State where the data is stored. The authority must reply within a month.

It should be noted that Step 1 can be run before but also after Step 2; both steps can also be performed in parallel.

[18] Consolidated versions of the Treaty on European Union and the Treaty on the functioning of the European Union, OJ 2010/C 83/01, 30.03.2010.
[19] Regulation 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative, OJ L 65/1, 11.03.2011.
[20] 'Organisers' means natural persons' forming a citizens 'committee responsible for the preparation of a citizens' initiative and its submission to the Commission.
[21] 'Signatories' means citizens of the Union who have supported a given citizens' initiative by completing a statement of support form for that initiative.
[22] Commission Delegated Regulation (EU) No 887/2013 of 11 July 2013 replacing Annexes II and III to Regulation (EU) No 211/2011 of the European Parliament and of the Council on the citizens' initiative.
[23] Commission Implementing Regulation (EU) No 1179/2011 laying down technical specifications for online collection systems pursuant to Regulation (EU) No 211/2011 of the European Parliament and of the Council on the citizens' initiative, OJ L 301/3, 18.11.2011.

In accordance with Article 6 (2) of the ECI Regulation, the Commission set up open-source software[24] providing all the basic functionalities to collect statements of support online through forms compliant with the ECI Regulation, securely store signatories' data and export the data to the competent national authorities.
This software also complies with the Web Content Accessibility Guidelines 2.0[25] and prevents the submission of duplicate statements of support.

As a basis for building their system, organisers are free to use the software developed by the Commission or other software of their choice.

- **Step 3: Collection of statements of support by organisers** – Once the initiative is registered, organisers have 12 months to collect at least one million statements of support overall, including a minimum number in at least seven Member States[26]. The threshold of number of signatories to reach per Member State is displayed in Annex I of the ECI Regulation[27].

Annex III of the ECI Regulation[27] provides the models for statement of support forms. It should be noticed that these are not harmonised across Member States: for instance, most require the provision of a personal identification number/personal identification document number (e.g. France, Spain) while a few do not (e.g. United Kingdom, Germany).

- **Step 4: Verification of statements of support by Member States** – After collecting the necessary statements of support from signatories, the organisers shall submit the statements of support, in paper or electronic form, to the relevant competent authorities (designated upfront by each Member State) for verification and certification. The competent authorities shall, within a period not exceeding three months from receipt of the request, verify the statements of support submitted and deliver a certificate to the organisers.
- **Step 5: Submission of a citizens' initiative by organisers to the European Commission** – After having obtained the certificates, the organisers may submit the ECI to the Commission. Where the Commission receives a citizens' initiative, it shall (a) publish the citizens' initiative without delay in the register[28], (b) receive the organisers to allow them to explain in detail the matters raised by the citizens' initiative and (c) within three months, set out in a communication its legal and political conclusions on the citizens' initiative, the action it intends to take, if any, and its reasons for taking or not taking that action.
  Within the three months, the organisers have also the opportunity to present their initiative at a public hearing in the European Parliament.

Step 4 and 5 are not addressed in this study as they do not directly belong to the online collection system in place for the ECI. This decision was made with the Project Management Committee during the inception phase of the study.

[24] Open-source software is computer software that is available in source code form for which the source code and certain other rights normally reserved for copyright holders are provided under a software license that permits users to study, change and improve the software.
[25] Web Content Accessibility Guidelines (WCAG) 2.0, W3C Recommendation 11 December 2008.
[26] Commission Delegated Regulation (EU) No 887/2013 of 11 July 2013 replacing Annexes II and III to Regulation (EU) No 211/2011 of the European Parliament and of the Council on the citizens' initiative.
[27] Commission Delegated Regulation (EU) No 531/2014 of 12 March 2014 amending Annex I of Regulation (EU) No 211/2011 of the European Parliament and of the Council on the citizens' initiative.
[28] The so-called 'Register' is the official interface, which was developed and maintained by the European Commission for the purpose of the ECI. The Register displays the information related to all the requests for registration received by the European Commission as well as the detail of the ECI-related procedure step-by-step.

Since 2012, the Commission has received 51 requests for registration from ECI organisers. As mentioned by the European Economic and Social Committee (EESC) President Henri Malosse during the ECI Day 2014[29], "the ECI should no longer be treated as a gadget of the European Commission, but as a standard tool of the new model of EU governance".

The first ECI, which was related to the enhancement of EU youth exchange programmes[30], was registered by the European Commission on 09.05.2012. This was soon followed by many other ECIs, for instance, related to the right to clean drinking water and sanitation[31] (10.05.2012) or the juridical protection of the dignity and the right to life of every human being[32] (11.05.2012).

Even though the Commission was pleased to note citizens' enthusiasm for the ECI and that the requests for registration received at that point concerned serious, citizen-led projects, they also conceded that the first initiatives had difficulties to get off the ground[33]. In fact, some organisers struggled to find suitable host providers[34] on the market for collecting statements of support online. As a reply to these teething problems, the Commission offered them a hosting platform on its own servers in Luxembourg[35] and helped them preparing all documents related to hosting environment for certification by the competent Luxembourgish Authority, the Centre des Technologies de l'Information de l'Etat (CTIE).

Organisers who, upon the Commission's request, confirm their interest in having their system hosted by the Commission receive a package of documents including the hosting agreement (contract) to be signed between the Commission and the organisers, and the documentation (covering security policy, business impact assessment, risk assessment and treatment, and a statement of applicability) that the organisers are required to complete and sign for the submission of their certification request to the Luxembourgish Authority.

This offer was being made to the first citizens' initiatives on an optional basis and was intended as a time-limited solution in response to, inter alia, the high financial costs currently being cited by ECI organisers for hosting their online collection systems, including the certification procedure. Two years later, out of the 51 requests for registration received by the Commission from ECI organisers, only four initiatives (8%) did not use or did not plan to use the Commission servers[36].

[29] ECI DAY 2014 press release
[30] http://ec.europa.eu/citizens-initiative/public/initiatives/obsolete/details/2012/000001
[31] http://ec.europa.eu/citizens-initiative/public/initiatives/finalised/details/2012/000003
[32] http://ec.europa.eu/citizens-initiative/public/initiatives/finalised/details/2012/000005
[33] Meeting of the Expert Group on the Citizens' Initiatives, Summary report, European Commission, Secretariat-General, Brussels, 2.10.2012.
[34] As stated in Art. 6 of the ECI Regulation, "where statements of support are collected online, the data obtained through the online collection system shall be stored in the territory of a Member State.".
[35] Press Release, Commission offers own servers to help get first European Citizens' Initiatives off the ground, Commission Vice-President Maroš Šefčovič, 18.07.2012.
[36] Water and sanitation are a human right! Water is a public good, not a commodity!"; "30 km/h - making the streets liveable!"; "My Vote against Nuclear Power» and 'Stop TTIP'.

Since the ECI Regulation entered into force on 01.04.2012, the Commission has handled 51 requests for registration from ECI organisers, among which:

- 3 proposed citizens' initiatives are currently collecting[37];
- 18 reached the end of the collection period[38]: among them 12 did not get enough support[39] while 3 have been submitted as successful to the Commission and received an answer[40] from the Commission[41];
- 10 were withdrawn[42] by organisers (among them 4 have only withdrawn in order to re-register);
- 20 requests for registration have been refused by the Commission[43].

However, as mentioned in the study mandated by the European Parliament in 2014[44], ECI organisers, on their side, still have concerns about the effective implementation of the ECI.

Considering the following context, it is time to further analyse the issues encountered by organisers while setting-up an ECI and any potential improvements to the current situation:

- Mandate of the Juncker Commission (2014 - 2019) having started in November 2014;
- Absence of a clear and specific basis in the ECI Regulation to the temporary solution proposed by the Commission; and
- Report on the implementation of the ECI Regulation due by 01.04.2015[45].

For that purpose, KURT SALMON was mandated by DG DIGIT and Secretariat-General (SG) to perform the study, which consists of the twofold:

- Analysis of the online collection process, as currently in place ("AS-IS");
- Production of a comparative analysis identifying the main advantages and disadvantages of existing online collection solutions used by citizens' initiative or e-petition instruments at European and national level and other existing market solutions.

The AS-IS (baseline) is composed of two main scenarios:

1. The original architecture of the online collection systems, as defined in the ECI Regulation and related Commission implementing Regulation (hosting by the organisers, software developed by the Commission or any other software);
2. The temporary solution proposed by the Commission (hosting by the Commission, software developed by the Commission).

[37] http://ec.europa.eu/citizens-initiative/public/initiatives/ongoing
[38] http://ec.europa.eu/citizens-initiative/public/initiatives/finalised
[39] http://ec.europa.eu/citizens-initiative/public/initiatives/obsolete/conditions_not_fulfilled
[40] http://ec.europa.eu/citizens-initiative/public/initiatives/finalised/answered
[41] For the three other closed initiatives, no information is available on whether they have reached the required number of statements of support or not.
[42] http://ec.europa.eu/citizens-initiative/public/initiatives/obsolete/withdrawn_by_organiser
[43] http://ec.europa.eu/citizens-initiative/public/initiatives/non-registered
[44] European Citizens' Initiative - First lessons of implementation, European Parliament, Directorate-General for Internal policies, Policy department C on citizens' rights and constitutional affairs, Brussels, 2014.
[45] COM(2015) 145 final, Report from the Commission to the European Parliament and the Council, Report on the application of Regulation (EU) No 211/2011 on the citizens' initiative, Brussels, 31.3.2015.

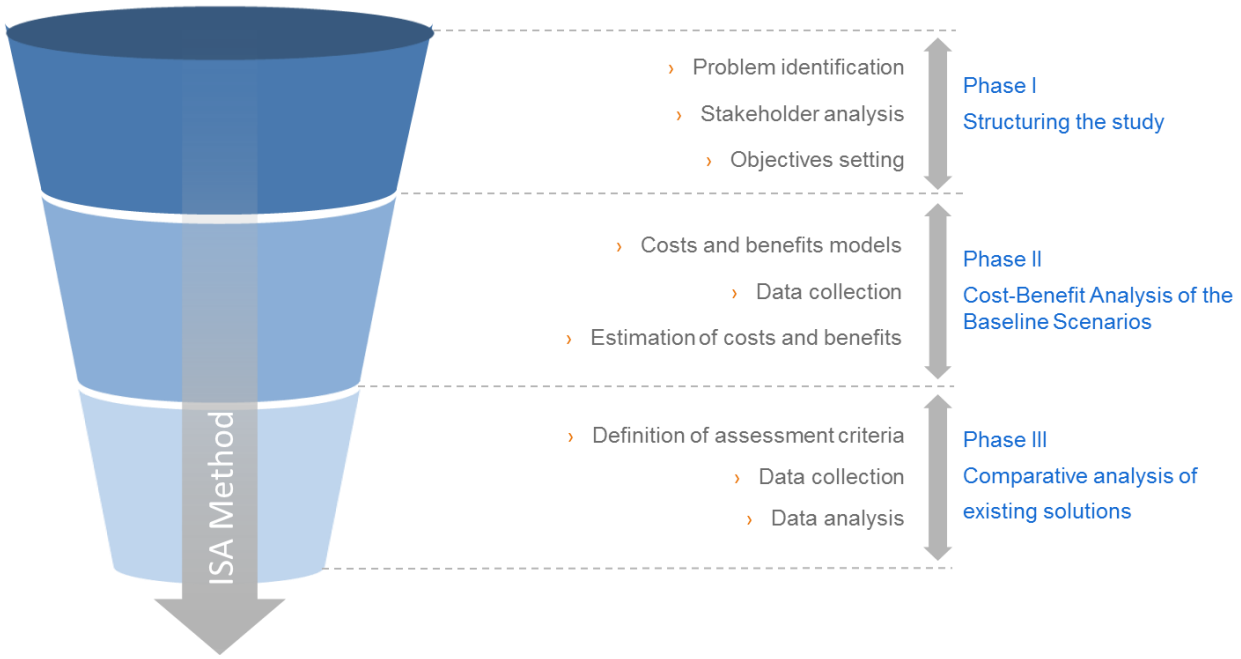
In this context, this Final report, which aims at presenting the key findings from the study, is articulated around the following sections:

- Section 1 presents the methodology used throughout the study.
- Section 2 goes through each of the main components identified in the online collection system (i.e. register, online collection software, hosting service, certification procedure and support) and assesses each of them based on the responses received during the data collection period.
- Section 3 assesses each of the two scenarios introduced above based on the responses received during the data collection period.
- Section 4 relates to the comparative analysis and describes the different solutions identified in the course of the study, highlighting for each of them their main features.
- Section 5 presents the key conclusions and recommendations drawn by KURT SALMON, based on the key findings from the assessment of the baseline scenarios and comparative analysis.
- Section 6 defines a set of proposed technical scenarios to be further investigated, based on the inputs received during the study and on KURT SALMON expertise.
- Section 7 (Appendix) provides the reader with support material and supplementary information on the study.

1. Methodology

Following the Impact Assessment guidelines from the Commission[46] and supported by the ISA method[47] all along the study, KURT SALMON followed a three-phase approach to perform this ECI study, as displayed on Figure 1.

Figure 1 Overall approach



This section aims at briefly describing each of these three phases, after having explained the extent to which the ISA method supported the assessment of ICT impacts in the context of the ECI Regulation.

1.1. The ISA Method

In 2010, DG DIGIT conducted a study for assessing the ICT impacts of EU legislation, taking into account cross-border and cross-sectoral impacts of the proposed legislation and for specifying the ICT related requirements imposed on Member States by the legislation. The main output of this study was a common method for the assessment of ICT impacts of EU legislation at Commission and Member States level, to be used by policy and ICT developers at the Commission as well as Member States and other implementing bodies.

This method aims to enable public administrations, both at EU and national levels, to better estimate the ICT impacts of EU legislation, ideally prior to their adoption by the European Parliament (EP) and the Council (i.e. ordinary legislative procedure), during the legislative proposals' preparation and interinstitutional negotiation phases, but also later once the legislation has been adopted.

The ISA programme carried forward the study, which was performed in the framework of the IDABC programme, in its Action 3.1 – Assessment of the ICT implications of new EU legislation, and the action is now specifically mentioned in Art. 3 (b) of the ISA Legal Decision No 922/2009/EC amongst the objectives of the Programme, notably “the

[46] Adaptation from the Impact Assessment guidelines [SEC (2009)92], European Commission, 15.01.2009.
[47] Method for Assessing ICT impacts of EU legislation, a report for the European Commission, Gartner, 01.03.2010.

assessment of the ICT impacts of proposed or adopted Community legislation and planning for the introduction of ICT systems to support the implementation of such legislation"
The ISA method consists of two main steps: the pre-assessment of the level of ICT impacts in legislation and the tools used to assess these ICT impacts.

Based on the assessment performed by KURT SALMON, overall, one can state that the implementation of the ECI Regulation is highly dependent on an ICT solution (e.g. the ECI Regulation requires the establishment of an ICT solution as its direct target or as a supporting function for its implementation; the processing of data and the design, establishment or modification of business processes which can potentially be digitised).

Furthermore, one can state that the level of complexity of the ICT solution is medium (e.g. level of complexity of the business processes to be automated; level of complexity of the overall ICT setup in terms of system architecture and software development can be considered as medium).

As a consequence, a high dependence of the ECI Regulation on ICT solution and a medium complexity to develop the ICT solution lead to a final assessment of ICT impacts evaluated as 'high'.

A 'high' final assessment means that the main tool to be used to assess the ICT impacts of the ECI Regulation should be the 'Detailed checklist'[48].

A detailed checklist is a guide with topics and questions which can be used to facilitate discussions with the stakeholders involved and thereby ensure that the implementation of the legislation from an ICT point of view is possible, efficient and effective. The list provides an overview of context, content and project management aspects related to the implementation of the legislation.

In this regards, for this study, the questions addressed to the stakeholders in the data collection phase were largely inspired by this checklist. This Final Report can also be considered as the so-called 'Template assessment report' mentioned in the ISA method.

[48] The detailed checklist can be accessed at the following link: http://ec.europa.eu/idabc/servlets/Docfac7.pdf?id=32706
Additional tools should be considered while applying the ISA method: Architecture overview and Business process modelling (BPM); Scoring sheet; a Project plan template.

1.2. Phase I: Structuring the study

The first part of our methodology describes the scope of the assessment performed in the course of this study. For this purpose, this section is articulated around three main steps, as listed below; each of them being further detailed in the remaining of this sub-section:

- Step 1: Problem identification (Section 1.2.1);
- Step 2: Stakeholder analysis (Section 1.2.2);
- Step 3: Objectives setting (Section 1.2.3).

1.2.1 Step 1: Problem identification

The following problems have been identified in the implementation of the baseline scenarios:

- Problem N°1: Difficulty to find suitable host providers (lack of availability, high costs) for organisers vs. high cost for the Commission to host ECI and no legal basis to this temporary solution;
- Problem N°2: Time-consuming and complex process to certify the Online Collection System for organisers;
- Problem N°3: Collection of sensitive data, the related high IT security requirements and the liability of organisers with regards to these data;
- Problem N°4: Non-harmonised data requirements for signatories across Member States; as the validation process is performed on the basis of appropriate checks, in accordance with (heterogeneous) national law and practice.

While these problems are further explored in the cost-benefit analysis, the comparative scenarios were also analysed against their type of hosting, certification procedure in place, the type of data collected and the related liability of stakeholders towards these data, and the process put in place (if any) by authorities to validate the statements of support collected by an initiative.

1.2.2 Step 2: Stakeholder analysis

Secondly, a stakeholder analysis was performed in order to identify all the groups of individuals being impacted by the ECI Regulation.

> Stakeholder analysis provides a means to identify the relevant stakeholders who have a ‘stake’ or interest in the study under consideration.

In this regards, the following nine stakeholder groups are impacted by the ECI Regulation and/or of interest in the context of the cost-benefit but also comparative analysis:

1. The Expert Group: This group includes experts from the Commission, having a mixed ICT, business and legal knowledge, to support KURT SALMON in the assessment of ICT impacts of this study.
2. MS authorities competent for certifying the Online Collection Systems: This group includes the competent authorities designated by each Member State to certify the Online Collection Systems.
3. ECI organisers: This group includes the citizens’ committees responsible for the setting up and operation of Online Collection Systems, in view of collecting statements of support for the initiative they have launched.
4. Civil Society organisations: This group includes the organisations providing advice to ECI organisers.

5. ECI signatories: This group includes the signatories of ECI.
6. IT experts: This group includes the IT experts who assist ECI organisers in the setting-up and operation of their systems.
7. Online Collection Software providers: This group includes the providers of online collection software that could develop software compliant with the ECI Regulation and related Commission Implementing Regulation to the organisers.
8. Hosting providers: This group includes the hosting providers that would fulfil the requirements set in the Commission Implementing Regulation N°1179/2011.
9. Member States and third countries having online collection solutions in place in the context of national/local citizens' initiative or e-petition instruments.

1.2.3 Step 3: Objectives setting

Thirdly, the study aims to assist the decision-making of the Commission as regards the following questions:

- Does the temporary hosting solution offered by the Commission need to be continued?
- Are there alternative solutions that could serve better and more efficiently the needs of the stakeholders concerned?
- What are the best scenarios for the online collection:
    - A public central platform?
    - Private[49] online collection systems?
    - Choice of ECI organisers between collecting on a public centralised platform and via a private system?

[49] 'Private online collection system' refers to a system based on private hosting providers services (private vendors) and allowing private online collection software certified by the MS authorities. In other words, this refers to the Scenario 1 currently in place for the ECI.

1.3. Phase II: Cost-Benefit Analysis of the baseline scenarios

The second part of the methodology aims to perform the cost-benefit analysis of the baseline scenarios. For this purpose, this section is articulated around three main steps, as listed below, each of them being further detailed in the remaining of this sub-section:

- Step 1: Costs and benefits model (Section 1.3.1);
- Step 2: Data collection (Section 1.3.2);
- Step 3: Estimation of costs and benefits (Section 1.3.3).

1.3.1 Step 1: Costs and benefits model

As mentioned, this study aims to analyse the impact of the baseline scenario for all stakeholders involved. In other words, KURT SALMON aims to measure the positive and negative impacts (benefits and costs) related to the ECI Online Collection System on both the demand side, i.e. ECI organisers[50], and the supply side, i.e. the European Commission, MS authorities competent for certifying the Online Collection Systems, IT experts, online collection software providers and hosting providers.

For this purpose, two approaches have been confronted.

On the one hand, a bottom-up approach enabled to define the cost items and benefits to put in place for each scenario so as to ensure that all the cost and benefit items, for each stakeholder group and for the implementation of each scenario, are taken into account in the definition of the cost and benefits models.

On the other hand, the top-down approach focused, on the other way around, on the costs and benefits enhanced by the ECI Regulation, with regards to the Online Collection System so as to ensure that all the regulatory costs and benefits that are related to the implementation of the ECI Regulation[51], and its related Online Collection Systems in particular, and identified for each stakeholder group, are taken into account in the definition of the cost and benefits models.

In this context, Table 1 illustrates a map of the stakeholders affected by the ECI Regulation, focusing on the Online Collection System, and the corresponding regulatory costs and benefits that are assessed in the course of this study.

It should be noted that the list of regulatory costs included in Table 1 does not refer to the 'opportunity cost', which are mentioned throughout the study, in particular in Section 3.

Referring to the opportunity cost is the most appropriate way in economics to assess the costs generated by regulation[51]. Accordingly, this is not a category of cost per se; separate from other categories of direct/indirect costs. Rather, they are the underlying concept that must be adopted as reference to describe all costs generated by regulation.

[50] The assessment of the costs and benefits related to the ECI Online Collection System for ECI organisers was based on their inputs and these received from Civil Society Organisations. The costs and benefits for the latter stakeholder group were not assessed as such.
[51] Assessing the costs and benefits of Regulation, by CEPS, Economisti Associati, Study for the European Commission, Secretariat General, Brussels, 10.12.2013.

Table 1 Map of regulatory costs and benefits on stakeholder groups

Category	Sub-category	Stakeholders affected by the ECI Regulation						
		ECI organisers	**European Commission**	**MS authorities competent for certifying the Online Collection Systems**	**IT experts**	**Online Collection Software providers**	**Hosting providers**	**ECI signatories**
Direct costs	Charges		☑					
	Substantive compliance costs	☑	☑	☑				
	Administrative burden	☑	☑	☑				
	Hassle costs	☑						
Indirect costs	Indirect compliance costs					☑	☑	
	Other indirect costs				☑	☑	☑	☑
Direct benefits	Improved market efficiency	☑	☑	☑				☑
	Additional utility, welfare or satisfaction	☑	☑	☑				☑
Indirect benefits	Benefits from third-party compliance with legal rules				☑	☑	☑	

The definition of each of the sub-category of costs and benefits is further explained in Appendix 7.2.

The main result from the confrontation of the bottom-up and top-down approach is an exhaustive list of cost and benefit items (mapped to each stakeholder group) to be used for the cost-benefit analysis.

As a result, a cost and benefit model was designed for each stakeholder group in the scope of this study, as further detailed in Section 3.

Cost items were mapped to the following categories:

1. Infrastructure costs provide the total (anticipated) cost of the hardware (e.g. network, servers) and software (e.g. licences, libraries) required to develop, support, operate and maintain the online collection system.
2. Development costs provide the total (anticipated) cost (human resources) for the development of the system (e.g. analysis and process re-engineering activity, coding activity, project management activity, test activity, configuration & change management activity, deployment activity).
3. Maintenance costs provide the total (anticipated) cost (human resources) in person days per year to maintain the system (e.g. activities related to both corrective maintenance and evolving maintenance).
4. Support costs provide the total (anticipated) cost (human resources) in person days per year to support the system and support users of the ECI Online Collection Software (including when it is used outside the Commission servers).
5. Training costs are related to the costs to train users (organisers).

The final purpose of this mapping exercise is to estimate the Total Cost of Ownership (TCO) related to each scenario assessed.

1.3.2 Step 2: Data collection

This sub-section aims at describing the data collection methods used during this study, i.e. desk research, interviews and online questionnaires.

Firstly, desk research consists in reviewing all available documents on the European Citizens' Initiative in order to obtain a clear picture of the field of study. Desk Research is the instrument to screen and collect legal, policy, and technical information from documentation available at national and EU level and therefore be able to assess the baseline scenarios on the ECI.

The data collection covers legal texts, policy documentation, expert group meeting summary reports and additional documents related to the baseline scenarios in the scope of the study. A selection of the most relevant documents is listed in Table 2.

Table 2 List of documents for desk research

ID	Title
1	Regulation (EU) No 211/2011 on the citizens' initiative
2	Commission Implementing Regulation (EU) No 1179/2011 laying down technical specifications for online collection systems
3	Hosting Agreement between on one side, the European Union, represented by the European Commission, and, on the other side, the Citizens' Committee of a proposed citizens' initiative
4	European Citizens' Initiative – First lessons of implementation, European Parliament, Directorate-General for internal policies, policy department C, citizens' rights and constitutional affairs, Brussels, 2014.
5	Guide to the European Citizens' Initiative, European Commission Secretariat-General, Brussels, June 2014.
6	Meeting of the Expert Group on the citizens' initiative, Summary report, Secretariat-General, European Commission [17.01.2012; 12.03.2012; 02.10.2012; 04.03.2013; 17.09.2013; 12.06.2014]
7	Online Collection System Risk Assessment v.1.00
8	Online Collection System Risk Assessment v.4.00
9	European Citizens' Initiative website
10	Impact Assessment guidelines [SEC (2009)92], European Commission, 15.01.2009
11	Press Release, Commission offers own servers to help get first European Citizens' Initiatives off the ground, Commission Vice-President Maroš Šefčovič, 18.07.2012.

Secondly, interviews, as a data collection method, provide in-depth information on explaining the reasoning leading to certain actions and describing the phenomena in question (i.e. answering to question types "how?" "why?").

In this regards, having performed interviews with key informants enabled to collect the information directly from the stakeholders concerned by this study (e.g. ECI organisers, Commission officials, MS authorities competent for certifying the Online Collection Systems, IT experts, online collection software providers and hosting providers).

Interviews were supported by an interview guide, tailored for each type of stakeholder group interviewed, and based on the desk research findings, more precisely on the areas identified as to be investigated, and on the cost and benefit models.

Overall, 15 interviews were performed with the following groups of stakeholders for the cost-benefit analysis part of the study:

- One Directorate-General (DG DIGIT) from the European Commission, including three units: DG DIGIT.B.2, C.2 and C.3, i.e. the stakeholders responsible for developing the register and open source software, for the hosting of the ECI initiatives on the Commission server and for supporting organisers for the certification of their system[52].
- Two MS authorities competent for certifying the Online Collection Systems: Germany and Luxembourg.
- Six ECI organisers[53] having collected or collecting online statements of support from citizens. It should be noted that out of these six organisers, four did not use the hosting service provided by the European Commission but a private hosting service.
- Three Civil Society organisations, which are providing support to ECI organisers (i.e. ECI campaign; European Citizen Action Service; Initiative and Referendum Institute Europe).
- Two IT experts having supported ECI organisers for the setting-up and running of the Commission software outside of the Commission server, i.e. in a private hosting server. It should be noted that one of them also took care of the hosting of one ECI online collection system (hosting provider).
- One online collection software provider developing online collection software for the purpose of the ECI Regulation.

Thirdly, two online questionnaires aimed at collecting data from a sample of the population, through a structured, limited set of questions were conducted.

1. One questionnaire was addressed to the ECI organisers that have not been interviewed but whose initiatives have also been registered by the European Commission. In total, five answers were received.

This questionnaire was not only helpful to understand the main obstacles and barriers of the online collection system, as it is in the baseline scenarios, but also at quantifying the costs and identifying the benefits for them with regards to the current situation.

2. One questionnaire was addressed to hosting providers, and in particular these identified as potentially compliant with the specifications from the ECI Regulation and in particular its related Commission Implementing Regulation N°1179/2011. In total, 11 answers were received.

This questionnaire was essential to understand the advantages and disadvantages, and potentially the costs and benefits, of the current situation (as set in the ECI Regulation and related Commission Implementing Regulation) for hosting providers.

It should be noted that the different data collection methods were triangulated to ensure the validity, reliability, and accuracy of the information/ data collected.

[52] Support concerning the certification process is only provided to organisers when their initiatives are hosted on the Commission platform.
[53] The sample should include ECI organisers having used and not having used the Commission servers to host their ECI.

1.3.3 Step 3: Estimation of costs and benefits

While analysing the data collected, several checks were performed by KURT SALMON to ensure that the data collected was reliable and valid.

Based on the outcomes of the previous phase, KURT SALMON was able to provide the costs and benefits, advantages and disadvantages, of the two baseline scenarios and to report these findings in the Section 3 of this report.

1.4. Phase III: Comparative analysis of existing solutions

The third part of the methodology is related to the comparative analysis, which aims to identify the main advantages and disadvantages of existing solutions, citizens' initiative or e-petition solutions already used or planned to be used at national or local level and a sample of market solutions.

For this purpose, this section is articulated around three main steps, as listed below, each of them being further detailed in the remaining of this sub-section:

- Step 1: Definition of Assessment criteria (Section 1.4.1);
- Step 2: Data collection (Section 1.4.2);
- Step 3: Data analysis (Section 1.4.3).

1.4.1 Step 1: Definition of Assessment criteria

Based on desk research, and on the feedback received from the stakeholders consulted in the context of the assessment of the baseline scenarios, KURT SALMON defined a list of criteria allowing the comparison of different aspects of the online collection solutions in the scope of the comparative analysis. These are further detailed in Section 4.1.

1.4.2 Step 2: Data collection

A selection of the most relevant documents to be consulted for the comparative analysis is listed in Table 3.
This list is not exhaustive: the documents related to the solutions identified as relevant to be part of the comparative analysis were also be consulted by KURT SALMON.

Table 3 List of documents for desk research

ID	Title
1	Regulation (EU) No 211/2011 on the citizens' initiative
2	Commission Implementing Regulation (EU) No 1179/2011 laying down technical specifications for online collection systems
3	Online Collection System Risk Assessment v.1.00
4	Online Collection System Risk Assessment v.4.00
5	Inventory of existing online collection of statements of support system software, final version, Deloitte for the European Commission, DG DIGIT, Brussels, 05.04.2011.
6	Requirements specification for online collection of statements of support system software, final version, Deloitte for the European Commission, DG DIGIT, Brussels, 2011.

Interviews have specifically been conducted for the purpose of the comparative analysis. The identification of the stakeholders was based on the inputs received from the Project Management Committee, the stakeholders consulted for the cost-benefit analysis of the current baseline scenarios and desk research performed by KURT SALMON.

Overall, 12 interviews were performed with the following groups of stakeholders for the comparative analysis:

- One unit from the European Commission: DG CNECT, i.e. the stakeholders involved in eParticipation projects (i.e. My University, Parterre, Puzzled by policy, Immigration policy, Our Space).
- Five online Collection Software providers having developed online collection software for the purpose of ePetition initiatives.
- Six Member States having or planning to have online collection solutions in place in the context of national/local citizens' initiative or e-petition instruments.

As part of the interviews related to the assessment of the costs and benefits of the baseline scenarios, ICT experts from the Commission, MS authorities competent for certifying the Online Collection Systems, Civil Society Organisations and ECI organisers were also asked for opinions or recommendations on possible solutions and best practices to further explore in the comparative analysis.

1.4.3 Step 3: Data analysis

Step 3 built on data collection activities carried out in Step 2. Its aim was to analyse the evidence obtained during the research phase and transform them into understandable results, i.e. findings.

KURT SALMON also ran two workshops along this study, one during the inception phase and one at the final phase, as these are proved to be a very efficient and effective format for gathering expectations and feedbacks from different stakeholder groups.

The main objective of organising a workshop during the inception phase of this study was to agree on the scope of the study and the scenarios to be analysed while benefiting from the expertise of each participant. In this regards, in addition to the Project Management Committee, experts from DG DIGIT.B.2 and B.6 participated in the event.

The main objective of organising a workshop during the final phase of this study was to ensure quality control. In fact, this did not only allow generating perception data that can triangulate with desk research and interviews data, but more importantly prompt a deeper discussion to justify and explain the study results. For this purpose, the scope of participants was broadened and additional members from the Expert group attended the second workshop. In addition to the stakeholders having participated in the first workshop, Commission officials from DG CNECT (highly involved in eParticipation initiatives) were indeed also invited.

Furthermore, in order to ensure that the analysed data was reliable and valid, the data collected was triangulated.

Triangulation of data is defined according to the practical guide for the Commission services on how to 'Evaluate EU activities', as "*the use of data collected using different tools and from different sources, and/or analysis from different theoretical perspectives and by different analysts, and at different time*" [54]. Triangulation of data aims to ensure the validity, reliability, and accuracy of the information/ data collected.

When planning triangulation of data, KURT SALMON considered whether the data collected was qualitative or quantitative. This was necessary because the meaning of validity is not the same for qualitative and quantitative research. In quantitative research, validity refers to whether the findings of a study are true and certain —**"true"** in the

[54] Evaluating EU activities – A practical guide for the Commission services, Directorate General for Budget, European Commission, July 2004

sense that research findings accurately reflect the situation and **"certain"** in the sense that research findings are supported by evidence[55]. When addressing the validity of quantitative data, one will focus more on the "true" meaning than on the accuracy of the data collected.

For the assessment of coherence, KURT SALMON checked that the data collected responded to the following principles, based on criteria for the quality of indicators, known as RACER (Relevant, Accepted, Credible, Easy to monitor and Robust against manipulation) in the Better Regulation toolbox[56].

- Relevant: closely linked to the objectives to be reached (in this case, measured). This means to verify if the data is representative of the universe to be measured and if it provides sufficient details.
- Accepted: this was verified through a workshop consultation.
- Credible: unambiguous and easy to interpret; this was verified through a consultation with stakeholders (e.g. workshops).
- Easy to monitor (e.g. data collection should be possible at low cost).
- Robust against manipulation: this was verified through data triangulation.

[55] Triangulation: Establishing the Validity of Qualitative Studies, Lisa A. Guion, David C. Diehl, and Debra McDonald, 2011
[56] Better Regulation Toolbox #35 Monitoring arrangements and indicators, complementing SWD(2015) 111 final, Commission Staff Working Document, Better Regulation Guidelines, {COM(2015) 215 final} {SWD(2015) 110 final}, Strasbourg, 19.5.2015.

2. Analysis of the process components

As mentioned earlier, the baseline on the ECI Online Collection System is composed of two scenarios.

On the one hand, Scenario 1 is based on the architecture defined in the ECI Regulation and related Commission Implementing Regulation N°1179/2011 (i.e. hosting by the organisers, software developed by the Commission or other software chosen by the organisers).

This Scenario has so far been implemented by four citizens' committees[57]:

- Water and sanitation are a human right! Water is a public good, not a commodity!
- 30 km/h - making the streets liveable!
- My Vote against Nuclear Power
- STOP TTIP

All of them have hosted their online collection systems on a private hosting provider's server while using the software developed by the Commission.

On the other hand, Scenario 2 includes the temporary solution proposed by the Commission (variation of Scenario 1). This ad-hoc set up, as provided by the Commission (i.e. hosting by the Commission) was used by all the other ECIs who collected online.

Figure 2 and Figure 3 respectively present each scenario from a business process perspective. While the text written in red stresses on the major differences between both scenarios; the shapes highlighted in orange are related to the five components of the ECI online collection process that were further analysed in the course of this section:

1. 'Publish information on the registered initiative on the 'Register': the 'Register is further analysed in Section 2.1;
2. 'Install and configure the system on a private server/ on the European Commission server': the Online Collection Software is further analysed in Section 2.2 while the hosting service is further analysed in Section 2.3;
3. 'Ask national competent authorities to certify the system': the certification process is further analysed in Section 2.4;
4. 'Need to be assisted by IT expert': any support needed by ECI organisers is further analysed in Section 2.5.

[57] Two requests for registration were refused: 'My vote against nuclear power' and 'STOP TTIP'.

Figure 2 Macro business processes (Scenario 1)

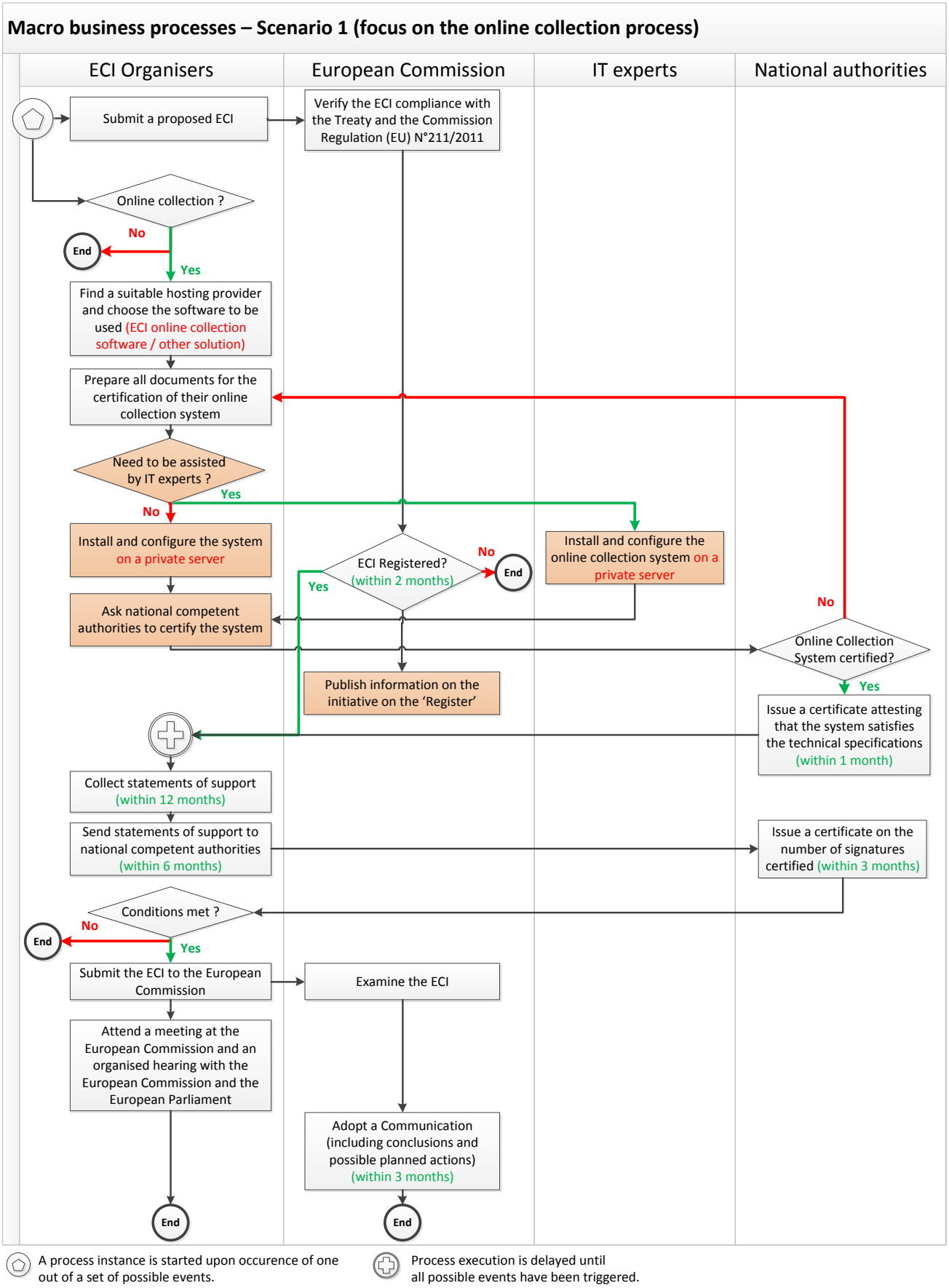
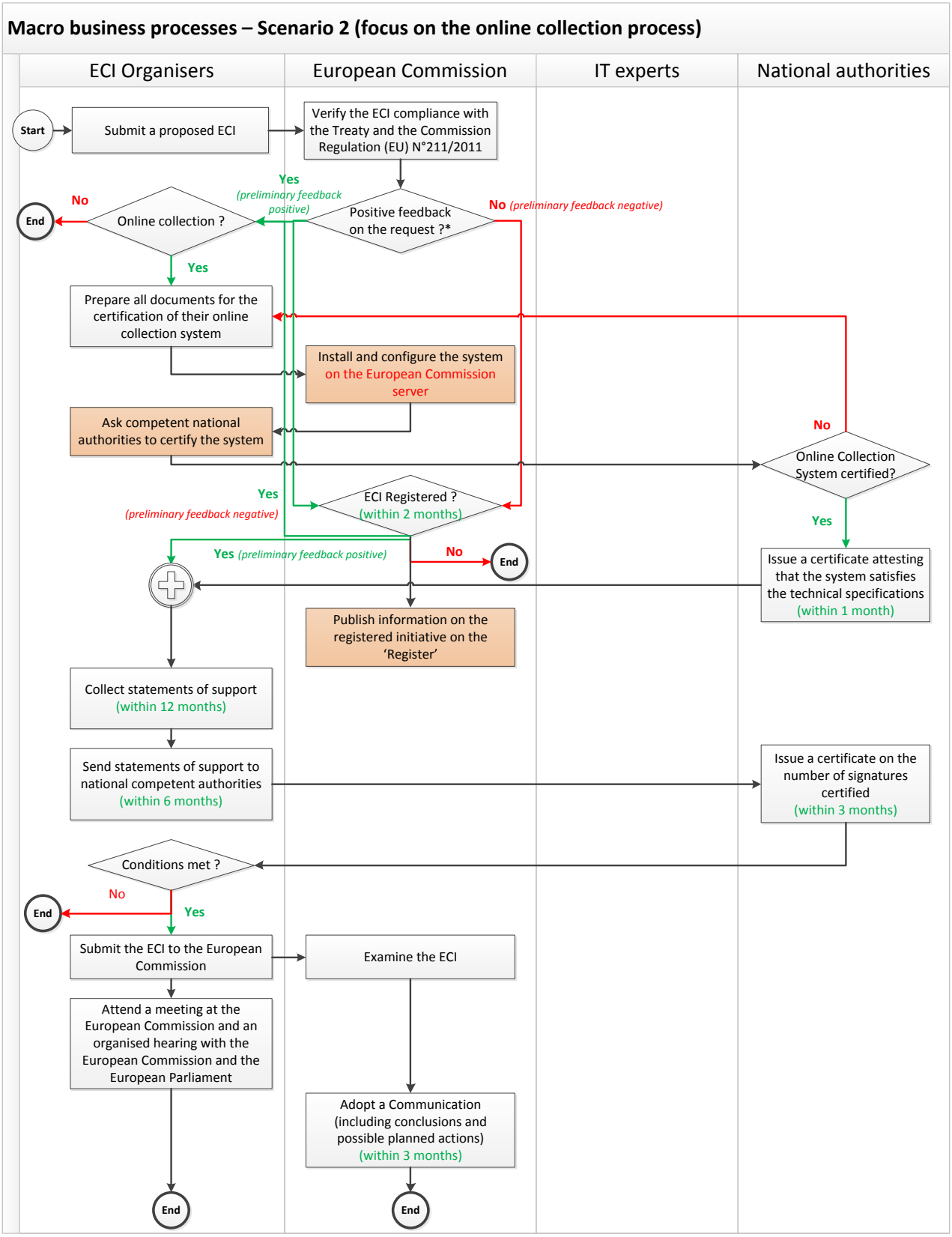


Figure 3 Macro business processes (Scenario 2)



* After a preliminary analysis of the initiative, the European Commission provides a preliminary feedback to ECI organisers on their request for registration (by the end of M+1). If this preliminary feedback is positive (i.e. request for registration expected to be validated by the European Commission), ECI organisers are allowed to start the administrative procedure for hosting their systems on the European Commission server.

2.1. Register

As stated in Article 4 (1) of the ECI Regulation, "information [set out in Annex II, in particular on the subject matter and objectives of the proposed citizens' initiative] shall be provided in one of the official languages of the Union, in an online register made available for that purpose by the Commission ('the Register')." The Regulation further obliges the Commission to inform via the register on the stage of the lifecycle the different initiatives have reached.

For this purpose, the Commission developed a public interface[58] displaying general information on the ECI (e.g. history, procedure to launch an ECI) as well as information on all the initiatives having requested to the Commission to be registered as an ECI and their status (e.g. open, closed, obsolete, refused requests for registration, submitted, answered).

Moreover, the register includes restricted areas only accessible to the organisers (organisers' accounts) and the Commission (administration interface). Through the organisers' account, organisers can directly manage their initiative (for example add linguistic versions, download the forms for the collection of statements of support, submit a successful initiative to the Commission, and at any stage contact directly the Commission ECI team). The administration interface allows the Commission services to reply to the different requests from the organisers and trigger the necessary actions in the public interface.

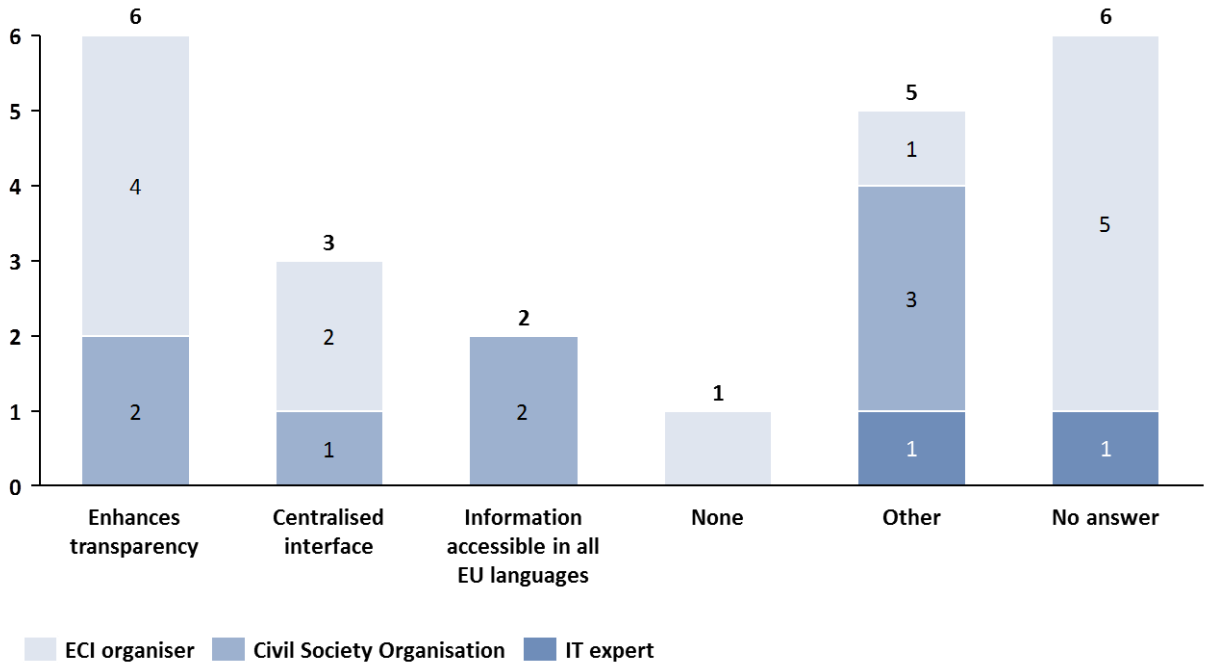
In the course of this study, ECI organisers[59] (11), Civil Society Organisations (3) and IT experts (2) were asked for the advantages and disadvantages of this Register as well as any potential improvement needed on the interface. These same stakeholders[60] were also asked whether further integration between the Register and the ECI Online Collection Software should be foreseen; while DG DIGIT (Commission) was specifically consulted to estimate the costs related to the Register.

Their feedback is displayed in this section.

[58] http://ec.europa.eu/citizens-initiative/public/initiatives/ongoing
[59] Out of the 11 ECI organisers part of the consultation, six were interviewed (6) and five answered to an online questionnaire (5).
[60] The same stakeholders were consulted except the ECI organisers surveyed (5).

Q1. In your view, what are the main advantages of the online register developed by the European Commission?

Figure 4 Advantages of the Register (number of occurrences)



Overall, the main advantage of the Register, as quoted by 6 respondents out of 16, is its ability to enhance transparency. Providing general information on how to conduct an ECI, from the registration to the submission to the European Commission, and displaying the core information related to each ECI (including their stage) enables greater visibility and transparency to all actors concerned.

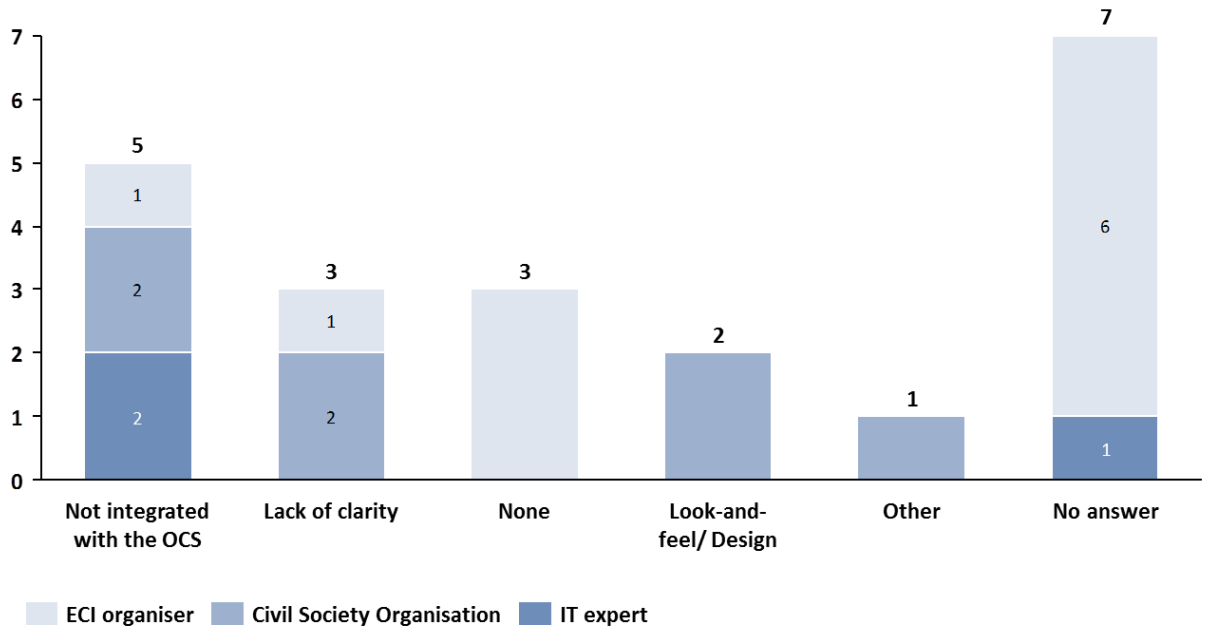
Three respondents also appreciate the fact that all ECI-related information are presented on a single centralised website, in a uniform and consistent manner while two welcomed the information translated into all EU languages.

Within the response category “Other”, respondents welcomed the fact that the register exists in the first place (1), its design (2), the fact that it is compliant with the ECI regulatory requirements (1) and its criticality to monitor the implementation of the ECI Regulation (1).

Six respondents did not provide any answer while one did not identify any advantage related to the Register.

Q2. In your view, what are the main disadvantages of the online register developed by the European Commission?

Figure 5 Disadvantages of the Register (number of occurrences)



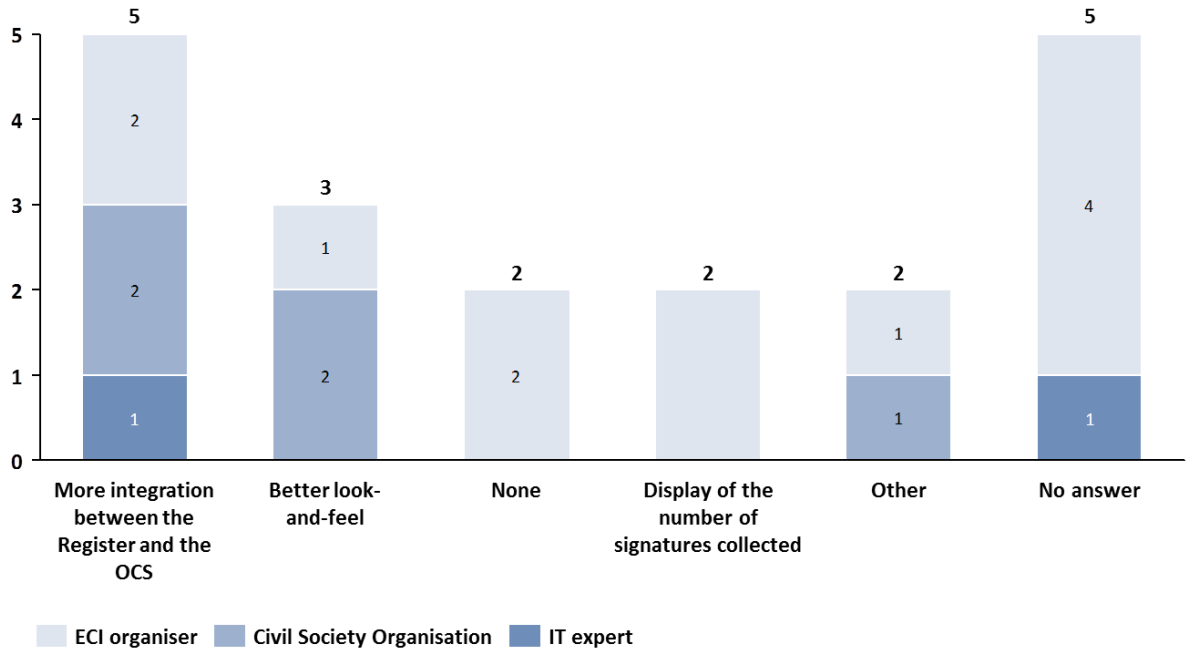
Overall, the main disadvantage of the register, as quoted by five respondents out of 16, is that it is not integrated to the ECI Online Collection Software, preventing citizens from supporting an ECI straight from the Register or from having a view on the progress of the ECIs: for example, it is not possible to flag an ECI (on the Register) when it reached the threshold of signatures before the data collection deadline. Three respondents (3) also addressed that some information displayed on the Register are not clear (definitions missing, terms confusing); two of them (2) having also highlighted that the look-and-feel of the interface was not attractive.

In the 'Other' category, one respondent (1) deplored the fact that the interface does not allow enough interactivity between the European Commission and ECI organisers. While the Register ensures a bilateral communication between the European Commission and ECI organisers, it does not play the role of a discussion forum.

Seven respondents (7) did not provide any answer while three (3) did not mention any disadvantage.

Q3. In your view, what are the main improvements, if any, needed on the register developed by the European Commission?

Figure 6 Improvements needed on the Register (number of occurrences)



The most popular responses to improving the ECI were to integrate the system with the ECI Online Collection Software (5) and to improve the look and feel of the public interface of the register (3). Enabling citizens to support an ECI straight from the Register would, according to the respondents, significantly simplify the online collection process.

The three respondents in favour of improving the look and feel of the public interface of the register (3) are the same as the ones having highlighted its lack of clarity in the previous question. From their perspective, improving the look-and-feel of the public interface of the register would indeed enable the public to visualise and understand information better.

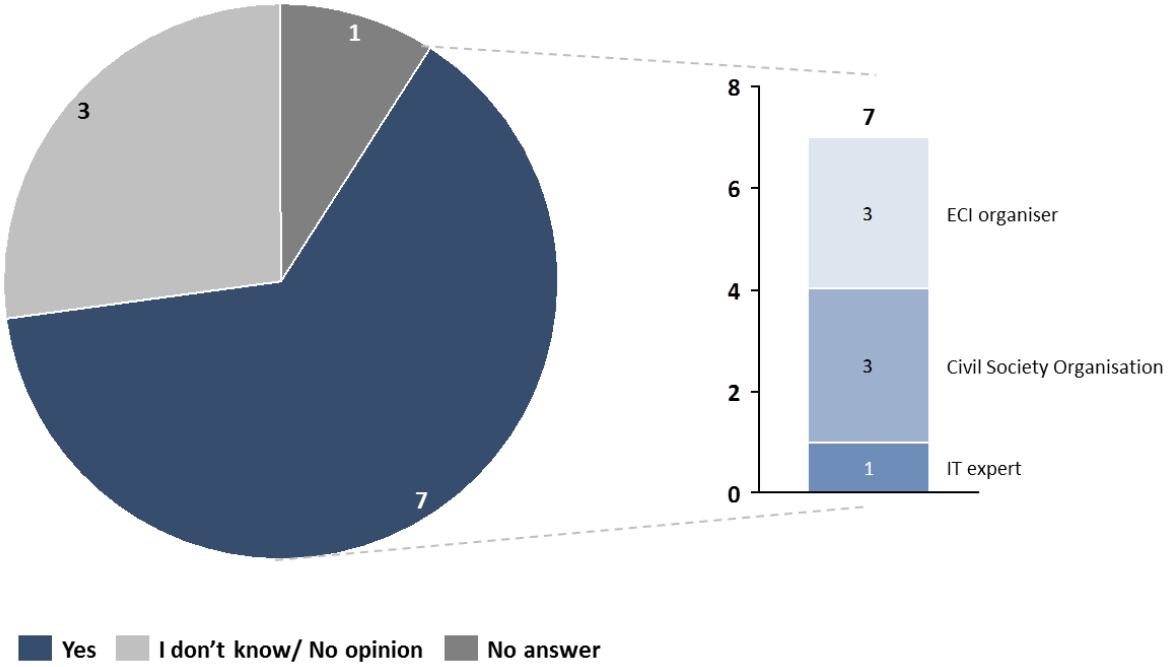
Two respondents (2) also mentioned that displaying the number of signatures collected for each ECI, including paper-based statements of support, would be another great improvement. This would however require modifying the legislative framework.

In the 'Other' category, one respondent (1) quoted the need to improve even more the level of interactions between the European Commission and ECI organisers; another respondent (1) proposed to better explain the information needed for the members of the ECI organisers' Committee, on the Register.

Five respondents (5) did not provide any answer while two (2) did not mention any improvement needed.

Q4. Do you think that there should be more integration between the register and the ECI Online Collection Software?

Figure 7 Integration between the Register and the ECI Online Collection Software



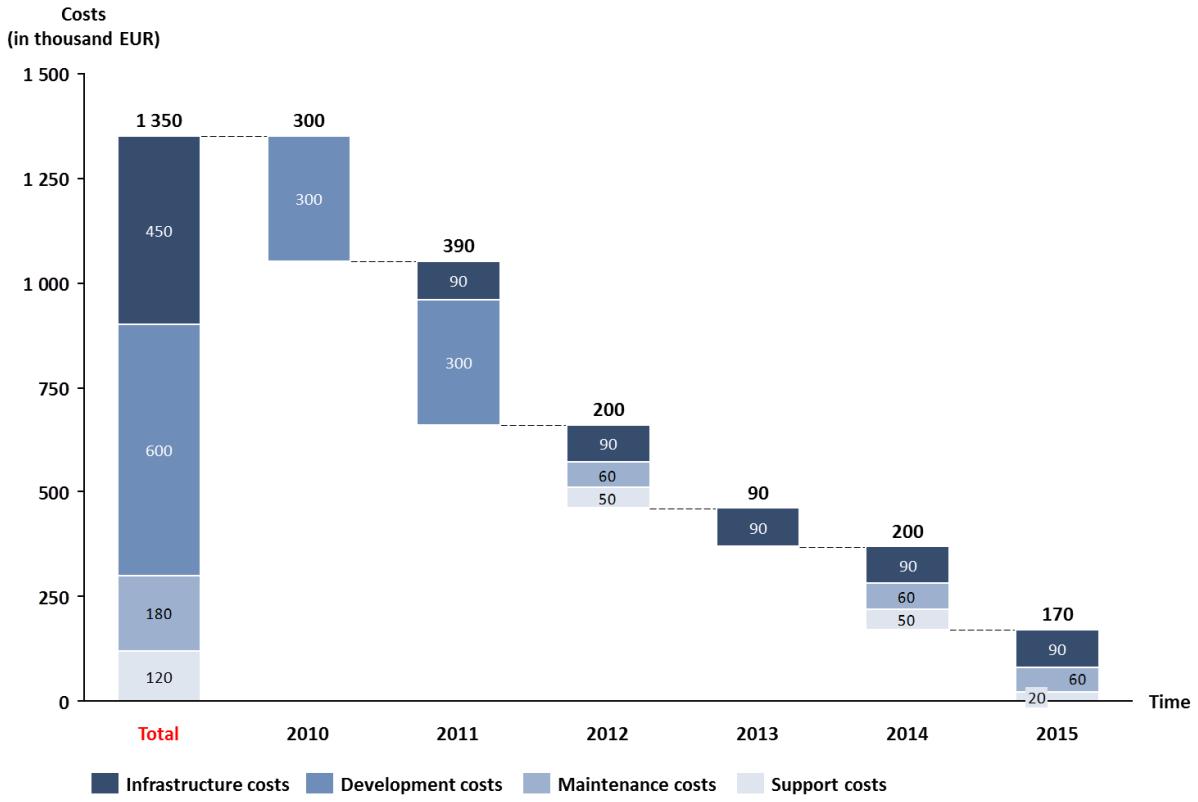
Out of the 11 respondents consulted on this question[61], seven are in favour of greater integration between the ECI Online Collection Software and the Register (7), including representatives from each of the three groups of stakeholders consulted on that question. Three ECI organisers have no opinion on the subject (3) and one IT expert (1) did not answer to the question.

These answers are not surprising given the results of the previous questions.

[61] Question addressed to ECI organisers (6), Civil Society Organisations (3) and IT experts (2), i.e. a total of 11 respondents. The five ECI organisers surveyed (5) were not asked to answer to this question.

Q5. Please state the yearly costs (in EUR) related to this Register for DG DIGIT, between 2010 and 2014, and estimate these costs for 2015.

Figure 8 Costs related to the Register (for the European Commission)



In total, since 2010 the European Commission spent approximately €1,180,000 in the Register and € 170,000 are planned to be spent in 2015. Moreover, the costs of one third of an FTE/ year (since 2012) from DIGIT.B.2 should be added[62] to the above mentioned costs, i.e. €33,333[63].

Based on these figures, and taking into account that, at the time of the report, the status of 51 initiatives is displayed on the Register, one can conclude that the Register has cost (so far) €25,098 per ECI[64].

It should finally be noted that these amounts do not take into account the costs from Secretariat-General staff[65], the costs related to the translation in the 24 official EU languages, some infrastructure costs such as building and energy, neither costs for licenses (Oracle).

Overall, stakeholders are satisfied with the Register developed by the European Commission but would be in favour of a greater integration between the Register and the ECI Online Collection Software.

While 'integration' is a broad term that includes all different types of connections between the two solutions, KURT SALMON has further analysed one type of connection during the interviews: the advantages and disadvantages of

[62] 1 FTE/ year from DIGIT.B.2 is used for support in the Register, ECI Online Collection Software and hosting.
[63] Based on VAST methodology, the value of 1 FTE in euros for a European Commission official can be assessed at €100,000.
[64] Average of the unit costs calculated for 2010, 2011, 2012, 2013 and 2014 (for the tool) and for 2012, 2013 and 2014 (for the cost of the internal resources in DIGIT): [(€300,000+€390,000+€200,000+€90,000+200,000)/51] + [(33,333*3)/51] = €25,098 per ECI.
[65] The Secretariat-General has the general coordinating role for the ECI in the Commission. However, the costs related to the resources engaged by the SG as business owner in the development of the ECI IT tools are not taken into account in the estimates.

integrating the Register and the ECI Online Collection Software into a single integrated system (full integration), compared to keeping them as two separate solutions. The result of this analysis, which is performed for all stakeholders involved in the ECI online collection process, is presented in Table 4.

Table 4 Integration/ non-integration between the Register and the ECI Online Collection Software

Group of stakeholders	Impact of the integration/ non-integration between the Register and the ECI Online Collection Software
DG DIGIT (European Commission)	The integration of the Register with the ECI Online Collection Software into **a single integrated system would avoid the current duplication of efforts and resources from DIGIT to operate both solutions as separate systems.** In other words, the costs to operate both systems would be significantly reduced for the European Commission. Political and liability impacts would require further analysis.
ECI organisers	As the transfer of information between the two solutions is (currently) not automatically performed, ECI organisers keep a full control on the information included into each system. On the other hand, the export of data is complex: ECI organisers need to first export the XML files related to their initiative from the register and then to import it into their online collection system. **Having a register and software integrated in a single solution would enable the automatic transfer of XML files from the Register to the ECI online collection system (and on the other way around) and thus facilitate the online collection process for ECI organisers.**
Member States' authorities competent for certifying the Online Collection Systems	In the current situation, Member States certifying the online collection systems need to ensure that they dispose of the right competences, expertise and available resources. In case of integration between the two solutions, **the European Commission would be the only responsible for the security of the systems at all times**: the online collection systems would indeed be hosted on the European Commission servers only. **A certification of the system may even no longer be required for each ECI online collection system but would rather take the form of an information system audit, performed on a regular basis (every year for instance). The authority responsible would need to be defined.**
Hosting and software providers	In case both solutions are integrated, **the possibility offered to service providers to penetrate the ECI market (and make this market grow) would be significantly reduced** as the European Commission would be the only one handling the hosting of the online collection systems, implying (as it is currently the case) the use of the Online Collection Software developed by the European Commission. However, the interest from software and hosting providers in the ECI may also be questioned. First, three years after the entry into force of the ECI Regulation and Commission Implementing Regulation 1179/2011, no alternative software was released on the market for the ECI. Secondly, the open-source community initiated by the European Commission has never substantially taken off. Thirdly, the low response rate from hosting providers during this study may also translate their lack of interest in being involved in the ECI.

It should be noted that a full integration of both solutions would only be possible if the current regulatory framework evolves; as now the Commission Implementing Regulation N°1179/2011 imposes that each ECI Online Collection System instance is independent for each ECI and cannot have connections with other systems (this related in particular to the specifications concerning the demilitarized zone (DMZ)). In addition, under the current framework as initially foreseen in the Regulation, organisers set up their systems independently, under their own responsibility and certify each instance thereof without the involvement of the European Commission so no connection could be envisaged.

The full integration of both solutions is also subject to one additional condition: the European Commission should permanently offer its hosting service, still fostering the use of the ECI Online Collection Software. In other words, a full integration of the solutions would not be envisaged either if the hosting service can still be ensured by private providers as an alternative to the European Commission offer.

"Partial" full integration may still leave space for the existence in parallel of the decentralised systems as currently foreseen in the Regulation, for which in such case only information would be provided as is currently the case.

Taking into account that the main reason for which respondents are in favour of more integration between the Register and the ECI Online Collection Software is to simplify the online collection process (e.g. ability for potential signatories to support an ECI straight from the Register), additional scenarios of integration are suggested by KURT SALMON.

As a first alternative to a full integration between the Register and the ECI Online Collection Software, a 'simple' automation between the Register and the ECI Online Collection Software could be envisaged. This automation could be ensured via exposure/consumption of web-services, allowing different software to get connected to the Register and thus enabling signatories to support an ECI straight from the Register. This type of integration would allow an automatic transfer of the XML files from the Register to the ECI Online Collection Software. Whether this automatic transfer would simplify the import and export of XML files for ECI organisers should be further investigated, as putting in place authentication over web services would require more IT expertise (for ECI organisers) than connecting to an administration interface.

Moreover, this first alternative is only possible if the Commission Implementing Regulation N°1179/2011 evolves, in particular the specifications related to the demilitarized zone (DMZ).

The second alternative identified by KURT SALMON, which does not require any change in the current regulatory framework (and minor improvements from the technical side), is the possibility to redirect signatories from the Register to the signing page of the ECI Online Collection Software. While the Register currently redirects signatories to the specific ECI website, the option could be given to ECI organisers to have a hyperlink or a 'Sign' button instead (on the Register) redirecting the potential ECI signatories to their ECI signing page directly.

2.2. Online collection software

As stated in Article 6 (2) of the ECI Regulation, "by 1 January 2012, the Commission shall set up and thereafter shall maintain open-source software incorporating the relevant technical and security features necessary for compliance with the provisions of this Regulation regarding the online collection systems."

Even though ECI organisers have the choice to use the latter software or any other software available on the market (as long as it complies with the ECI Regulation and related Commission Implementing Regulation N°1179/2011), it should be noted that the ECI Online Collection Software developed by the European Commission has been used or was planned to be used[66] by all ECI organisers[67].

The first part of this sub-section is related to the software developed by the European Commission (ECI Online Collection Software). The second part is related to other potential solutions available on the market.

2.2.1 ECI Online Collection Software

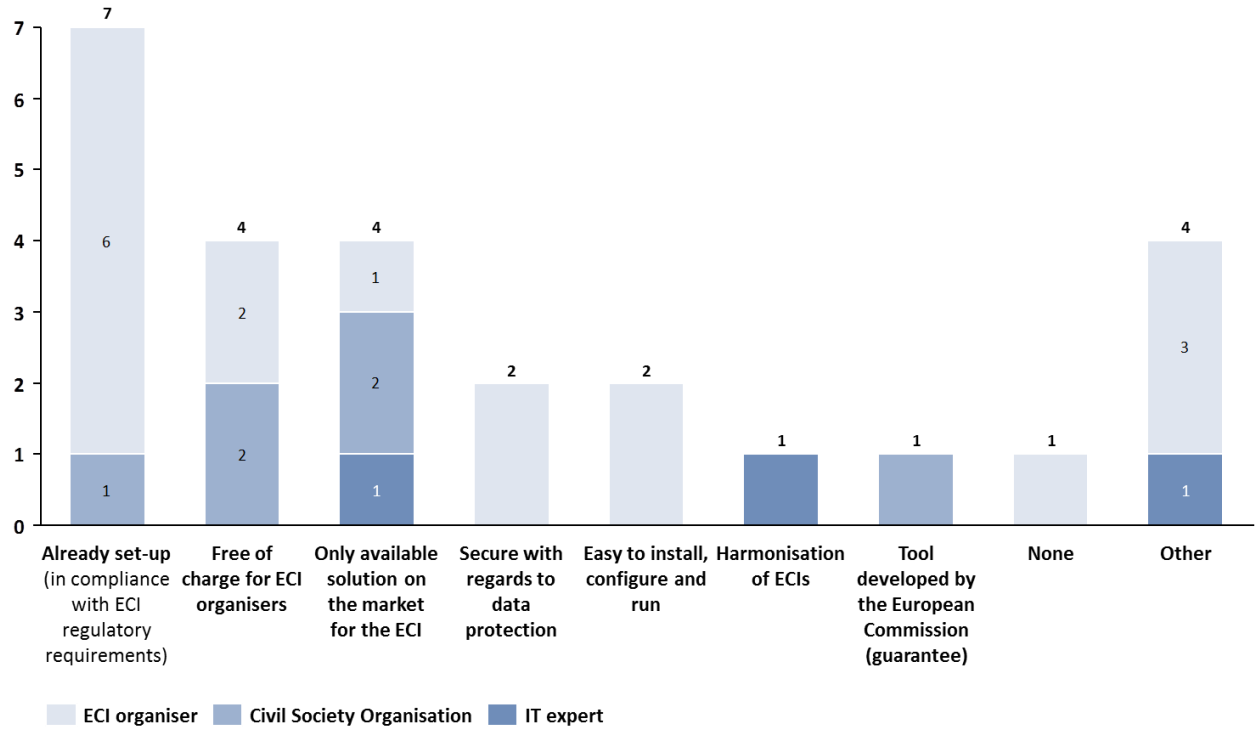
In the course of this study, several groups of stakeholders[68] were consulted to identify the main advantages and disadvantages of the online collection software developed by the European Commission as well as any potential improvement needed on the solution. DG DIGIT (Commission) was also specifically consulted to estimate the costs related to the ECI Online Collection Software.

Their feedback is displayed in this section.

[66] The initiatives whose requests for registration were refused or having been withdrawn by the ECI organisers had planned to use the ECI Online Collection Software in their online collection system.
[67] At the time of the data collection for this report
[68] The stakeholders consulted varied from one question to another. The list of these consulted for each question is thus detailed in each related question.

Q6. In your view, what are the main advantages of the online collection software developed by the European Commission?[69]

Figure 9 Advantages of the ECI Online Collection Software (number of occurrences)



Overall, the main advantage of the ECI Online Collection Software, as quoted by seven respondents out of 16 is the fact that it is already set-up in compliance with the ECI regulatory requirements; in particular, the statements of support generated by the ECI Online Collection Software are aligned with the data requirements of each EU Member State as set out in Annex III to the ECI Regulation. The free of charge availability of the ECI Online Collection Software is another advantage mentioned by four respondents (4). The fact that the ECI Online Collection Software is the only solution available in the market for the purpose of the ECI was also recognised as an advantage by four respondents (4), as it allows ECI organisers to become familiar with a unique tool (making it easier for them to use it) and also because if this solution did not exist then it would have been difficult for ECI organisers to conduct any ECI. For these four respondents the ECI Online Collection Software has the merit to exist.

The software itself is perceived by two respondents (2) as secure for processing personal data, and easy to install, configure and run. Additionally, one respondent (1) highlighted the software advantage of enabling all ECI interfaces to look the same (harmonised display creating an identity to the ECI) while, for another respondent (1), the fact that the software was developed by the European Commission presents a guarantee to organisers, regarding the security towards the collection and processing of personal data and to Member States authorities, for the certification of the systems.

[69] Question addressed to ECI organisers (11), Civil Society Organisations (3) and IT experts (2), i.e. a total of 16 respondents.

The ECI Online Collection Software comes with a "warranty" from the Commission, aimed to facilitate the certification process. The latter is indeed ensured to provide the necessary functionalities for the online collection of statements of support according to the rules established by the ECI Regulation. In case ECI organisers wish to modify its elements to better adapt it to their needs and preferences, it remains possible: being open-source, all the elements of the software can be modified.

However, if any of the core features of the software are modified, the use of the software will no longer guarantee compliance with the provisions mentioned above. In other words, the competent national authority will carry out the certification procedure as if the system was not using the software developed by the Commission (the software is packaged using a hashed code which can be checked by the authority to ascertain that the version presented for certification has not been modified). Some elements at database level (e.g. the rules for the automatic validation process of entered data) are not part of these core features and can thus be modified without compromising the compliance with the Regulation[70].

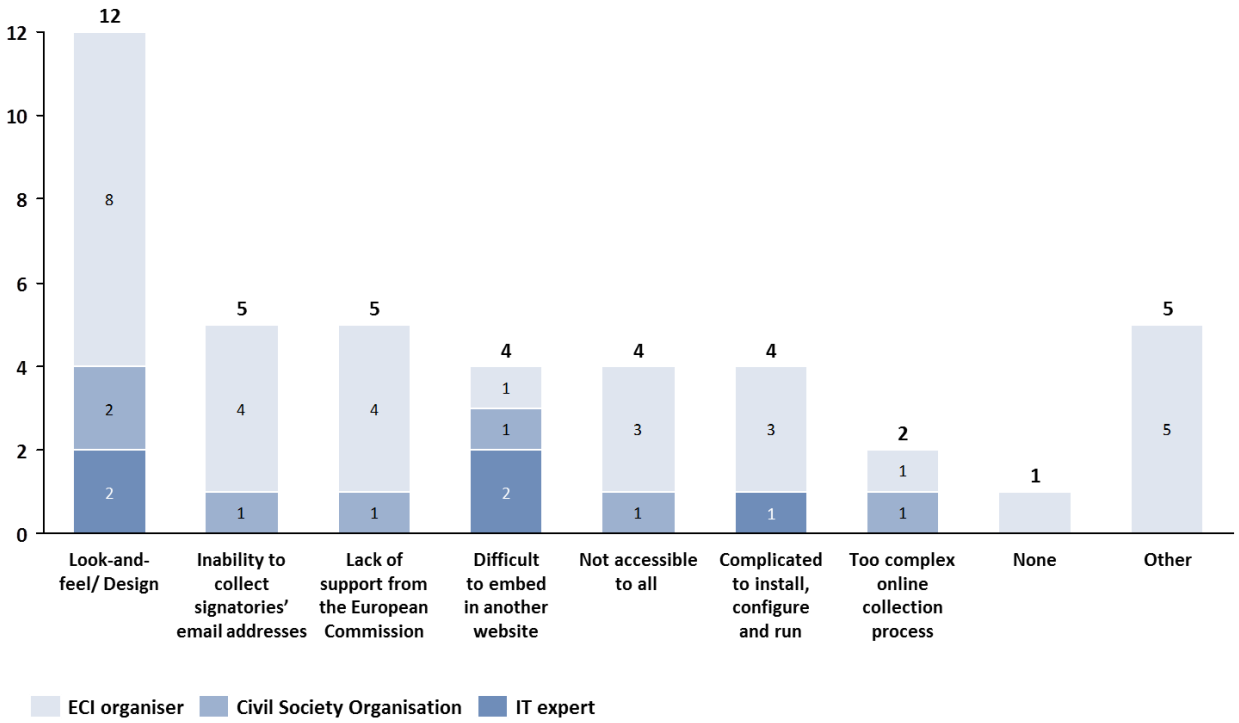
The ECI Online Collection Software multilingualism (1), the ability for ECI organisers to use the server provided by the European Commission (1) to host their system (in case they use the ECI Online Collection Software) and the fact that the number and geographical distribution of the signatures collected can be displayed on the organisers' websites (1) are additional advantages of the ECI Online Collection Software, as quoted in the 'Other' category. The fourth respondent from the latter category mentioned that the software fulfilled its intended purpose and met the specifications initially defined.

One respondent (1) did not mention any advantage.

[70] Official Register of the European Citizens' Initiative, FAQ: "Is it possible to modify the software developed by the Commission?" http://ec.europa.eu/citizens-initiative/public/faq

Q7. In your view, what are the main disadvantages of the online collection software developed by the European Commission?[71]

Figure 10 Disadvantages of the ECI Online Collection Software (number of occurrences)



A great majority of respondents (12 out of 16) highlighted the poor look-and-feel and design of the ECI Online Collection Software; in particular the fact that the user interface is very difficult to customise (while it looks rather administrative than appealing for a potential signatory) and not user-friendly[72]. Five respondents (5) deplored the fact that signatories' email addresses cannot be collected via the software; while keeping in touch with signatories is essential from a campaigner's point of view.

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[71] Question addressed to ECI organisers (11), Civil Society Organisations (3) and IT experts (2), i.e. a total of 17 respondents.
[72] Major improvements concerning in particular the look and feel have been implemented in the latest 1.6. version of the software released in March 2015 (not used by the organisers interviewed).

It should however be noted that the fact that the software does not allow to collect email addresses is not a technical issue but rather a legal one. The inclusion of the email address field directly in the statements of support forms (being not necessary for identification of the citizens) is indeed not possible under the current legal framework given the intended use of the data by the organisers (for campaigning purposes) and the applicable retention time limits. However, ECI organisers may, if they wish so, collect email addresses separately in accordance with applicable data protection legislation[73].

For this purpose the software developed by the Commission incorporates a so-called "callback" functionality. The organisers may configure the software so that - on the confirmation screen displayed after the successful submission of the statement of support form - a link appears whereby the signatories may go back to the organisers' website and provide their e-mail address if they wish so.

Also some organisers ask for the provision of the e-mail address on their website before providing the signatory with a direct link to their online collection system.

Despite the quality of the technical support provided by the European Commission, five respondents highlighted that their responses to ECI organisers' requests were too slow compared to organisers' expectations (in particular in case of technical bugs or issues on the software) and that only limited statistical data were provided on their ECIs

In practice, while the ECI Online Collection Software is able to track the number of signatures collected by each country on a daily basis, per country and in total[74], there is no functionality in place on the ECI Online Collection Software to access web analytics[75] such as the number of hits on their website, number of views per page, exit rate, conversion rate, visit duration.

Four respondents (4) insisted that the software interface is not only unattractive but also difficult to integrate into another website.

In practice, several organisers integrated their ECI Online Collection Software interface into social media or their own campaigning websites[76]. Some of them also published how to do it. However these initiatives have completed their data collection phase and information on how to do it is not any more accessible on the web.

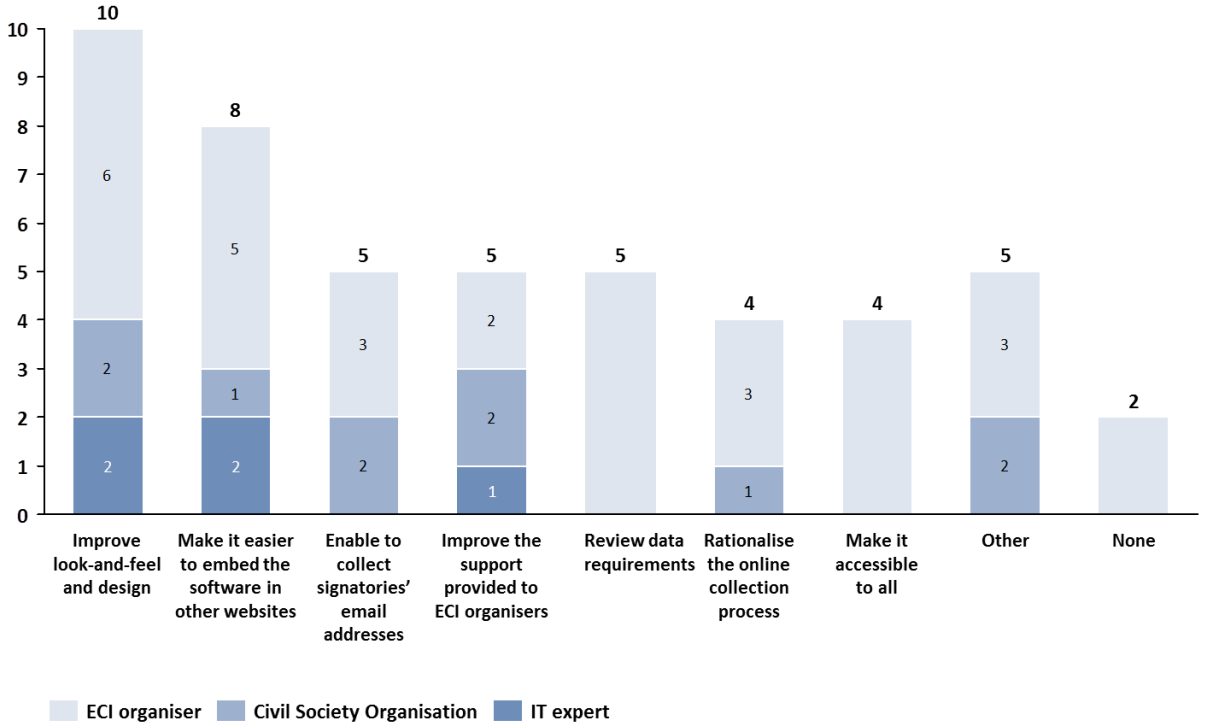
According to four interviewees (4) the fact that the audio captcha[77] system is only available in English, and thus not accessible for all visually impaired people, prevents access for all citizens. The software was also told by four respondents (4) to be complicated to install, configure and run while two respondents (2) went even beyond stating that the whole online collection process was too complex.

One respondent did not mention any disadvantage.

[73] Opinion of the European Commission in the European Ombudsman's own-initiative inquiry OI/9/2013 Into the functioning of the European citizens' initiative (ECI) procedure, European Commission, 06.10.2014, Brussels.
[74] This information is available in the administration interface of the software. In addition, when the system is hosted on the Commission's servers, an email including these data is automatically submitted to ECI organisers on a daily basis.
[75] Web analytics is the measurement, collection, analysis and reporting of web data for purposes of understanding and optimising web usage.
[76] It should be noted that not all kinds of integration are allowed by the regulatory framework. Their compliance with the regulatory framework depends on the technical solution chosen.
[77] 'Captcha' stands for 'Completely Automated Public Turing test to tell Computers and Humans Apart'.

Q8. In your view, what are the main improvements, if any, needed on the online collection software developed by the European Commission[78]?

Figure 11 Improvements needed on the ECI Online Collection Software (number of occurrences)



Unsurprisingly, the improvements needed on the software go along with the disadvantages identified on the ECI Online Collection Software. The most popular improvements, in terms of occurrences are the need to improve the look-and-feel and the design of the ECI Online Collection Software (10) and make it easier to embed in other websites (8), i.e. functional and graphical integration of the software inside other platforms (campaigning websites, social media) through API[79] or other interfaces.

It should however be noted that implementing APIs or other similar interfaces, as suggested by some respondents is not possible under the current regulatory framework due to some specifications of Commission Implementing Regulation N°1179/2011 related to the network security, and in particular the demilitarized zone (DMZ) . By stipulating that the system is to be hosted on an internet facing server installed on a demilitarized zone (DMZ) and protected by a Firewall, Commission Implementing Regulation N°1179/2011 also suggests that no exchange of information between the ECI online collection system and other systems is allowed.

Five respondents (5) also respectively mentioned that the software should allow organisers collecting signatories' email addresses and that the support provided by the European Commission should ensure that organisers can receive responses to their requests faster and be able to track better the progress of their initiative in terms of traffic on the pages.

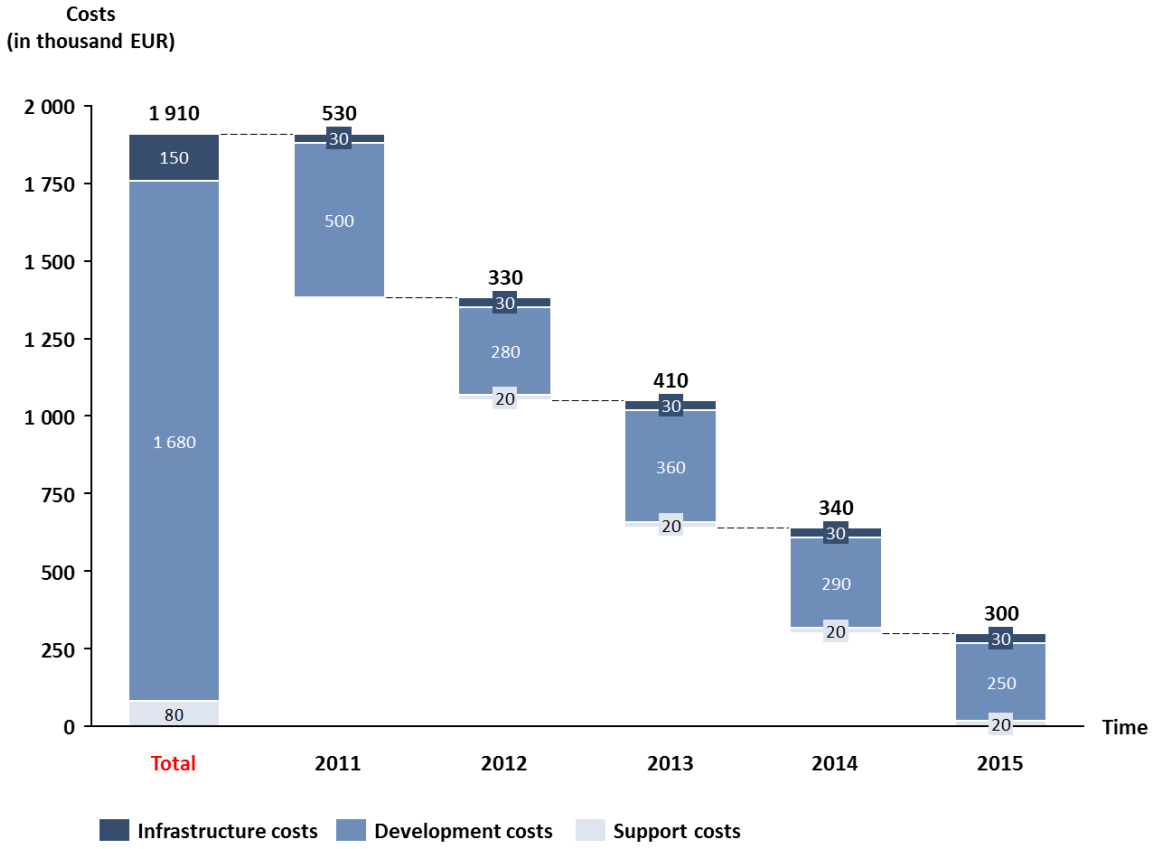
[78] Question addressed to ECI organisers (11), Civil Society Organisations (3) and IT experts (2), i.e. a total of 16 respondents.
[79] API stands for Application Programming Interface.

Comments that are going beyond the ECI Online Collection Software itself have also been received in order to rationalise the online collection process, by reducing the number of steps for signatories to support an ECI (4), and make it simpler, by reviewing data requirements (5). Finally the ECI Online Collection Software should be accessible for all, as mentioned by 4 respondents.

Two respondents (2) did not mention any improvement needed.

Q9. Please state the yearly costs (in EUR) related to the ECI Online Collection Software for DG DIGIT, between 2011 and 2014, and estimate these costs for 2015.

Figure 12 Costs related to the ECI Online Collection Software (for the European Commission)



In total, since 2011 the European Commission engaged €1,610,000 in the ECI Online Collection Software and €300,000 are planned to be consumed in 2015.

Infrastructure costs include development, test and acceptance servers for the ECI online collection software; Development costs include the costs to have the service and the documentation ready for ECI Online Collection Software ISO/IEC/27000 certification, i.e. after each new release of the software.

In addition to the costs displayed in Figure 12, the costs of one third of an FTE/ year from DIGIT.B.2 should be added[80], i.e. €33,333[81].

[80] 1 FTE/ year from DIGIT.B.2 is used for support in the Register, ECI Online Collection Software and hosting.
[81] Based on VAST methodology, the value of 1 FTE in euros for a European Commission official can be assessed at €100,000.

Based on these figures, and taking into account that, at the time of the report, the ECI Online Collection Software was available to 31 ECIs, one can conclude that the software has cost (so far) €55,161 per ECI[82].

It should finally be noted that these amounts do not take into account the costs from Secretariat-General staff[83]; some infrastructure costs such as building and energy; and the costs for licenses (Oracle).

KURT SALMON verified the reasons why the software was used or planned to be used[84] by all ECI organisers consulted in the study so far.

The top three reasons received by the 11 respondents interviewed[85] can be correlated with the three major advantages identified earlier:

1. The software is already set-up in compliance with the ECI regulatory requirements, and thus facilitates the certification process.
2. The software is free of charge for ECI organisers.
3. The ECI Online Collection Software is (as of today) the only available solution in the market.

This question was also addressed in the survey submitted to additional ECI organisers. In this regards, based on the four answers received to that question[86], the three reasons having scored the highest[87] are the following:

1. The software is free of charge (cheapest option for the ECI organisers) – Score 5/5
2. We could benefit from the free support provided by the European Commission, in case of issues with the software – Score 5/5
3. The fact that the European Commission developed it guarantees a certain level of security and compliance with the ECI Regulation and related Commission Implementing Regulation N°1179/2011. – Score 4.8/5

While the surveyed organisers tend to commonly agree on the fact that they did NOT choose the ECI Online Collection Software so that their ECI could have the same look-and-feel as the other ECIs, one Civil Society Organisation and one IT expert mentioned during their interviews (see Q6) that they consider it an advantage that the software enables all ECI interfaces to look the same (harmonised display creating an identity to the ECI). Some of the ECI organisers having contributed to the open-source community even mentioned that the look-and-feel of the ECI Online Collection Software should be close to that of the Register of ECIs, as a point against an interface customisation[88].

[82] Average of the unit costs calculated for 2011, 2012, 2013 and 2014 (for the tool) and for 2012, 2013 and 2014 (for the cost of the internal resources in DIGIT): [(€530,000+€330,000+€410,000+€340,000)/31] + [(33,333*3)/31] = €55,161 per ECI.
[83] The Secretariat-General has the general coordinating role for the ECI in the Commission. However, the costs related to the resources engaged by the SG as business owner in the development of the ECI IT tools are not taken into account in the estimates.
[84] The initiatives whose requests for registration were refused or having been withdrawn by the ECI organisers had planned to use the ECI Online Collection Software in their online collection system.
[85] Overall this question was addressed during an interview with 6 ECI organisers, 3 Civil Society Organisations and 2 IT experts.
[86] Out of the five ECI organisers surveyed, four answered that they had used or planned to use the ECI Online Collection Software. As a result, these four organisers only were asked to explain the reason(s) for having used or planned to use the ECI Online Collection Software.
[87] Survey respondents were given a list of potential reasons for using the ECI Online Collection Software and were asked, for each reason, whether they 'strongly agree', 'agree', 'neither agree nor disagree', 'disagree' or 'strongly disagree'. KURT SALMON established a scoring system going from 1 to 5 for each type of answers and calculated the average score of each reason.
[88] OCS Change Management Board Meeting, Summary report, European Commission, Brussels, 14.05.2013.

To summarise, stakeholders are looking for online collection software available for free and meeting the ECI regulatory requirements. For campaigning purposes, it is also essential for the software to have a nice look-and-feel; and to be easily integrated in other websites. As the collection of email addresses is also key to ECI organisers (again, for campaigning purposes), a change in the regulatory framework, so as to allow so, would also be welcomed by them.

Being provided with support during the installation of the software and during the online collection is also important for organisers.

2.2.2 Other online collection software

As mentioned above, the ECI Online Collection Software developed by the European Commission has been used or was planned to be used[89] by all ECI organisers consulted in the study. While it has so far been the only solution available on the market for the ECI, an alternative to this software, which was developed by IT experts highly involved in the ECI, was in testing at the time of this analysis aiming to be released in the course of 2015: 'Open ECI'.

While the drill down of the costs related to this alternative solution was not disclosed by the interviewee, the following costs were assessed for 2014 and 2015 (until the release of the version 1.00) for the 'Open ECI':

- € 20,000 for the development of the software itself (between € 10,000 and € 20,000 additional may be consumed until the software is completed);
- € 10,000 for performing the risk analysis and other documents requested for the certification.

The interviewee not having assessed the support costs related to the 'Open ECI', KURT SALMON estimated these as 10% of the overall costs[90] of the software. Depending whether additional €10,000 or €20,000 are consumed, support costs will amount between €4,000 and €5,000 (per year) for 'Open ECI'.

The total costs related to 'Open ECI' were thus estimated between €44,000 and €55,000 for 2014 and 2015.

The software provider of 'We Sign It', an online petition system featuring in the comparative analysis of this study, also estimated the costs that would be incurred on their organisation to comply with the ECI regulatory framework. These were assessed at €130,000 and additional €20,000 support costs per year.

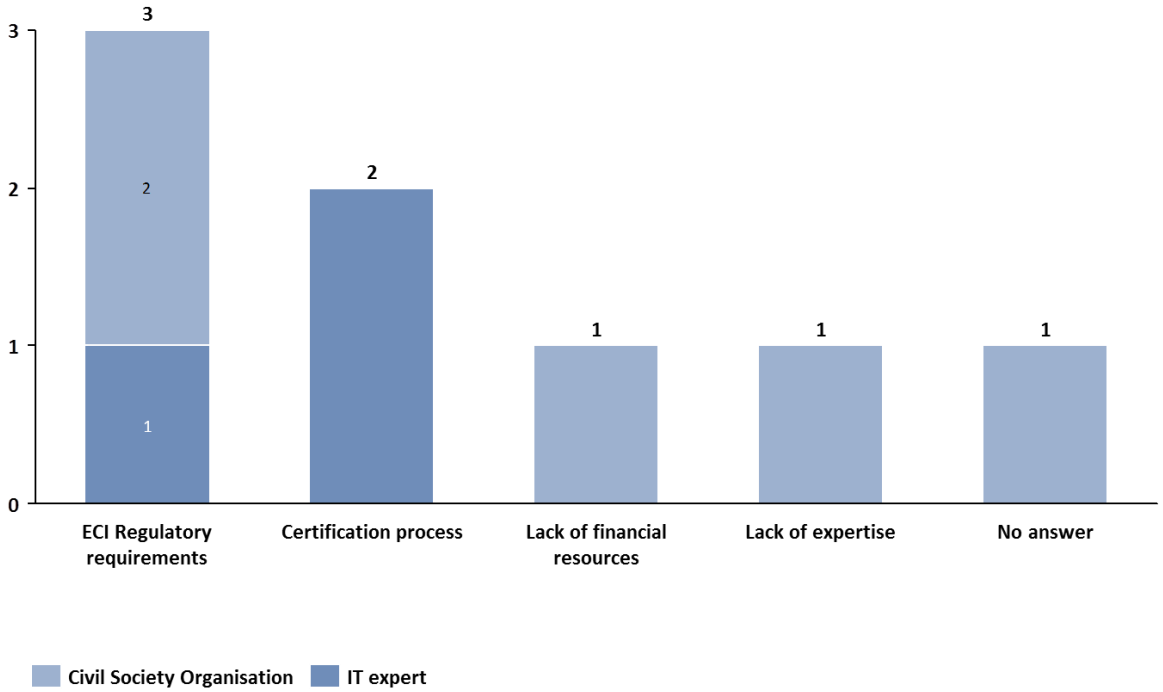
The estimates of these two solutions are further mentioned in the cost-benefit analysis (Section 3).

In the course of this study, several groups of stakeholders[91] were asked for their opinion on the main barriers that would prevent other software providers to develop their own online collection software for the purpose of the ECI.

[89] The initiatives whose requests for registration were refused or having been withdrawn by the ECI organisers had planned to use the ECI Online Collection Software in their online collection system.
[90] This assessment is based on KURT SALMON IT expertise and on a benchmark of similar studies performed by KURT SALMON.
[91] The stakeholders consulted varied from one question to another. The list of these consulted for each question is thus detailed in each related question.

Q10. In your view, what are the main barriers/difficulties for a software provider to develop software compliant with the ECI Regulation and related Commission Implementing Regulation No 1179/2011?[92]

Figure 13 Barriers to software providers (number of occurrences)



Out of the five stakeholders having answered that question (Civil Society Organisations (3) and IT experts (2), one having been involved in the development of the 'Open ECI'), three believe that the main barrier for software providers to develop software for the ECI is related to the regulatory requirements imposed by the ECI Regulation and related Commission Implementing Regulation N°1179/2011. These were assessed by the respondents as too high and complex to implement and to enable to develop a solution meeting users' needs.

Two respondents have been more specific in their answers mentioning that the certification process itself was keeping providers away from the ECI, and in particular the administrative burden generated by the risk analysis to be performed on the software (technical specifications aiming at implementing the Article 6 (4) (b) of the ECI Regulation).

Finally, as quoted by one respondent respectively, the potential lack of expertise (both legal and technical) and financial resources of software providers are adding difficulty for software providers.

[92] Question addressed to Civil Society Organisations (3) and IT experts (2), i.e. a total of 5 respondents.

2.3. Hosting

ECI organisers have the choice to either find a suitable hosting provider (and bear the related costs of the hosting service to host their online collection system) as foreseen by the ECI Regulation (Scenario 1) or to use the temporary solution proposed by the Commission (hosting on the Commission's servers, using the software developed by the Commission – Scenario 2) as a response to the initial difficulties encountered by organisers to find host providers.

The hosting service offered by the European Commission to support ECI organisers includes the following package:

- Install and host ECIs' online collection systems on a platform in the Commission data centre.
- Prepare all documents related to hosting environment for certification by the competent Luxembourgish Authority and submit them to the Luxembourgish authority.
- Provide advice/guidance/support documents on how to draft the organisers' Risk Management documentation.
- Help the organisers on any other technical issue related to their certification request for their online system (e.g. to secure their own environment).
- Help the organisers in their notification to the Data protection authorities, if needed.
- Train the organisers in the operation of ECI Online Collection Software.
- Provide personalised technical assistance/guidance to the organisers.

Among the 31 registered initiatives, 21 initiatives have collected statements of support online. The hosting service offered by the Commission has been used by 19 of them, whereas two other initiatives have used private hosting. Moreover the organisers of further two proposed initiatives for which the Commission has refused registration have also set up the online collection system using private hosting. Given the interest in comparing between the two types of hosting, all questions concerning hosting have been addressed to the organisers of all four initiatives who used or planned to use the service of a private hosting provider and to the organisers of a sample of seven ECI who have used the hosting service provided by the European Commission.

Q11. Proportion of organisers having used the Commission hosting for their Online Collection System.

Figure 14 Use of the hosting service provided by the European Commission (population)

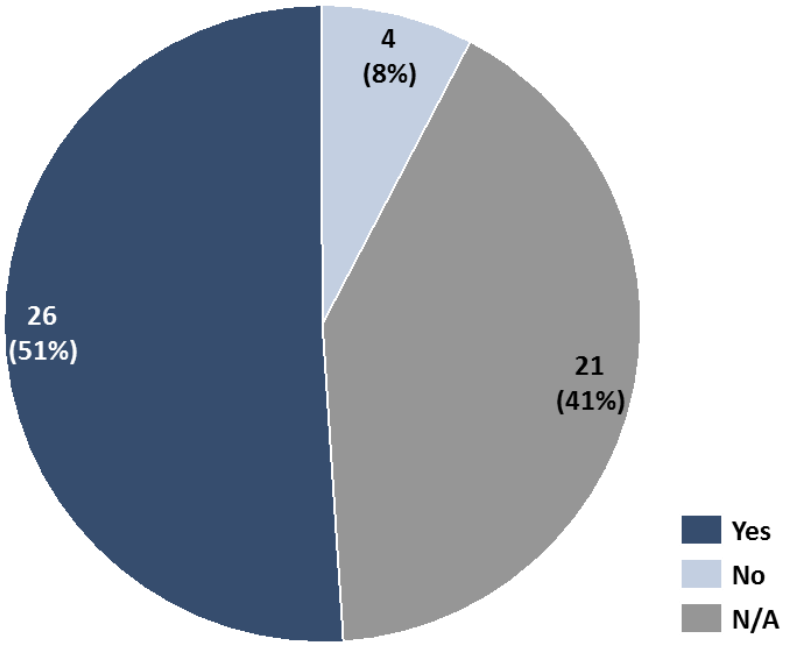
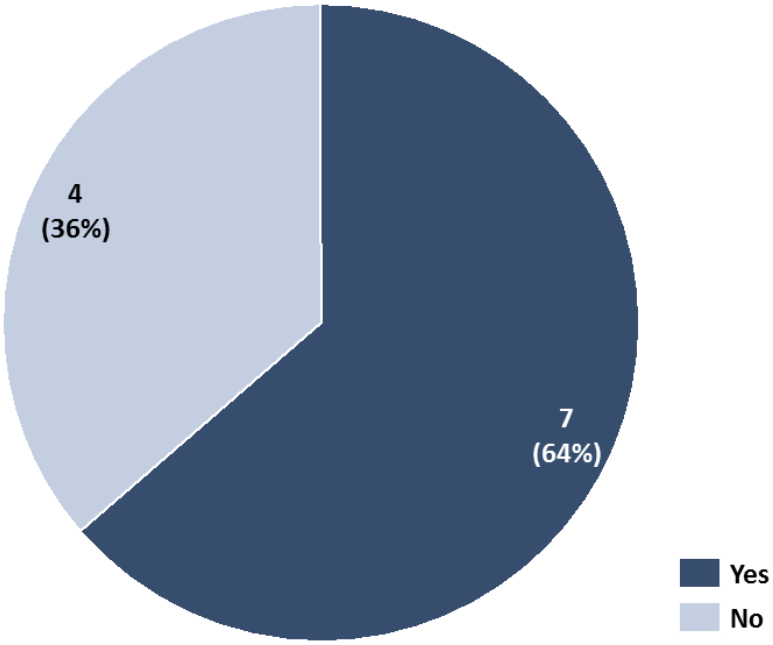


Figure 15 Use of the hosting service provided by the European Commission among the sample of organisers consulted in the framework of the study



At the time of the report, and as displayed in Figure 14 above, 26 out of 31 ECIs have used or planned to use the Commission servers. In fact, all but two organisers having collected online have used or planned to use the hosting service provided by the European Commission (26 ECIs). While 19 managed to have their online collection system up and running and certified (19 certificates have been produced by the authority competent for certifying the online collection systems in Luxembourg), two were currently in the process of having their system certified at the time of the report and five withdrew their ECI before getting their system ready.

Conversely, only four ECI organisers have set up and certified systems based on the hosting service provided by private vendors (two registered initiatives and two others for which registration was refused by the Commission and who have thus never used the systems they got certified)..
Finally, 21 ECI organisers did not set-up any online collection system at all: 18 of them were in fact not registered by the Commission and three registered initiatives did not set up an online collection system at all (3)[93].

The first part of this sub-section aims to dig further into the hosting service provided by potential (private) hosting providers (Scenario 1) while the second part is related to the service offered by the European Commission (Scenario 2).

2.3.1 Solutions offered by (private) hosting providers

As mentioned earlier, in total, four ECI organisers hosted their online collection system on private providers' servers instead of the European Commission's.
While the related hosting providers did not reply to the requests for interview made by KURT SALMON, the results from the vendor consultation give some inputs on the price invoiced by ECI organisers for this service.

In the course of December 2014 and January 2015, KURT SALMON conducted a vendor consultation, including a sample of hosting providers all across EU Member States.

While 100 hosting providers representing 23 different Member States were contacted to participate in the consultation, only two initially answered. After having performed follow-up calls with each of them, KURT SALMON managed to get this rate increased to 11%.
Despite this increase, the response rate remains low, demonstrating a lack of interest from vendors on the subject and confirming the difficulties mentioned by ECI organisers to find a (suitable) hosting provider for their system.

The vendor consultation aimed at gathering inputs from hosting providers on their interest in the ECI and at assessing the potential costs incurred to them for complying with the ECI Regulation and related Commission Implementing Regulation N°1179/2011 and the benefits brought to them for becoming online collection system host provider.
For this purpose, the questions addressed aimed at verifying the extent to which the regulatory requirements imposed on hosting providers were easy to implement and, if so, the pricing they would charge ECI organisers for using their service. Out of the 11 answers received, one hosting provider was not eligible to be qualified as their datacentre was not located in an EU Member State but in Switzerland. With regards to the pricing, two hosting providers did not provide with any pricing; these are thus not included in Table 5 either.

[93] "EU Directive on Dairy Cow Welfare", "Central public online collection platform for the European Citizen Initiative", "Kündigung Personenfreizügigkeit Schweiz"

Table 5 (Private) hosting pricing

Pricing per hosting item	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8
Data Centre location	**Belgium**	**Croatia**	**Belgium**	**Belgium**	**Croatia**	**UK, France, Germany, Poland, Italy, Finland, The Netherlands, Bulgaria, Sweden**	**Luxembourg**	**The Netherlands**
Hosting service	€ 3,197	#N/A	€ 5,166 (€ 287/month)	€ 2,250 (€ 125/month)	€ 2,920	#N/A	#N/A	€ 7,200 (€ 400/month)
Virtual Machine setup	€ 500	#N/A	€ 210	€ 1800	€ 150	#N/A	#N/A	€ 75
Internet domain and DNS configuration	€ 30	#N/A	€ 46	To be defined	€ 50	#N/A	#N/A	€ 0
Acquisition, installation and maintenance of SSL certificate for the ECI Online Collection Software website	€ 198	#N/A	€ 90	To be defined	€ 150	#N/A	#N/A	#N/A
Network and firewall configuration	€ 0	#N/A	€ 0	€ 720	€ 100	#N/A	#N/A	#N/A
Management (patching during 18 months) of Fedora 17	€ 199	#N/A	€ 0	To be defined	€ 600	#N/A	#N/A	#N/A
Management (patching during 18 months) of MySQL 5.5 database	€ 199	#N/A	€ 0	€ 5400	€ 600	#N/A	#N/A	#N/A
Management (patching during 18 months) of Glassfish 3 application server	€ 199	#N/A	€ 0	To be defined	€ 600	#N/A	#N/A	#N/A
Weekly VM back-up	€ 900	#N/A	€ 0	To be defined	#N/A	#N/A	#N/A	€ 50
Business hours support	€ 75	#N/A	€ 0	€ 1800	#N/A	#N/A	#N/A	€ 0
Other:	#N/A	#N/A	€ 0	To be defined	#N/A	#N/A	#N/A	#N/A
TOTAL	**€ 5 422**	**€ 9 320**	**€ 5 512**	**€ 11,970**	**€ 5,170**	**€ 54,000** (€3,000 per month)	**€ 60,000**	**€ 7,325**
Comments	-	-	-	-	-	IaaS service[94]	IaaS service[94]	-

One more result should be added to the vendor consultation: in 2012, European Citizen Action Service (ECAS) investigated the possibility of providing hosting or assisting organisers in the hosting of their online collection systems. In this regards, a shortlist of hosting providers was established, and only one (Belgium hosting provider) answered to ECAS request. At that time, the pricing proposed by the latter was the following:

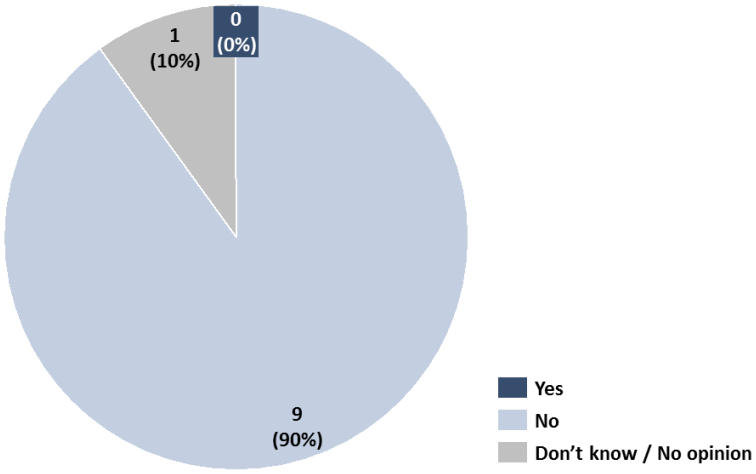
- Set-up fee of € 1,660
- Monthly fee of € 3,500.80, including the front-end and back-end, vulnerability scan, VPN, extra storage and the infrastructure.
- **TOTAL:** € 64,674.40 for 18 months.

Based on the 10 answers received by hosting providers eligible to be qualified for the ECI[95], the following results should be highlighted.

[94] Infrastructure as a Service (IaaS) is a form of cloud computing that provides virtualized computing resources over the Internet. IaaS is one of three main categories of cloud computing services, alongside Software as a Service (SaaS) and Platform as a Service (PaaS). In an IaaS model, a third-party provider hosts hardware, software, servers, storage and other infrastructure components on behalf of its users. IaaS providers also host users' applications and handle tasks including system maintenance, backup and resiliency planning.
[95] The hosting providers qualified to be eligible are the 10 ones having their data centre in an EU Member State.

Q12. Have you ever been contacted by ECI organisers wishing to use your hosting service?

Figure 16 Contact with ECI organisers



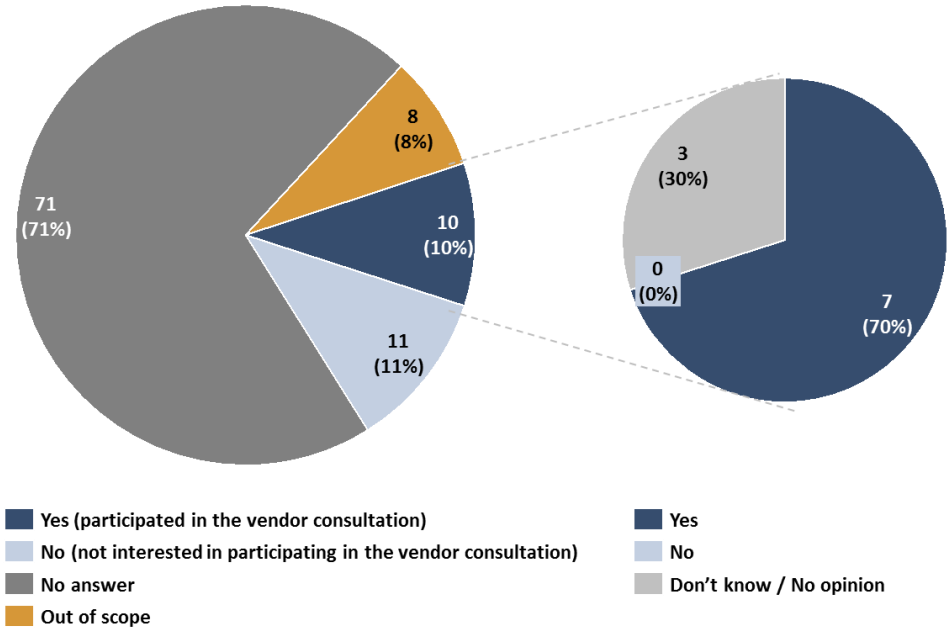
As displayed in Figure 16, while one hosting provider cannot recall whether they were contacted by ECI organisers wishing to use their hosting service, the others have never been solicited by them.

However, two of them mentioned that they had been contacted by the European Commission directly in 2012, when DG DIGIT initially performed a research on hosting providers in Belgium. The purpose of this research was to have a back-up solution in case more hosting capacity would have been needed while reducing the burden on the Luxembourgish authority. These two hosting providers are thus well aware of the level of security and service to be provided in the context of the ECI.

Q13. Are you interested in participating to the vendor consultation?

Q14. Have you ever been interested in hosting ECI online collection systems?

Figure 17 Vendors' interest in the ECI



As displayed in Figure 17, out of the 100 hosting providers invited (via phone and email) to participate in the consultation, only 10 answered to the online questionnaire prepared by KURT SALMON. In total, 11 clearly mentioned that they were not interested in participating, 71 did not follow-up on KURT SALMON's requests and 8 were qualified as out of scope, as hosting was not part of their core business but offered to their customers as a convenience.

Out of the 10 hosting providers who participated in the vendor consultation, 70% declared being interested in hosting ECI online collection systems against 30% who do not have any opinion on the subject.

The two results (rate of replies and degree of interest expressed in the replies) have to be interpreted together as in practice the absence of answers should be interpreted in this case as a lack of interest from the vendors in the subject.

The degree of interest shown in the received replies cannot thus be extrapolated to the whole consulted population.

Q15. Does your organisation offer a dedicated hosting service (dedicated server)?

As stated in the requirement 2.18.5 of the Commission Implementing Regulation N°1179/2011 "Local area network (LAN) security measures are in place such as: the Demilitarized Zone is on a dedicated virtual local area network (VLAN)/LAN".

All but one hosting provider are able to provide dedicated servers. The exception provides full cabinet co-location where customers can host multiple servers in the single cabinet. The related respondent highlighted that hosting a dedicated server in a full cabinet would not be cost-effective.

Q16. Does your data centre comply with the ISO standards ISO/IEC/27001, ISO/IEC/27002 and the Standard of Good Practice for Information Security?

As mentioned in requirements 2.1 and 2.2 of the Commission Implementing Regulation N°1179/2011, "Organisers provide documentation showing that they fulfil the requirements of standard ISO/IEC 27001[96], short of adoption. […]. Organisers choose security controls based on the risk analysis in 2.1(a) from the following standards: (1) ISO/IEC 27002[97]; or (2) the Information Security Forum's 'Standard of Good Practice".

Overall, all eligible surveyed hosting providers (10) are ISO/IEC/27001 compliant and 7 are either compliant with ISO/IEC/27002 or the Standard of Good Practice for Information Security[98], as required by the Commission Implementing Regulation N°1179/2011. The three remaining hosting providers are neither compliant with ISO/IEC/27002, nor with the Standard of Good Practice for Information Security[99].

It should however be noticed that these data do not necessarily reflect the easiness to comply with ISO/IE/27001 as this was the main criterion to select the sample of hosting providers to be part of the vendor consultation.

Furthermore, the following should be noted:

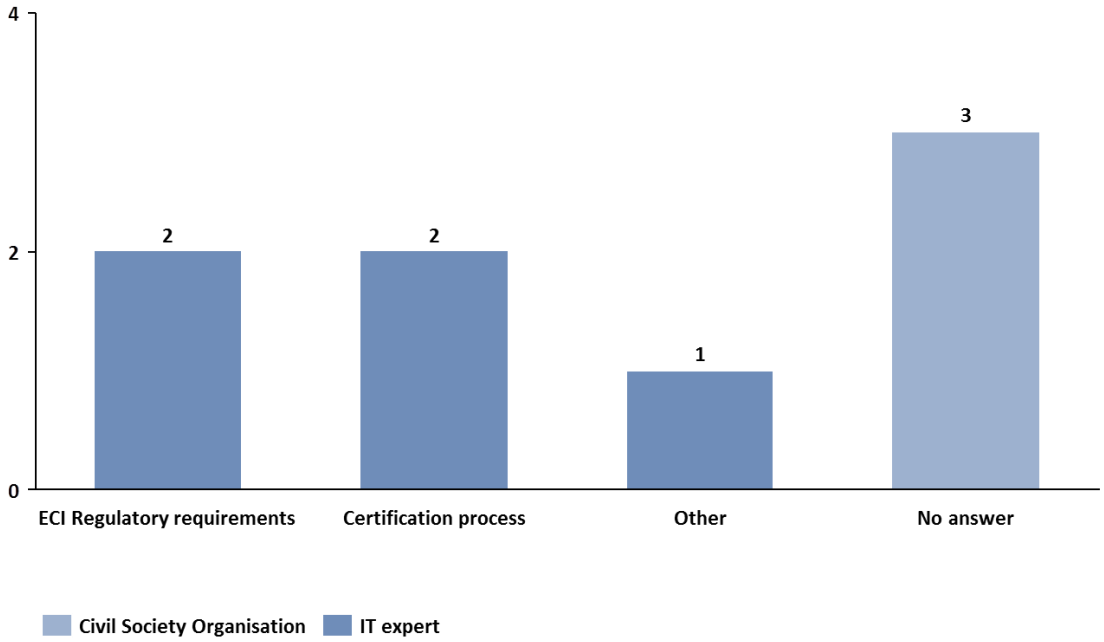
- Complying with the security requirements on database security and data integrity mentioned in Commission Implementing Regulation N°1179/2011 was assessed as easy by all respondents. Only one respondent assessed the requirements related to data encryption, data access and data validation as difficult.
- Complying with the security requirements on infrastructure security was assessed as easy by all respondents. Only one respondent assessed the requirements related to hosting area access control and audit log as difficult.
- Complying with the security requirements on network security was assessed as easy by all respondents.

In the course of this study, several groups of stakeholders[100] were asked for their opinion on the main barriers that would prevent hosting providers from hosting ECI online collection systems. Their feedback is displayed below.

[96] ISO/IEC 27001 formally specifies a management system that is intended to bring information security under explicit management control. In particular, this standard requires that management (1) Systematically examine the organization's information security risks, taking account of the threats, vulnerabilities, and impacts; (2) Design and implement a coherent and comprehensive suite of information security controls and/or other forms of risk treatment (such as risk avoidance or risk transfer) to address those risks that are deemed unacceptable; and (3)Adopt an overarching management process to ensure that the information security controls continue to meet the organization's information security needs on an ongoing basis.
[97] ISO/IEC 27002 is a code of practice recommending information security controls addressing information security control objectives arising from risks to the confidentiality, integrity and availability of information.
[98] The Standard of Good Practice for Information Security, published by the Information Security Forum (ISF), is a business-focused, practical and comprehensive guide to identifying and managing information security risks in organizations and their supply chains.
[99] One does not know whether its organisation is compliant with the Standard of Good Practice for Information Security.
[100] The stakeholders consulted varied from one question to another. The list of these consulted for each question is thus detailed in each related question.

Q17. In your view, what are the main barriers/difficulties for a hosting provider to comply with the ECI Regulation and related Commission Implementing Regulation No 1179/2011?[101]

Figure 18 Barriers to hosting providers (number of occurrences)



Out of the five stakeholders to whom this question was addressed (5), two believe that the main barrier for hosting providers relates to the costs of implementing regulatory requirements imposed by the ECI Regulation and related Commission Implementing Regulation N°1179/2011 (2). For instance, while using a dedicated server makes it easier and cheaper for Member States to certify a system, it is costly to implement for hosting providers without necessarily improving the security of the system. Also, complying with the ISO/IEC/27001 and ISO/IEC/27002 standards is just as costly as these are not open standards but need to be bought by the company.

The same two respondents mentioned the lack of harmonised certification procedures across EU Member States and the administrative burden related to the certification process as other barriers to consider. In the 'Other' category, the issues on the software (e.g. lack of user-friendliness and usability) were mentioned as they may render the hosting even more complex.

One interviewee suggested creating a single document where all the security principles would be listed to make it easier for hosting providers to meet the regulatory requirements imposed; as for now the Regulation refers to a list of around 20 different requirements that refer themselves to other standards.

[101] Question addressed to Civil Society Organisations (3) and IT experts (2); i.e. a total of 5 respondents.

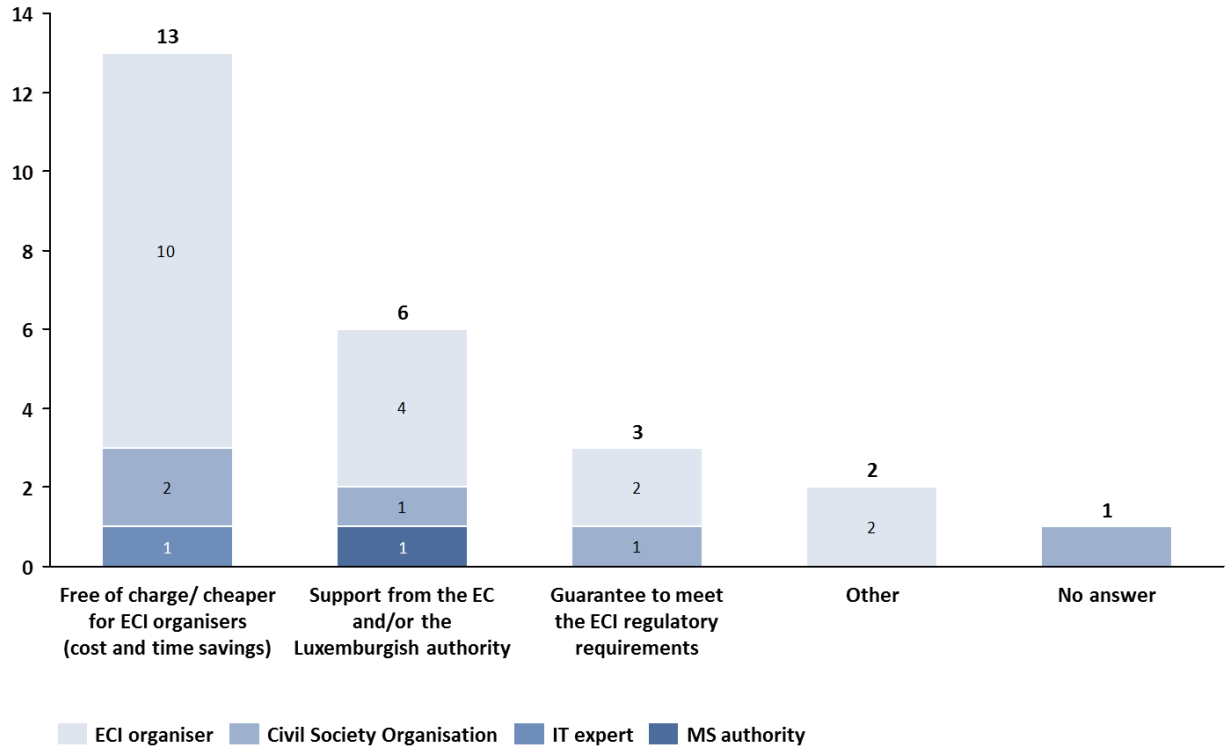
2.3.2 Solution offered by the European Commission

In the course of this study, several groups of stakeholders[102] were consulted to identify the main advantages and disadvantages of having an online collection system hosted on the Commission server as well as any potential improvement needed on that service. DG DIGIT was also specifically consulted to estimate the costs related to the hosting service. Their feedback is displayed in this section.

[102] The stakeholders consulted varied from one question to another. The list of these consulted for each question is thus detailed in each related question.

Q18. In your view, what are the main advantages of having ECI hosted on the Commission platform for ECI organisers?[103]

Figure 19 Advantages of the hosting service provided by the European Commission (number of occurrences)



As displayed in Figure 19, the main advantage of the hosting service provided by the European Commission is (by far) the fact that it is free of charge for ECI organisers. Overall, 13 respondents out of 16 quoted that advantage, including 10 out of 11 ECI organisers. Using this service indeed avoids ECI organisers to invest time in researching a suitable hosting provider and then bear the costs related to their hosting service. The time and money spent in installing and setting-up the system (whether on their own or by requesting the assistance from an IT expert) is also saved as this is performed by the European Commission. These are important assets that can be invested in the ECI campaign instead.

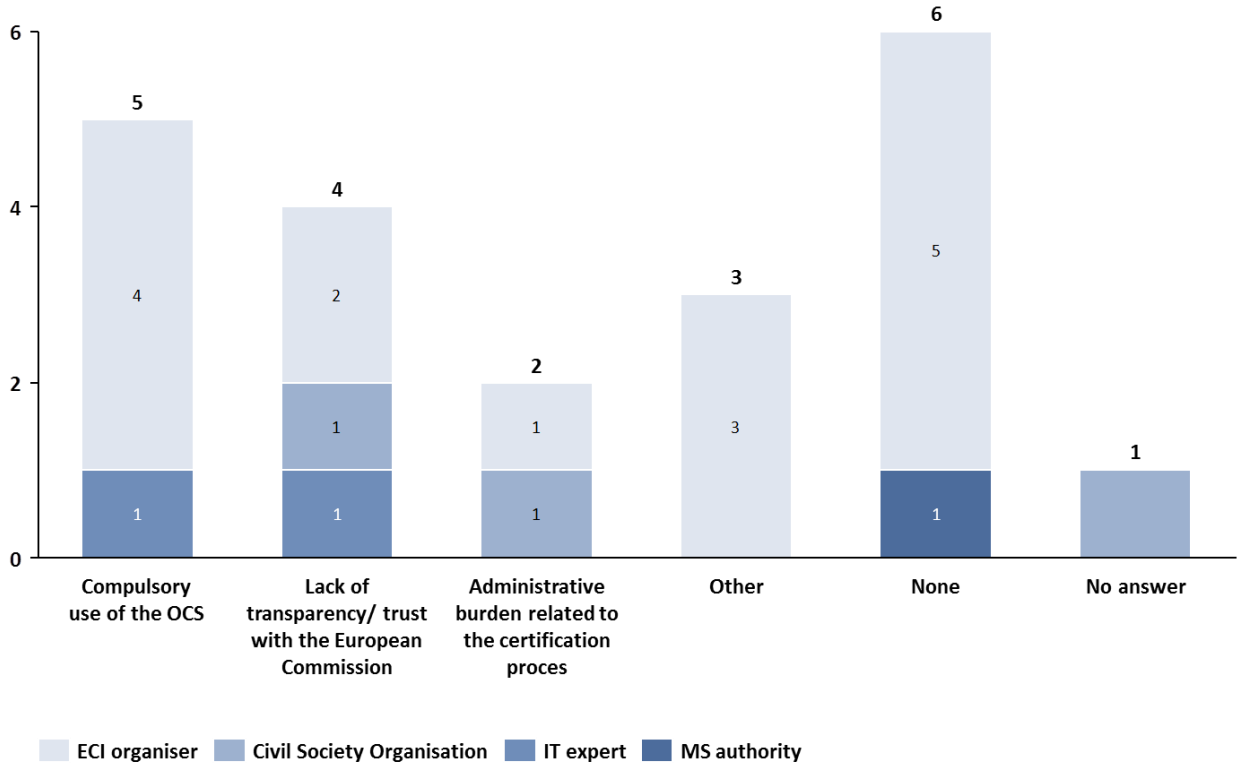
The support provided by the European Commission and/or the Luxembourgish authority competent for certifying the online collection systems is the second main advantage identified by the interviewees (6). This support significantly reduces the administrative burden for ECI organisers and also makes the certification process easier and faster for ECI organisers, taking into account that audit process in the European Commission environment has been highly optimised and partly automated during the 19 audits already performed by the CTIE. Last but not least, part of the documentation needed to get the system certified is directly provided by the Commission which is responsible for ensuring that the parts concerned comply with the technical specifications.

A third major advantage is the guarantee to meet the ECI regulatory requirements and thus the assurance that data are protected and can be securely processed, as mentioned by three respondents (3).

[103] Question addressed to ECI organisers (11), Civil Society Organisations (3), IT expert (1) and Member State's authority competent for certifying the online collection systems (1); i.e. a total of 16 respondents.

Q19. In your view, what are the main disadvantages of having ECI hosted on the Commission platform for ECI organisers?[104]

Figure 20 Disadvantages of the hosting service provided by the European Commission (number of occurrences)



While more than a third of the respondents (6) did not identify any disadvantage to the hosting service provided by the European Commission, the other respondents mentioned three major ones.

Firstly the compulsory use of the software developed by the European Commission was mentioned by five respondents as the main disadvantage, taking into account the disadvantages of the tool and the improvements it requires according to them (see Section 2.2).

Second, four respondents highlighted the need to trust the European Commission, both the institution itself (political) but also its processes and their related security when it comes to the collection and processing of data (technical).

Third, even though the certification process can be performed at a lower cost and faster for ECI organisers, they still need to spend time understanding the documentation needed for the certification of their online collection system and perform some of the paperwork, as mentioned by two respondents.

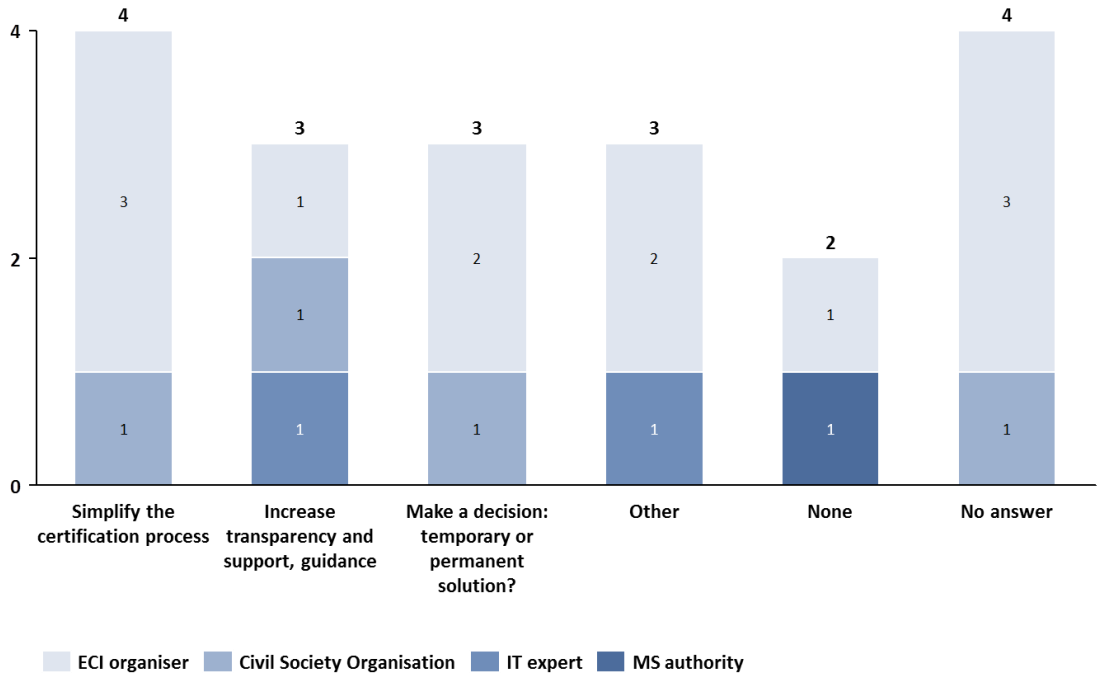
In the 'Other' category, the three following disadvantages were mentioned: the uncertainty around this hosting service as it is presented as a 'temporary solution', the inability for some ECI organisers to communicate with the European Commission in their native language (according to the hosting agreement, organisers can only communicate with the Commission in French or English), and the low capacity of the server when too many concurrent searches are performed.

[104] Question addressed to ECI organisers (11), Civil Society Organisations (3), IT expert (1), Member State's authority competent for certifying the online collection systems (1); i.e. a total of 16 respondents.

It should be noted that the issue identified by one respondent on the low capacity of the European Commission server was never communicated to the European Commission and the Commission has never received such complaint from any organiser or citizen. The accuracy of this answer is therefore not confirmed.

Q20. In your view, what are the main improvements, if any, needed on the hosting service provided by the European Commission?[105]

Figure 21 Improvements on the hosting service provided by the European Commission (number of occurrences)



Unsurprisingly, the improvements needed on the hosting service provided by the European Commission go along with the disadvantages identified in the previous page. The most popular improvement, in terms of occurrences is the need to simplify the certification process (4). In total, three of the respondents who quoted that improvement mentioned that the certification process should even disappear for ECI organisers: the European Commission should provide them with a 'ready-to-use' platform. This would require modifying the ECI Regulation.

Three respondents (3) would welcome more transparency and guidance from the European Commission, i.e. additional effort and resources should be put on the technical help desk service to reduce the requests' response time and thus further support ECI organisers setting-up their online collection systems. Even though one respondent only stressed on it as a disadvantage, three quoted the need to take a decision on the service (to be temporary or permanent) as a necessary improvement (3). Among them one respondent even suggested to offer this service as a unique and permanent solution to all ECI organisers.

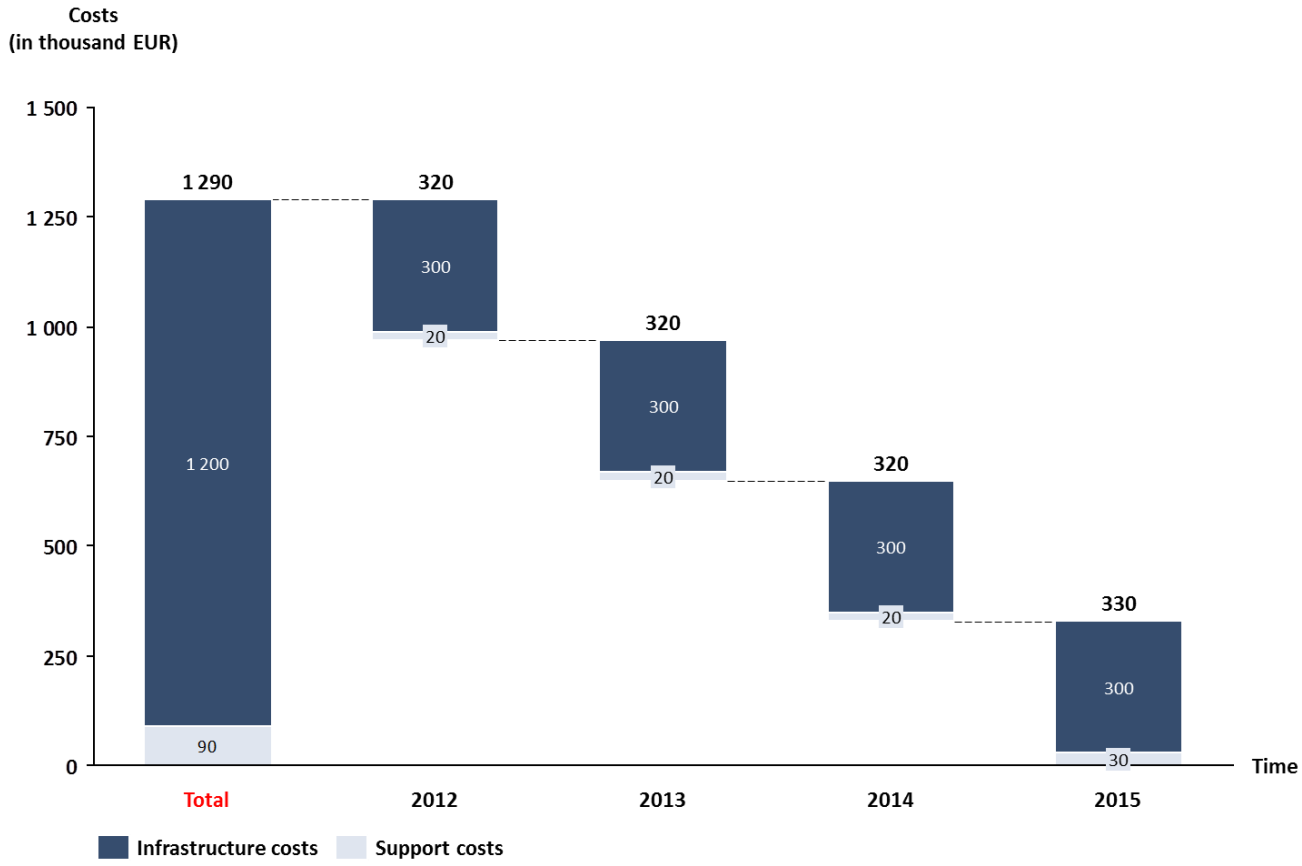
[105] Question addressed to ECI organisers (11), Civil Society Organisations (3), IT expert (1) and Member State's authority competent for certifying the online collection systems (1); i.e. a total of 16 respondents.

In the 'Other' category, while one respondent (1) mentioned the necessity to improve the ECI Online Collection Software, two respondents (2) tended to go beyond the service hosted by the European Commission and respectively commented on the need to review the online collection process timeframe to take into account the time needed for the certification of the system and the need to collect signatories' email addresses.

Four respondents (4) did not provide any answer while two (2) did not mention any improvement needed.

Q21. Please state the yearly costs (in EUR) related to the hosting service for DG DIGIT, between 2012 and 2014, and estimate these costs for 2015.

Figure 22 Costs related to the hosting service (for the European Commission)



In total, between 2012 and 2014 the European Commission engaged € 960,000 in the hosting service and € 330,000 are planned to be consumed in 2015.

As presented in Figure 22, the costs related to the hosting by the European Commission are fixed costs. In fact the system used by the European Commission (Solaris operating system) was designed as an extensible system with the notion of building blocks comprising a capacity[106] planned for 12 systems running at the same time. If, for business reason, additional systems shall be hosted in parallel, a second building block would be added, providing a capacity planned for 12 additional systems.

[106] Capacity should be understood in terms of processor power and storage capacity.

While the hosting cost-model of the European Commission was developed based on an average estimate of 12 systems; in practice, depending on the capacity used by the systems, more or less than 12 systems can be hosted by each building block. For instance, in 2013, a total of 17 systems were hosted in parallel on the same building block during one month.

At the time of this report, a total of 19 systems have been hosted by the European Commission since 2012.

The hosting of a system is assumed to start at the date of the hosting agreement signature between both parties involved, i.e. the European Commission and ECI organisers, and to last 18 months (maximum).

Based on these assumptions, KURT SALMON was able to retrieve the number of systems hosted each year on the European Commission server between 2012 and 2014 and thus to estimate the average cost of hosting one system on these servers[107]:

- 2012: 10 ECI online collection systems (i.e. hosting cost of € 30,000 per system);
- 2013: 17 ECI online collection systems (i.e. hosting cost of € 17,647 per system);
- 2014: 14 ECI online collection systems (i.e. hosting cost of € 21,429 per system).

The infrastructure costs include the cost of support for the certification from the "data-centre" / DIGIT.C.
In addition to the costs displayed in Figure 22, the costs of one third of an FTE/ year from DIGIT.B.2 should thus be added[108] to the above mentioned costs, i.e. €33,333[109].

Based on these figures, one can conclude that the hosting service has cost €28,025 per system[110] between 2012 and 2014.

It should finally be noted that these amounts do not take into account infrastructure costs such as building and energy, neither costs for licenses (Oracle).

To summarise, based on the outcomes of the interviews conducted, the hosting service provided by the European Commission tend to fully satisfy its users, as the setting-up, certification, operation and maintenance of the system is 'cheaper, easier and faster'.

The results of the survey confirmed these findings as the four reasons having scored the highest[111] are the following:

1. It saved/will save the costs (time and money) of the research to perform in order to find eligible hosting providers and these related to the setting-up of the online collection system as these services are provided free of charge by the European Commission – Score 5/5
2. Free support provided by the European Commission all along the online collection process (including the certification process). – Score 4.8/5

[107] Infrastructure costs being fixed every year (€300,000), the cost of hosting one system can be assessed (for each year) by dividing these yearly infrastructure costs by the number of systems having been hosted on the European Commission servers each year.
[108] 1 FTE/ year from DIGIT.B.2 is used for support in the Register, ECI Online Collection Software and hosting.
[109] Based on VAST methodology, the value of 1 FTE in euros for a European Commission official can be assessed at €100,000.
[110] Average of the unit costs calculated for 2012, 2013, 2014 (for the server) and for 2012, 2013 and 2014 (for the cost of the internal resources in DIGIT): [(€30,000+€17,647+€21,429)/3] + [(33,333*3)/20] = €28,025 per system.
[111] Survey respondents were given a list of potential reasons for using the hosting service offered by the European Commission and were asked, for each reason, whether they 'strongly agree', 'agree', 'neither agree nor disagree', 'disagree' or 'strongly disagree'. KURT SALMON established a scoring system going from 1 to 5 for each type of answers and calculated the average score of each reason.

3. Technical responsibility shifted to the European Commission, even though ECI organisers remain liable for the data collected (lower risks). – Score 4.8/5
4. The fact that the European Commission itself is hosting the ECIs guarantees the required level of security and compliance with the ECI Regulation and related Commission Implementing Regulation N°1179/2011 – Score 4.8/5

The main reasons why four ECI organisers did not use the hosting service provided by the European Commission are the following: this service was not yet offered by the European Commission (3); and the fact that the solution proposed was only temporary (uncertainty) combined to the idea that the European Commission server had a capacity that would have been too low for the ECI (1)[112].

[112] See in this regard comments under Question 19 and Figure 20 above.

2.4. Certification procedure

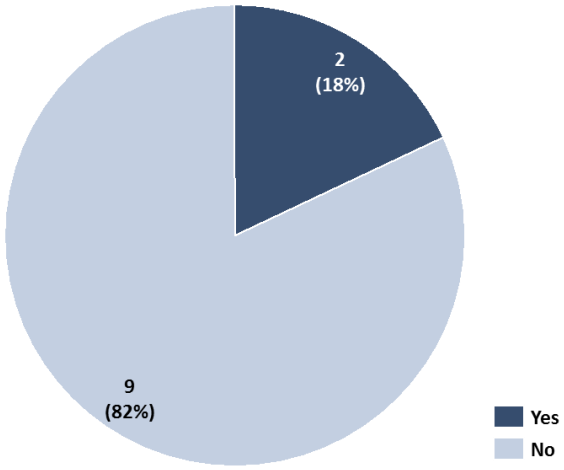
As stated in Article 6 (1) of the ECI Regulation "Where statements of support are collected online, the data obtained through the online collection system shall be stored in the territory of a Member State.
The online collection system shall be certified […] in the Member State in which the data collected through the online collection system will be stored. The organisers may use one online collection system for the purpose of collecting statements of support in several or all Member States."

In the course of this study, several groups of stakeholders[113] were consulted to further analyse the administrative burden generated on ECI organisers for getting their online collection system certified. Their feedback is displayed in this section.

[113] The stakeholders consulted varied from one question to another. The list of these consulted for each question is thus detailed in each related question.

Q22. Have you got your system certified before the registration of your proposed initiative by the Commission?[114]

Figure 23 ECI organisers having certified their online collection system before the registration



Based on the 11 answers received from ECI organisers, two ECI organisers certified their system before having any approved request for registration. While the request for registration of one of them was rejected by the European Commission afterwards; the other one was able to collect online statements of support but did not reach the necessary amount of statements of support by the end of the data collection period.

With regards to the organisers of nine other ECIs, five managed to conduct both steps in parallel; one got their system certified one month after their request for registration was approved; and one after three months[115] . The other two respondents did not mention any timeframe.

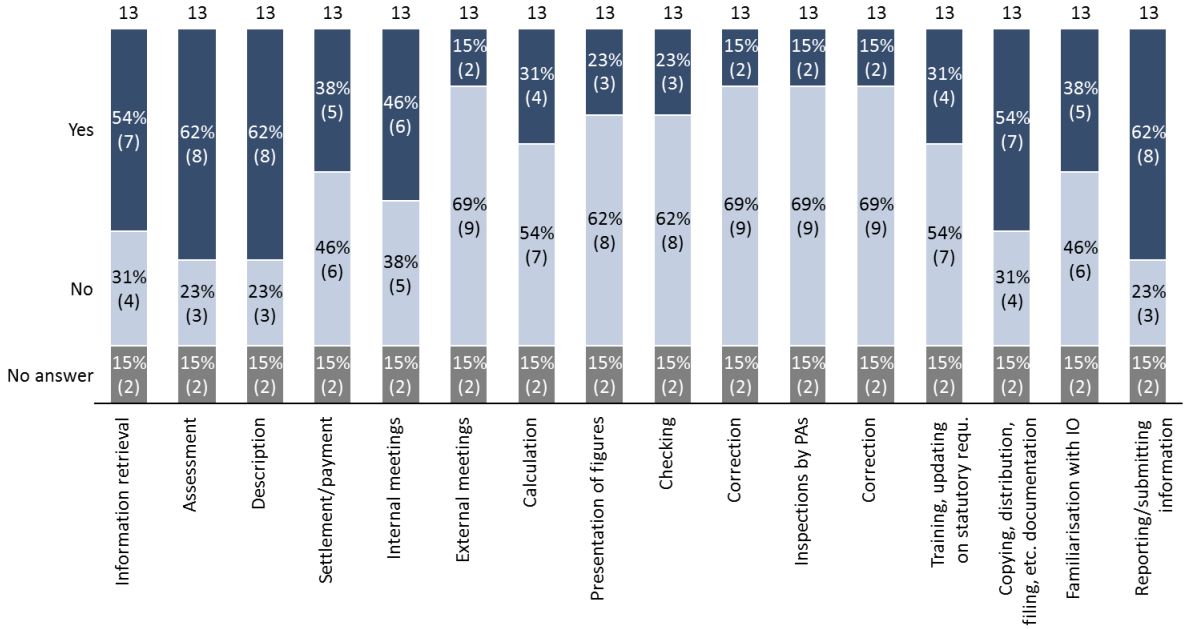
In July 2012, the European Commission decided to exceptionally extend the one-year deadline to collect one million statements of support until the 01.11.2013, as a response to the issues faced by the first ECI organisers[116] during the start-up phase of their ECI. This aimed to ensure that all organisers had the same opportunity for a full 12 months data collection from the moment the Commission's platform is operational, whether they use the platform or not.

[114] Question addressed to ECI organisers (11).
[115] The respondent mentioned that 'It has been three months since the ECI is registered but the system is not yet certified' at the time of the report.
[116] Fraternité 2020 - Mobility. Progress. Europe; High Quality European Education for All; Pour une gestion responsable des déchets, contre les incinérateurs; Suspension of the EU Climate & Energy Package ; Central public online collection platform for the European Citizen Initiative ; Stop vivisection ; Water and sanitation are a human right! Water is a public good, not a commodity!; One of us.

Q23. What are the administrative activities generated by the ECI Regulation on your 'organisation', with regards to the certification of online collection systems?

Based on the International Standard Cost Model Manual[117] a list of 16 administrative activities have been defined and addressed to 13 stakeholders (11 ECI organisers and 2 MS competent authorities for certifying ECI online collection systems).

Figure 24 Administrative activities generated on ECI organisers



As displayed in Figure 24, two ECI organisers (2) did not answer to the question due to the low level of granularity of the activities. More than three fourth of the ECI organisers having answered to that question mentioned that the administrative activities to be performed by ECI organisers are:

- Assessment: which figures and information need to be included in the documentation
- Description: Preparation of description of the information required.
- Reporting/submitting information: Submission of the documentation to the relevant authority.
- Information retrieval: Retrieving the relevant figures and information needed to fill in the documentation required, from internal or external sources.
- Copying, distribution, filing, etc. of the documentation required. It may also be necessary to store the documentation with a view to subsequent production in connection with an inspection.

Furthermore, one IT expert having supported two ECIs mentioned that the administrative activity that was the most time-consuming was the familiarization with the ISO standards mentioned in the ECI Commission Implementing Regulation N°1179/2011 and the risk analysis of the hosting platform, process and organisation.

While asked to estimate the price, time and quantity needed to perform these activities for the certification procedure, ECI organisers had difficulties to give an estimate. In some cases, it occurred a long time ago and the organisers did not keep track of the effort spent on these activities; in other cases the estimate includes the efforts spent over the whole ECI online collection process; or some information is missing (e.g. no duration, no number of resources).

[117] International Standard Cost Model Manual 'Measuring and reducing administrative burdens for businesses, SCM Network.

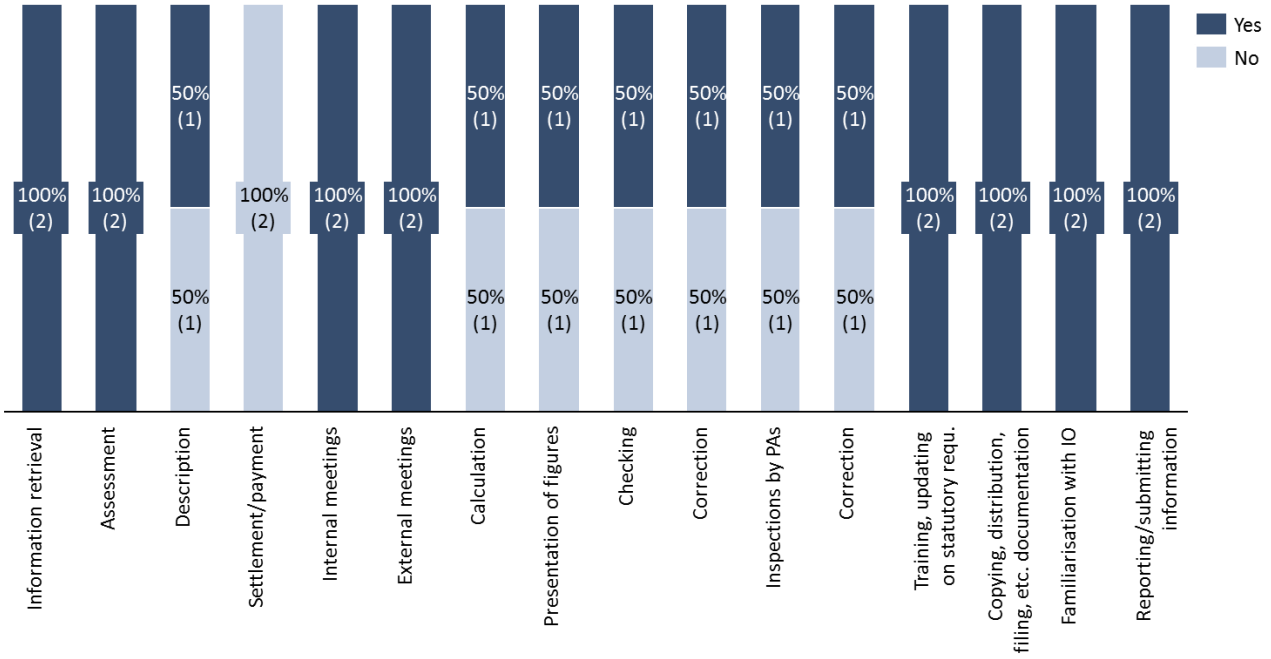
While correlating the estimates from ECI organisers and these from one IT expert who supported the certification of several ECI online collection systems, two estimates can be considered as relevant:

- 30 hours of an IT expert [€ 2,400] and 10 hours of one ECI organiser
- Ten days of one IT expert [€ 6,400][118] and € 3,000 for external consulting (in this case, once the IT experts had completed all the documents required for the certification, they hired an external consultant to verify them and improve them to ensure the certification of the system.)

It should be noted that these estimates concern ECI organisers having used the service of a private hosting provider. It thus seems relevant to lower these estimates in case ECI organisers choose to host their system on the European Commission server, as in most cases, the assistance by the European Commission replaced the need for being assisted by an external IT expert.

The same question was addressed to Member States competent authorities for certifying online collection systems (two of them).

Figure 25 Administrative activities generated on MSs authorities



Both authorities surveyed agreed that the administrative activities to be performed by them are:

- Information retrieval: Retrieving the relevant figures and information needed to comply with a given information obligation, from internal or external sources.
- Assessment: which figures and information need to be included in the documentation
- Internal meetings: Meeting(s) held internally between the stakeholders involved in the certification of the documentation required.
- External meetings: Meeting held in cases where compliance with the information obligation requires meetings with an auditor, lawyer or the like.

[118] Following the estimates given by one ECI organiser, the rate of an IT expert can be considered as 80€/hour. In this regards, by assuming that one day of work correspond to 8 hours, ten days of an IT expert would cost €6,400 (80*8*10).

- Training, updating on statutory requirements: As the ECI Regulation is a relatively new instrument, training has been necessary for the national authorities to get acquainted with and implement the new rules. Moreover, although no changes have been made in the ECI regulatory framework which could have impacted on the actual certification process, modifications have been brought to the Annexes of the ECI Regulation (in particular Annex III related to the statement of support forms) and in some cases, the authorities in charge of certifying online collection systems are concerned thereby as they are at the same time in charge of verifying the statements of support.
- Copying, distribution, filing, etc. of the documentation required. It may also be necessary to store the documentation with a view to subsequent production in connection with an inspection.
- Familiarisation with the information obligation: Time and effort spent by the organisation in familiarising themselves with the rules included in the ECI Regulation and related Commission Implementing Regulation, with regards to the certification procedure.
- Reporting/submitting information: Submission of the documentation to the relevant authority.

Regarding their assessment of the costs related to the certification procedure, one authority assessed these costs at € 30,000 per certification while the other one estimates 1 FTE during 2 to 3 weeks (depending on the situation).

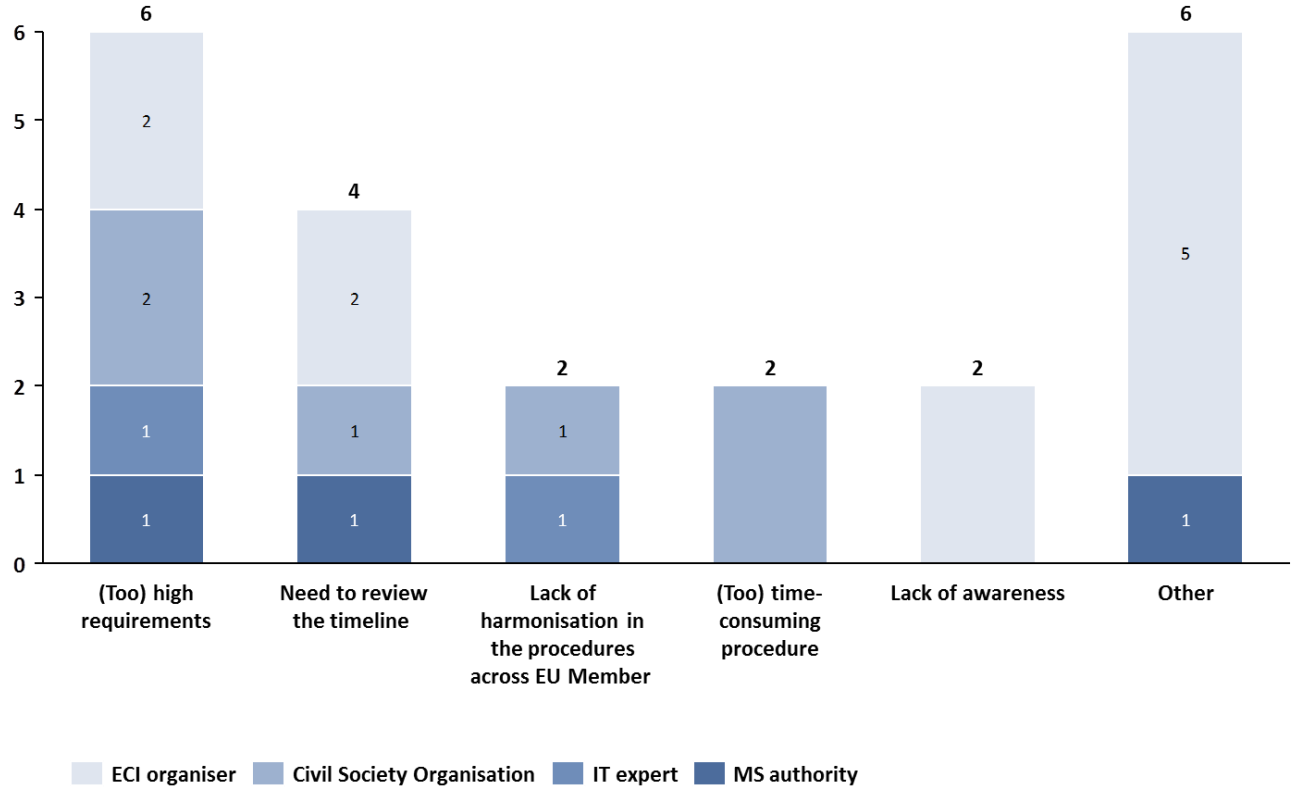
When organisers choose to have their system hosted on the Commission servers, a third group of stakeholder is impacted by the certification procedure: the European Commission and in particular the unit from DIGIT which is responsible for the hosting service.

The latter assessed the costs related to the certification procedure at € 10,000 to ensure the audit of each ECI Online Collection Software instance by the CTIE[119].

[119] These costs are specific to the certification and independent from these already accounted for in the hosting section.

Q24. Please indicate any general comments you may have on the certification procedure[120].

Figure 26 Comments on the certification procedure (number of occurrences)



Overall, half of the respondents (6) mentioned that the ECI regulatory requirements for online collection are very high and generate too much paperwork and administrative burden, making the certification procedure complex. One ECI organiser stated that "unless a team is dedicated to the administrative tasks necessary for the certification, it is very difficult for organisers to manage this step of the process". For the Member States having low experience on the matter, the certification procedure may also end up being very complicated.

Four respondents (4) are in favour of reviewing the timeline set for the certification procedure in the ECI Regulation. In their opinion, the data collection period should either be extended taking into account the time needed for the certification process or it should be made compulsory to start the certification process at the same time as the registration process. The Luxembourgish authority agreed that the one-month certification period can be short in case the documents sent to the authority need to be revised by the ECI organisers because not complete. Additionally, two respondents respectively claimed the lack of harmonisation in the certification procedure at national level (2), some authorities going for a physical audit and others purely checking documents; the fact that the certification procedure is too time-consuming for ECI organisers in particular (2) and ECI organisers' lack of awareness on the certification process (2). Regarding the latter point, it is not clear to all ECI organisers that the certification can be performed in parallel to the registration in spite of this being explained in the ECI website and guide.

[120] Question addressed to ECI organisers (6), Civil Society Organisations (3), IT experts (2) MS authority (1); i.e. a total of 12 respondents.

In the 'Other' category, the two following points were mentioned: (i) Member States should not be involved in the exercise of European citizens' rights; (ii) the documents to be filled-in and submitted to the national competent authority with regards to the certification of an ECI online collection system (or a hyperlink to these documents) should be provided by the latter authority to the concerned ECI organisers, in order to facilitate the certification procedure for them. It should however be noticed that, in practice, some authorities such as the CTIE in Luxembourg, already do so[121].

[121] http://www.guichet.public.lu/citoyens/fr/citoyennete/democratie-participative/depot-requetes-petition/initiative-citoyenne-europeenne-EN/index.html

2.5. Support

Whether they decide to implement Scenario 1 or Scenario 2, ECI organisers may be assisted by IT experts to install, operate and/or get their online collection system certified.

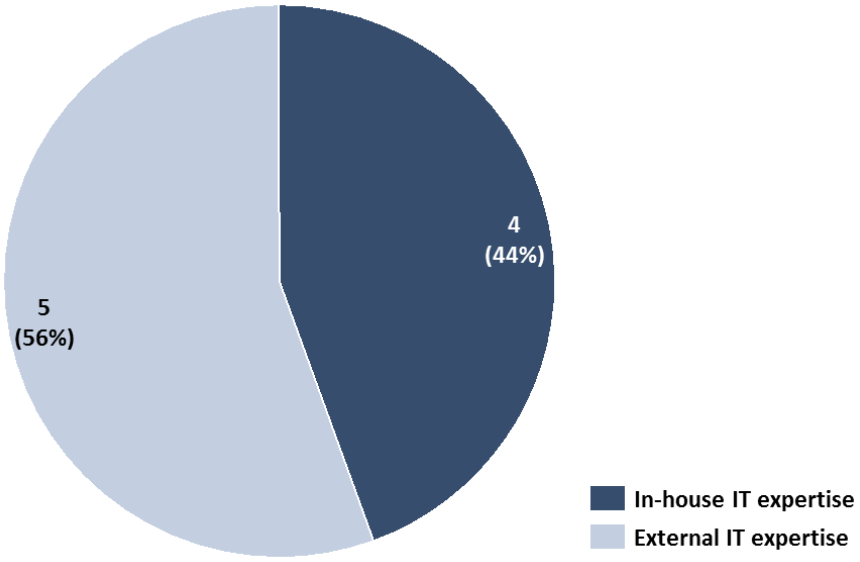
In the course of this study, ECI organisers themselves as well as Civil Society Organisations were consulted to understand the level and type of support needed by ECI organisers while collecting online for an ECI. Their feedback is displayed in this section.

Q25. Have you been or planned to be assisted by IT expert(s) for the setting-up and operation of your online collection system (either external or from within your committee)?[122]

Overall, out of the 11 respondents, 9 ECI organisers have used IT experts to set-up and operate their online collection system. One ECI organiser did not know the situation for their ECI and one did not use any IT expert as they withdrew their initiative before certifying their system.

Figure 27 below displays the split between the ECI organisers having used the IT skills available in-house and these having hired an external IT expert.

Figure 27 Support by IT experts



While four ECI organisers have used the competencies within their ECI organisers' committee or close network (4), five requested the help from external experts (5).

For 8 ECI organisers out of 9, this decision was related to the IT skills available/ not available in-house. When members of the ECI organisers' committee (and related network) were 'computer-savvy' enough and had the requested skills to get the system certified, then no external IT expertise was needed. On the other hand, when the IT skills and resources required were not available in-house then the ECI organisers contracted external IT expert(s) to support them throughout the certification process.

[122] Question addressed to ECI organisers (11).

One ECI organiser mentioned that the decision made to be supported by an external IT expert was mostly related to the amount of time-consuming administrative activities needed for the certification. The amount of bureaucracy/ paperwork required is indeed a major issue in the online collection process, as the time spent on the certification is taken out from the statements of support collection period if organisers do not go through this process before registering their proposed initiative.

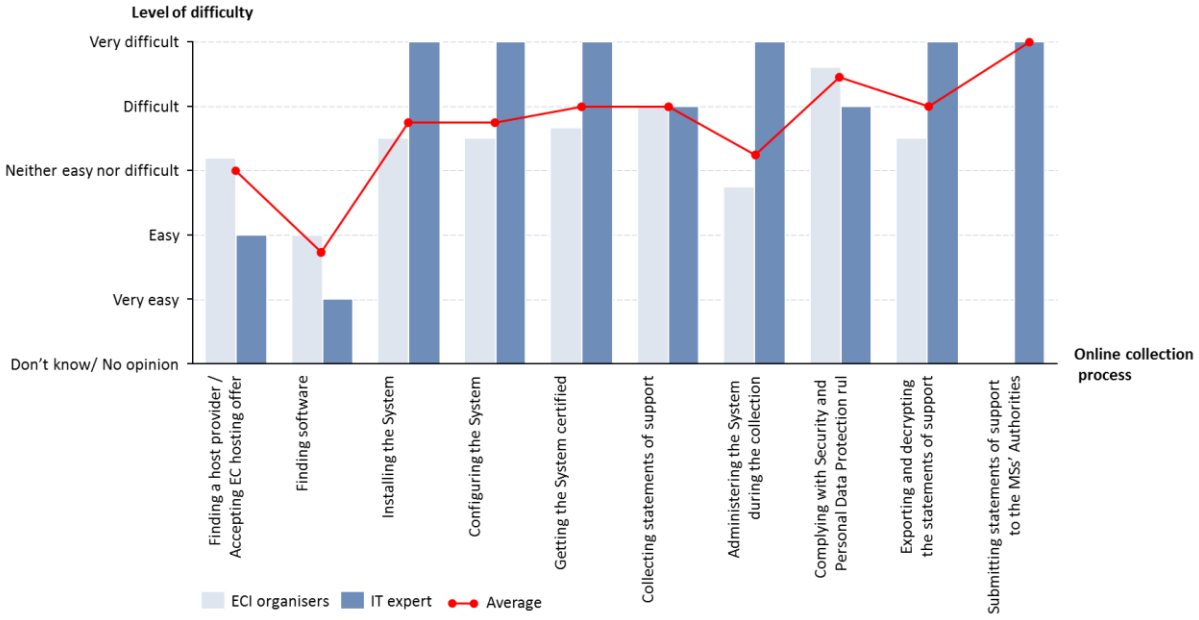
It should be noted that all the ECI organisers having used their in-house IT expertise to set-up and operate their system have also used the European Commission hosting service. On the contrary, out of the five ECI organisers having requested external support, four used a private hosting service and only one the hosting service offered by the European Commission.

Two main points result from this analysis: IT skills and expertise are necessary for setting-up and getting an online collection system certified in all cases. While the European Commission provides this expertise for free to ECI organisers when they decide to host their system on the European Commission server, ECI organisers need external support when they choose to host their system on private servers.

Q26. Which part of the online collection process was the most difficult for you and why?

ECI organisers (5) and one IT expert (1) having supported two ECIs were asked which part of the online collection process was the most difficult to implement. Figure 28 displays the main findings related to this question.

Figure 28 Online Collection process difficulty



On the one hand, the most difficult parts of the process, as assessed by five ECI organisers and one IT expert, are related to the compliance of the system with the rules on Security and Personal Data, the actual collection of statements of support, getting the online collection system certified and exporting and decrypting the collected statements of support[123].

Two ECI organisers mentioned that the process can only be straightforward if organisers have the knowledge and prior experience needed in this field. Otherwise, for 'ordinary' citizens, or non IT persons, the process is most likely to be overwhelmingly difficult. One ECI organiser also highlighted that it is not easy to ensure a consistent commitment to IT throughout the ECI lifecycle, when the work is performed by volunteers only.

On the other hand, finding online collection software and a host provider (or accepting the European Commission hosting offer) are rather easy activities to perform.

The question was also addressed to ECI organisers and Civil Society Organisations, as an open question, in the course of the interviews.

- ECI organisers' responses tend to converge towards the actual collection of statements of support (4), mostly due to the type of data and the heterogeneous data requirements that are set across EU Member States. The rest of the organisers mentioned the installation of the system (1) and getting it certified (1).
- Civil Society Organisations' responses rather tend to the certification process (2), inducing a high amount of paperwork and the need to be assisted by IT experts. One added that the collection of statements of support is another difficult step for the same reasons as abovementioned.

[123] Even though the submission of the collected statements of support to the Member States' Authorities is assessed as very difficult, it is not taken into account in the analysis as it is based on the answer from one respondent only.

Q27. What are the most common requests for support you receive with regards to the online collection process, as currently in place in the context of the ECI?

While consulted on this question, Civil Society Organisations (3) mostly mentioned two types of requests:

- General information on the functioning of the ECI (2): General information on the ECI (e.g. what is it? how does it work?); and more specifically on the registration (time needed to register an ECI, relevance of the ECI to the registration criteria, steps to ensure compliance with the Data protection law) and certification procedure (e.g. difference between software and system, time needed for the certification).
- Legal advice (2): ECI organisers generally lack understanding of the ECI legal framework and process; they thus need legal advice to ensure that the request for registration of their initiative complies with the registration criteria set out in the ECI Regulation.
- Other (3): ECI organisers also benefit from the help from Civil Society Organisations for translating their ECI and for building networks (to ensure that seven individuals from seven different Member States can form a committee of ECI organisers and to ensure that the threshold in terms of number of statements of support to be collected is reached in at least seven Member States).

One Civil Society Organisation also reported complaints on the slow technical support from the European Commission and the fact that the audio captcha[124] system is only available in English, and thus not accessible for all visually impaired people, prevents access for all citizens.

As a result of this analysis, one can conclude that the requests for support received from Civil Society Organisations are not directly related to the online collection process. While some ECI organisers consulted them for getting specific inputs on the certification procedure, most rather need their support to acquire a better knowledge on the ECI overall and be more informed (general information but also legal advice) so as to 'pass' the registration process in particular. To a lesser extent, support is also provided by the Civil Society Organisations to help organisers translating their ECIs in additional official EU languages and building strong networks.

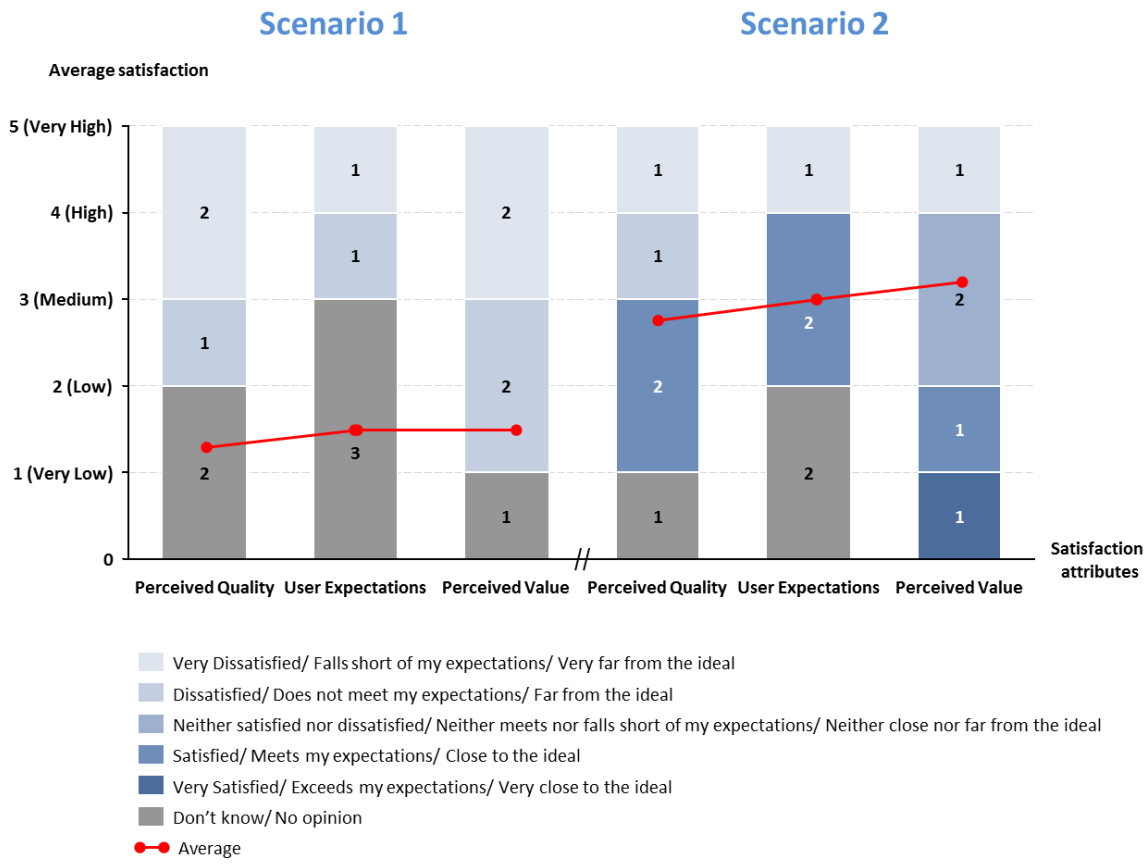
[124] 'Captcha' stands for 'Completely Automated Public Turing test to tell Computers and Humans Apart'.

3. Assessment of the baseline scenarios

This section aims at assessing each scenario based on the costs and benefits generated on each group of stakeholders.

To introduce this section, the average level of satisfaction of ECI organisers with regards to each scenario is presented below. Based on the "American Customer Satisfaction Index" (ACSI) methodology[125], the customer satisfaction index score is calculated as a weighted average of three survey questions that measure different facets of satisfaction with a product or service (perceived quality, customers' expectations and perceived value). In this regards, ECI organisers were asked in an online questionnaire to assess their overall satisfaction with each scenario, and to evaluate whether each scenario meets their expectations and is close to their ideal.

Figure 29 Level of satisfaction (Scenario 1 and 2)



As a result, based on the five answers received by ECI organisers, it appears that Scenario 2 provides them with a greater level of satisfaction than Scenario 1. While the latter scores an average of 1.4 in terms of satisfaction (between 'very low' and 'low'); Scenario 2 scores 3, corresponding to a level of satisfaction that is rather neural/ medium.

[125] International Journal of Academic Research in Business and Social Sciences, October 2011, Vol. 1, No. 3, ISSN: 2222-6990.

The main reasons for the low score of Scenario 1 are that it is said to be time-consuming and costly to implement. In Scenario 2, ECI organisers appreciate the free hosting service provided by the European Commission, and are mostly dissatisfied with the ECI Online Collection Software that should, in their opinion, be subject to improvements. Two ECI organisers out of five mentioned that the ideal scenario would be to be provided with a full integrated and ready-to-use package, similar to Avaaz.org, where certification is not borne by the stakeholders conducting an initiative.

Taking into account that these results are based on the answers from five ECI organisers only, they may not reflect the perception from all stakeholder groups impacted by the ECI Regulation.

Therefore, the remaining of this section aims to assess the positive impacts (benefits) and negative impacts (costs) foreseen for each scenario and stakeholder group.

Before going through the costs and benefits of each scenario, the major assumptions for the assessment are stated in the following sub-section.

3.1. Assumptions

While performing the cost-benefit analysis of both scenarios, the following assumptions should be made:

- Assumption 1 – Differentiation between Scenario 1a and 1b
  Scenario 1, which corresponds to the original architecture of the online collection systems, as defined in the ECI Regulation and related Commission Implementing Regulation No 1179/2011 (hosting to be found and borne by the organisers who can use the software developed by the Commission or any other software) is further articulated according to whether the software developed by the European Commission (1a) or private software (1b) is used. While comparing Scenario 1 and Scenario 2, the specificities of Scenario 1a and 1b are taken into account accordingly.
- Assumption 2 – Average cost of Full-Time Equivalent (FTE)
  In this regards, two types of resources are considered for our analysis.
  - Non-EC staff, including every type of expense (human, software, hardware, etc.) except those covered by the "European Commission staff" category. The average cost of one FTE[126] external staff is considered to be around €110,000 per year.
  - EC staff in FTE, i.e. internal staff like officials, contractual agents, temporary agents. The average cost of one European Commission staff in FTE is considered to be around €100,000 per year.
- Assumption 3 – Substantive compliance costs
  Since the estimates of the costs are focused on Information Technology (IT), substantive compliance costs are calculated as a sum of infrastructure, development, maintenance and support costs and define the Total Cost of Ownership of the system.
  - Infrastructure costs provide the total (anticipated) cost of the hardware (e.g. network, servers) and software (e.g. applications, libraries) required to develop, support, operate and maintain the system.
  - Development costs provide the total (anticipated) cost (human resources) for the development of the system (e.g. analysis and process reengineering activity, coding activity, project management activity, test activity, configuration & change management activity, deployment activity).

[126] One FTE indicates the equivalent work of one full-time resource.

- Maintenance costs provide the total (anticipated) cost (human resources) in person days per year to maintain the system (e.g. activities related to both corrective maintenance and evolving maintenance).
- Support costs provide the total (anticipated) cost (human resources) in person days per year to support the system (e.g. helpdesk, operations).
- Training costs are not included in the TCO considering that these are not substantial for the online collection system implementation.

Additional expenses for organisers to comply with the ECI Regulation are not included in the estimates of the substantive compliance costs, as these are considered as insignificant (< €200), in comparison with the other costs included in the analysis.

- Assumption 4 – Scope of the potential alternative to the ECI Online Collection Software

  Based on the outcomes from the consultation with stakeholders, two online collection software were considered as potential future alternative to the ECI Online Collection Software: Open ECI and We Sign It. The costs for these two solutions to be compliant with the ECI regulatory framework were indeed assessed by their related providers and taken as a basis for assessing the indirect costs for software providers in Scenario 1b.

- Assumption 5 – Uncertainty on the alternative software business model

  Both Open ECI and We Sign It would be based on a freemium model, providing a free-of-charge access to the application combined with a set of services for which initiatives' organisers would have to pay. However, considering that the business model has not been defined yet by the developers, the related costs for ECI organisers are not estimated.

- Assumption 6 – Similar implementation costs of Scenario 1a and 1b for ECI organisers

  Given the absence of available data, the costs to install and operate the online collection system were considered the same for ECI organisers whether the ECI Online Collection Software (Scenario 1a) or an alternative solution (Scenario 1b) is used. This assumption thus implies that, in case alternative software are developed, ECI organisers will not be charged for their development, use or for the use of their related services, following the model set by the ECI Online Collection Software.

  Assumption N°6 also implies the presumption that the cost for ECI organisers to be supported by IT experts in the process would also be similar.

- Assumption 7 – Different implementation costs of Scenario 1a and 1b for national authorities

  The compliance with the technical specifications laid down by the Commission Implementing Regulation (EU) No 1179/2011 is to be verified by the national authority competent for certifying the systems before ECI organisers can start collecting statements of support online. This verification is performed in all cases, whether the software developed by the European Commission is used or not. However, the software developed by the European Commission comes with a warranty from the European Commission, guaranteeing that the software already complies with the relevant security and technical requirements, i.e. points 1, 2.3 to 2.7.2, 2.7.3 (a), (b), (d), (f), (h), 2.7.4, 2.7.5, 2.7.7 (b), (c), 2.7.8, 2.7.10, 2.12, 2.14, 3.1, 3.2, and partially points 2.7.3 (c), (e), 2.7.7 (a), (d), 2.8 to 2.11, 2.13, 3.3 of the Annex to Regulation (EU) No 1179/2011. Therefore, when this software is used for the online collection, national authorities will only need to ensure that the other elements of the online collection system (e.g. hosting environment, business process) comply with the relevant technical

specifications of the ECI regulatory framework. Conversely, when other software than the one developed by the European Commission are used, the national authority will need to verify the compliance of the software with all specifications. As a result, KURT SALMON assumes that the cost of certification for national authorities is doubled when other software than the one developed by the European Commission are used[127].

- Assumption 8 – (Direct) implementation costs have been assessed per ECI.
  The implementation costs of Scenario 1a, 1b and 2 have been calculated based on the estimates indicated in Section 2, for the Register (€25,098 per ECI), the ECI Online Collection Software (€55,161 per ECI) and the hosting service provided by the European Commission to ECI organisers (€28,025 per ECI).
- Assumption 9 – Costs calculated based on the upper range.
  In case estimates do not allow coming up on a precise costs, only the costs of the upper range will be included in the aggregation (e.g. if the substantive compliance costs for ECI organisers is comprised between €10,000 and €45,000; the upper range (€45,000) will be considered in the costs calculations).

[127] http://ec.europa.eu/citizens-initiative/public/software

3.2. Scenario 1

This sub-section aims at assessing the costs and benefits for each group of stakeholders impacted by the ECI Regulation, in case Scenario 1 is implemented.

This assessment is based on the analysis from KURT SALMON and on the inputs received during the data collection period (through online questionnaires and interviews) from the different group of stakeholders.
For instance, the latter were asked about the advantages and disadvantages of each scenario for the different groups of stakeholders.

3.2.1 Costs

Table 6 below provides a qualitative and quantitative description of the main costs related to Scenario 1, which corresponds to the original architecture of the online collection systems, as defined in the ECI Regulation and related Commission Implementing Regulation No 1179/2011 (hosting to be found and borne by the organisers who can use the software developed by the Commission or any other software). Scenario 1 is further articulated according to whether the software developed by the European Commission (1a) or private software (1b) is used. These two sub-scenarios will be treated separately in the cost-benefit analysis.

Table 6 Costs related to Scenario 1 (per group of stakeholders)

SCENARIO 1		
	Qualitative description	**Quantitative description**
Costs to ECI organisers	***Substantive compliance costs***	***€10,000 - €45,000[128] (per ECI)***
	• **(Private) hosting service:** A vendor consultation was launched by KURT SALMON in order to assess the cost of hosting ECI online collection systems in the current state of the ECI Regulation.	• These costs have been assessed between €5,000 and €10,000.
	• **IT expert:** Based on the results of our consultation, ECI organisers do not have the necessary skills and expertise for installing and getting an online collection system certified on a private server. They thus need to hire an IT expert to support them in this process.	• Based on the feedback from ECI organisers having been supported by an IT expert to install, operate and get their online collection system certified (on a private server), costs can be assessed in the following range: o Right 2 Water: €15,000 o Stop TTIP: between € 5,000 and €10,000 o My Voice against nuclear power: €15,000 o 30km/h: €35,000.
	• **Additional expenses to comply with the ECI Regulation[129]**	• Security measures (e.g. rental of a bank safe for the codes and USB key to be stored) : €40; • Notifying the relevant data protection authority: between €0 and €100; • Optionally: Internet website: €50.

[128] This range includes the cheapest (in terms of substantive compliance costs) possible scenario (€5,000 for hosting service and €5,000 for external support to install, operate and get the online collection system certified) and the most expensive one (€10,000 for hosting service and €35,000 for external support to install, operate and get the online collection system certified). The additional expenses to comply with the ECI Regulation are considered as insignificant and thus not included in the compliance costs estimates.
[129] As mentioned in the assumptions, the additional expenses to comply with the ECI Regulation are considered as insignificant and thus not included in the compliance costs estimates.

SCENARIO 1		
	Administrative burden	***€6,000 (per ECI)***
	• **Administrative burden and paperwork related to the certification of the online collection systems:** ECI organisers need to deal with the paperwork/ administrative burden related to the certification process; without necessarily having the required IT skills. Moreover, **certification procedures are not harmonised across EU Member States**: ECI organisers have to choose between 28 different certification processes (efforts for organisers might be higher/lower depending on the MS).	• Based on the feedback from IT experts and ECI organisers, the administrative burden for ECI organisers (Scenario 1) to certify the online collection system stands at an average of €6,000[130].
	Hassle costs	***N/A***
	• **Difficulties to find a suitable hosting provider, i.e. meeting the regulatory requirements** set in the ECI Regulation and related Commission Implementing Regulation N°1179/2011 (e.g. ISO/IEC/27001, ISO/IEC/27002, dedicated server). • **Difficulties to find a suitable alternative to the software developed by the European Commission**, i.e. meeting the regulatory requirements set in the ECI Regulation and related Commission Implementing Regulation N°1179/2011. Moreover, any other software but the one developed by the European Commission would need to be certified as well (increased burden on ECI organisers). • **The liability of ECI organisers** towards the data collected in the context of the ECI can be prohibitive to start an ECI.	• Hassle costs could not be monetised.
Costs to the European Commission	***Substantive compliance costs***	***€80,259 (per ECI)***
	• **Difficulties to ensure the smooth implementation of the ECI**, as under this Scenario the European Commission is not involved in the online collection process.	Costs to maintain (and further develop) the Register and the ECI Online Collection Software are related to the twofold: • **Cost of the Register (per ECI):** €25,098. • **Cost of the ECI Online Collection Software (per ECI):** €55,161.

[130] The exact average is equal to € 5,900; however KURT SALMON rounded it up to € 6,000 for the purpose of the cost-benefit analysis.

SCENARIO 1		
Costs to MS authorities competent for certifying the Online Collection Systems:	***Substantive compliance costs***	***€30,000 (per ECI) – Scenario 1a*** ***€60,000 (per ECI) – Scenario 1b***
	• **Certification of the online collection system by the authority** (more complex in scenario 1b than in Scenario 1a as it would also include the certification of the private software while the one developed by the European Commission comes with a warranty offered by DIGIT, enabling to accelerate the online collection system certification procedure). • **Skills and resources needed to certify these systems.** Resources should be held ready as there is a legal obligation to certify the system within a month (potential need to outsource to external companies for additional resources, in case of a shortage within the administration). • **Processes to be established by each Member State** for certifying the online collection systems.	• Based on the feedback received by Germany, which certified four online collection systems in the context of the ECI, we consider the cost of certifying one online collection system including the software developed by the European Commission to reach € 30,000. • The additional effort to be spent for the certification procedure, in case other software than the one developed by the European Commission is used (Scenario 1b), cannot be precisely estimated based on the answers received from the respondents. KURT SALMON however assumes that the effort will be multiplied by two as, in this case, the authority would need to verify the compliance of the software with each technical specification from the ECI regulatory framework.
	Administrative burden	***N/A***
	• **Effort potentially spent in vain** in case a system is certified before the request for registration of its related ECI is approved.	• Administrative burden could not be monetised.
Costs to hosting providers	***Indirect compliance costs***	***N/A***
	• **Compliance with the requirements set in the ECI Regulation and Commission Implementing Regulation N°1179/2011:** On the one hand, the results from the vendor consultation do not translate any difficulty for hosting providers to comply with the ECI regulatory framework. On the other hand, the hosting providers consulted by the European Commission (DG DIGIT) in 2012, and one IT expert believe that the main barrier for hosting providers relates to the costs of implementing regulatory requirements imposed by the ECI regulatory framework, in particular the use of dedicated server and the compliance with the ISO/IEC/27001 and ISO/IEC/27002 standards which are not open standards but need to be bought by the company.	• Indirect compliance costs for hosting providers were not monetised.

SCENARIO 1		
Costs to software providers:	***Indirect compliance costs***	***€44,000 – €130,000***
	• **Compliance with the requirements set in the ECI Regulation and Commission Implementing Regulation N°1179/2011** in order to pass the certification procedure.	• The costs to be incurred on software providers are related to the development, certification and support of software complying with the ECI Regulation. In this regards, two software have been identified as potential future alternatives to the ECI Online Collection Software: 'Open ECI' and 'We Sign It'. While the cost of the former was assessed between €44,000 and €55,000, the owner of the latter estimates the costs at € 130,000 to become compliant with the certification rules imposed by the ECI regulatory framework.
	Other indirect costs (opportunity costs)	***N/A***
	• The costs for software providers in Scenario 1a are so-called 'lost opportunity' costs; they correspond to the value (benefits) for them of implementing Scenario 1b.	• Given that the market is not mature enough (size is too low), lost opportunity costs cannot be assessed for Scenario 1a.
Cost to IT experts	• No costs to be incurred on IT experts.	• No costs to be incurred on IT experts.
Cost to ECI signatories	***Other indirect costs (opportunity costs)***	***N/A***
	• No direct cost to be incurred on ECI signatories, since the access to the system is free-of-charge. • Indirect cost of adaptation to each different software, in case the ECI Online Collection Software is not used by the ECI organisers (Scenario 1b).	• No direct cost to be incurred on ECI signatories, since the access to the system is free-of-charge. • Indirect costs for signatories were not monetised.

As a result, the direct costs incurred on ECI organisers and the European Commission are the same whether Scenario 1a or Scenario 1b is implemented. KURT SALMON indeed considered the costs of installing and operating the online collection system similar whether the ECI Online Collection Software or a private solution is used[131]. The cost of implementing each scenario would however differ for the national authorities competent for certifying online collection systems[132] (i.e. twice higher when the online collection software developed by the European Commission is not used) and for software providers (indirect costs related to the development, certification and support of software complying with the ECI Regulation, in Scenario 1b).

[131] Please refer to the Assumption 6.
[132] Please refer to the Assumption 7.

3.2.2 Benefits

Table 7 below provides a qualitative and quantitative description of the main benefits related to Scenario 1, which corresponds to the original architecture of the online collection systems, as defined in the ECI Regulation and related Commission Implementing Regulation No 1179/2011.

Table 7 Benefits related to Scenario 1 (per group of stakeholders)

SCENARIO 1		
	Qualitative description	**Quantitative description**
Benefits to ECI organisers:	***Improved market efficiency***	
	• **Online Collection Software available for free** to ECI organisers (**Scenario 1a**). The software is also coming with a warranty offered by DIGIT, enabling to accelerate the online collection system certification procedure. • **Ability to adapt online collection system to their needs:** choice of the hosting provider; choice of the software provider: alternative to the ECI Online Collection Software (Scenario 1b); modified version of the ECI Online Collection Software (Scenario 1b); ECI Online Collection Software in its current state. • **Ability to engage the community of IT experts interested in eDemocracy** and aware of campaigners' needs (as several have assisted ECI organisers setting-up and operating their online collection system in the context of the ECI). • **Efficient and effective communication with their hosting providers** (e.g. no language barrier, fast responses from the provider). • **More possibilities for ECI organisers to have their system certified** (any of the 28 Member States). • **Support from the Commission on how to operate the ECI Online Collection Software for free under Scenario 1a.**	• Benefits could not be monetised.
Benefits to the European Commission:	***Improved market efficiency***	
	• **Time and money saved:** no need to get involved in the technical settings and certification of the systems. • **Technical responsibility** borne by ECI organisers, private hosting providers (scenario 1a) as well as software providers (Scenario 1b).	• Benefits could not be monetised.

SCENARIO 1		
Benefits to MS authorities competent for certifying the Online Collection Systems:	***Improved market efficiency***	
	• **Use of the ECI Online Collection Software facilitating the certification procedure**, as it comes with a "warranty" from the European Commission (Scenario 1a).	• Benefits could not be monetised.
	Additional utility, welfare or satisfaction	
	• **Opportunity to learn about** and get involved in the online collection systems in the context of the ECI, and reuse this knowledge at local, regional or national level.	• Benefits could not be monetised.
Benefits to hosting providers:	***Benefits from third party compliance with legal rules***	
	• **Opportunity for hosting providers to penetrate the ECI market**, inducing (in the short-term) potential financial benefits and acquired expertise; and (in the long-term) a new need on the market, new jobs and economic growth (in Scenarios 1a & 1b).	• Benefits could not be monetised.
Benefits to software providers:	***Benefits from third party compliance with legal rules***	
	• **Opportunity for software providers to penetrate the ECI market**, inducing (in the short-term) potential financial benefits and acquired expertise; and (in the long-term) a new need on the market, new jobs and economic growth (only in Scenario 1b).	• Benefits could not be monetised.
Benefits to IT experts	***Benefits from third party compliance with legal rules***	
	• **Opportunity for IT experts to penetrate the ECI market**, inducing (in the short-term) potential financial benefits and acquired expertise. • **Ability to be engaged in and contribute to eDemocracy**, by putting their knowledge and competencies in the service of ECI organisers.	• Benefits could not be monetised.
Benefits to ECI signatories	***Improved market efficiency***	
	• **Access to the system is free-of-charge.** • **Harmonised ECIs,** using the ECI Online Collection Software (no effort to adapt to different systems) in Scenario 1a.	• Not assessed
	Additional utility, welfare or satisfaction	
	• Not assessed	• Not assessed

As a result of the benefits analysis, the benefits to stakeholders tend to differ according to the scenario implemented. On the one hand, Scenario 1a allows the use of the ECI online collection software, made available for free to ECI organisers, facilitating the certification process for Member States' authorities competent for certifying the Online Collection Systems and enabling signatories to get used to a harmonised display of ECIs.

On the other hand, Scenario 1b allows software providers to penetrate the ECI market, inducing potential financial benefits and acquired expertise, and releases the European Commission from some of their technical responsibilities, i.e. technical support to ECI organisers on the ECI Online Collection Software.

3.3. Scenario 2

This sub-section aims at assessing the costs and benefits for each group of stakeholders impacted by the ECI Regulation, in case Scenario 2 is implemented.

This assessment is based on the analysis from KURT SALMON and on the inputs received during the data collection period (through online questionnaires and interviews) from the different group of stakeholders.
For instance, the latter were asked about the advantages and disadvantages of each scenario for the different groups of stakeholders.

3.3.1 Costs

Table 8 below provides a qualitative and quantitative description of the main costs related to Scenario 2.

Table 8 Costs related to Scenario 2 (per group of stakeholders)

SCENARIO 2		
	Qualitative description	**Quantitative description**
Costs to ECI organisers:	***Substantive compliance costs***	***€ 0*** [133]
	• **Additional expenses to comply with the regulation**	• Security measures (e.g. rental of a bank safe for the codes and USB key to be stored): € 40; • Notifying the relevant data protection authority: between €0 and €100; • Optionally, Internet website: € 50.
	Administrative burden	***€ 1,500***
	• **Administrative burden and paperwork related to the certification of the online collection systems reduced compared to Scenario 1, but still there:** even though the technical skills required for ECI organisers are lower than in Scenario 1, they still need to spend time understanding the documentation needed for the certification of their system.	• The time spent for the certification procedure cannot be precisely estimated considering that there are divergent answers from the respondents. However, KURT SALMON assumes that the effort can be divided by four at least, compared to Scenario 1.
	Hassle costs	***N/A***
	• **Inability to fully adapt their online collection system to their needs** (e.g. alternative to the ECI Online Collection Software; modified version of the ECI Online Collection Software; ECI Online Collection Software as its current state), since the use of the ECI Online Collection Software is compulsory.	• Hassle costs could not be monetised.

[133] As mentioned in the assumptions, the additional expenses to comply with the ECI Regulation are considered as insignificant and thus not included in the compliance costs estimates.

SCENARIO 2		
	• **Margin for improvement in the communication between ECI organisers and the European Commission technical helpdesk:** responses from the European Commission to ECI organisers' requests slower than expected by organisers and potential inability to communicate in the ECI organiser's native language. ECI organisers think that this could slow down the online collection process in case of incident, despite the clear provisions of the Hosting Agreement in this respect.	
Costs to the European Commission:	***Charges***	***€10,000 (per ECI)***
	• **Fee related to the audit of each system instance hosted on the Commission servers in Luxembourg** by the Luxembourgish authority responsible for the certification of the systems in Luxembourg (CTIE)	• The Commission pays a fee of €10,000 for the audit of each system instance by the CTIE.
	Substantive compliance costs	***€108,284 (per ECI)***
	• **Additional costs compared to Scenario 1** considering that besides further developing and maintaining the Register and the ECI Online Collection Software, the Commission should be hosting the ECI collection systems.	The costs to be incurred on the European Commission are related to the following: • **Cost of the Register (per ECI):** €25,098. • **Cost of the ECI Online Collection Software (per ECI):** €55,161. • **Cost of the hosting service (per ECI):** €28,025.
	Administrative burden	***N/A***
	• The hosting service offered by the European Commission to support ECI organisers includes **the preparation and submission of all documents related to the hosting environment for certification** by the competent Luxembourgish Authority as well as **advice/guidance/support documents on how to draft the organisers' Risk Management documentation.**	• Administrative burden could not be monetised.
Costs to MS authorities competent for certifying the Online Collection Systems:	***Substantive compliance costs***	***€5,000 and €10,000 (per ECI)***
	• **Work and efforts/ costs** and burden related to the certification concentrated on one public authority only, i.e. Luxembourg.	• The costs to be incurred on the CTIE are related to the certification of the system by the authority. • Assessed at 1 or 2 FTE during 2 to 3 weeks for each certification, this costs estimate can be valued between €3,846 and €5,769 (1 FTE during 2 to 3 weeks) and the double (2 FTEs between 2 to 3 weeks). We thus consider that each certification performed by the CTIE costs to their organisation between €5,000 and €10,000.
Costs to hosting providers:	***Other indirect costs (opportunity costs)***	***N/A***
	• The costs for hosting providers are so-called 'lost opportunity' costs. In this regards, the 'lost opportunity' costs for hosting providers in Scenario 2 are the value (benefits) for them of implementing Scenario 1.	Given that the market is not mature enough (size is too low), lost opportunity costs cannot be assessed

SCENARIO 2		
Costs to software providers:	***Other indirect costs (opportunity costs)***	***N/A***
	• The costs for software providers are so-called 'lost opportunity' costs. In this regards, the 'lost opportunity' costs for software providers in Scenario 2 are the value (benefits) for them of implementing Scenario 1.	Given that the market is not mature enough (size is too low), lost opportunity costs cannot be assessed
Cost to IT experts	***Other indirect costs (opportunity costs)***	***N/A***
	• The costs for IT Experts are so-called 'lost opportunity' costs. In this regards, the 'lost opportunity' costs for IT Experts in Scenario 2 are the value (benefits) for them of implementing Scenario 1.	Given that the market is not mature enough (size is too low), lost opportunity costs cannot be assessed.
Cost to ECI signatories	• No cost to be incurred on ECI signatories, since the access to the system is free-of-charge.	• No cost to be incurred on ECI signatories, since the access to the system is free-of-charge.

Compared to Scenario 1, one can observe a shift in the costs of implementing Scenario 2 from ECI organisers to the European Commission, who plays the role of the hosting providers and IT experts from Scenario 1, and also supports the certification process, in collaboration with the competent Luxembourgish authority.

3.3.2 Benefits

Table 9 below provides a qualitative and quantitative description of the main benefits related to Scenario 2.

Table 9 Benefits related to Scenario 2 (per group of stakeholders)

SCENARIO 2		
	Qualitative description	**Quantitative description**
Benefits to ECI organisers:	***Improved market efficiency***	
	• **Online Collection Software available for free** to ECI organisers. The software is also coming with a warranty offered by DIGIT, enabling to accelerate the online collection system certification procedure. • **Hosting service available for free** to ECI organisers. • **Administrative burden reduced for ECI organisers:** technical support and assistance provided for free by the European Commission and competent authority in Luxembourg to set-up their online collection system, get it certified, operate and maintain it throughout the whole online collection process; unique certification procedure (as in this scenario it is only performed by the competent authority of Luxembourg). • **Technical responsibility partly shifted to the European Commission**, reducing risks for ECI organisers. • **Training provided for free on how to operate the ECI Online Collection Software.** • **Opportunity to learn**, by being given a whole package and an official back-up, from more experienced stakeholders and thus develop a more efficient learning curve than if they had to manage the whole setting-up and operation of the system on their own.	• Benefits could not be monetised.
	Additional utility, welfare or satisfaction	
	• **Trust in the European Commission:** the fact that the software was developed by the European Commission and that hosting can also be provided by the institution can be perceived as a guarantee regarding data security, in particular. Moreover several organisers tend to even use the image of reliability of the European Commission on their own campaigning websites to reassure potential signatories of the system security (e.g. "I sign the petition (secure website of the European Commission)[134]")	

[134] http://www.transparencyforall.org/

SCENARIO 2		
Benefits to the European Commission:	***Additional citizens' utility, welfare or satisfaction***	
	• **Involvement in the ECI online collection process**, ensuring a smoother implementation of the ECI Regulation. • **Simplified monitoring of the ECI Regulation implementation as regards online collection**, thanks to a standardised approach. • **(Short-term) Dissemination of a positive message and signal to citizens**, showing that the institution has a positive attitude towards the ECI instrument and is willing to assist and support the citizens that would be willing to engage in the ECI. • **(Long-term) Opportunity to have a very good image and prestige** all around the world if the ECI works, as they would be the main contributor of this success (thanks to their hosting package) and become a driving force towards eDemocracy.	• Benefits could not be monetised.
Benefits to MS authorities competent for certifying the Online Collection Systems:	***Improved market efficiency***	
	• **Use of the ECI Online Collection Software facilitating the certification procedure**, as it comes with a "warranty" from the European Commission. • **Certification procedure overall and audit process in particular in place already and highly optimised** between the European Commission and the CTIE (19 audits already performed by the CTIE) • **The other 27 competent authorities no longer need to be ready to potentially carry out a certification procedure.**	• Benefits could not be monetised.
Benefits to hosting providers:	• **There are no benefits,** considering that service providers cannot penetrate the ECI market: the European Commission would be the only player.	• None.
Benefits to software providers:	• **There are no benefits,** considering that service providers cannot penetrate the ECI market: the European Commission would be the only software provider.	• None.
Benefits to IT experts:	• **There are limited benefits,** considering that the European Commission supports the installation of the ECI system, while IT experts can only support the certification process and operation of the system.	• Benefits could not be monetised.
Benefits to ECI signatories	***Improved market efficiency***	
	• **Access to the system is free-of-charge.** • **Harmonised ECIs,** using the ECI Online Collection Software (no effort to adapt to different systems)	• Not assessed

SCENARIO 2		
	Additional utility, welfare or satisfaction	
	• **Trust in the European Commission:** the fact that the software was developed by the European Commission and that hosting can also be provided by the institution can be perceived as a guarantee regarding data security, in particular.	• Not assessed

While Scenario 2 prevents private providers from penetrating the ECI market and reduces the chances for IT experts to do so, it brings great benefits to the other stakeholders involved in the ECI.

Compared to Scenario 1, ECI organisers mostly benefit from large cost savings and gain of time. After having delivered 19 certificates to ECI organisers, the competent Luxembourgish authority for certifying online collection systems benefits from a highly optimised certification procedure. However, the burden is shared disproportionally between the Luxembourgish authority and the other 27 MS competent authorities. Finally, thanks to its major role in this scenario (hosting package), the European Commission has the opportunity to disseminate a positive image to citizens and become a driving force towards eDemocracy.

3.4. Comparison of the scenarios

This section aims to compare Scenario 1 and Scenario 2 according to two evaluation criteria, i.e. efficiency and effectiveness.

3.4.1 Efficiency

First of all, efficiency refers to the extent to which the ECI online collection process can be implemented at least-cost in terms of Total Cost of Ownership (TCO)[135] for the stakeholders impacted. In this regards, Table 10 illustrates the estimated costs in Euros incurred on the impacted stakeholders for each scenario in the period 2012-2015 for one ECI.

The table focuses on direct costs and differentiates whether the costs are one-off (i.e. costs which are incurred at the beginning of a project only) or ongoing (i.e. costs which are incurred again and again during a project or an investment); taking into account that usually one-off costs are very large in comparison to ongoing costs each time the latter occur.

Table 10 Comparison of costs of Scenario 1 and Scenario 2

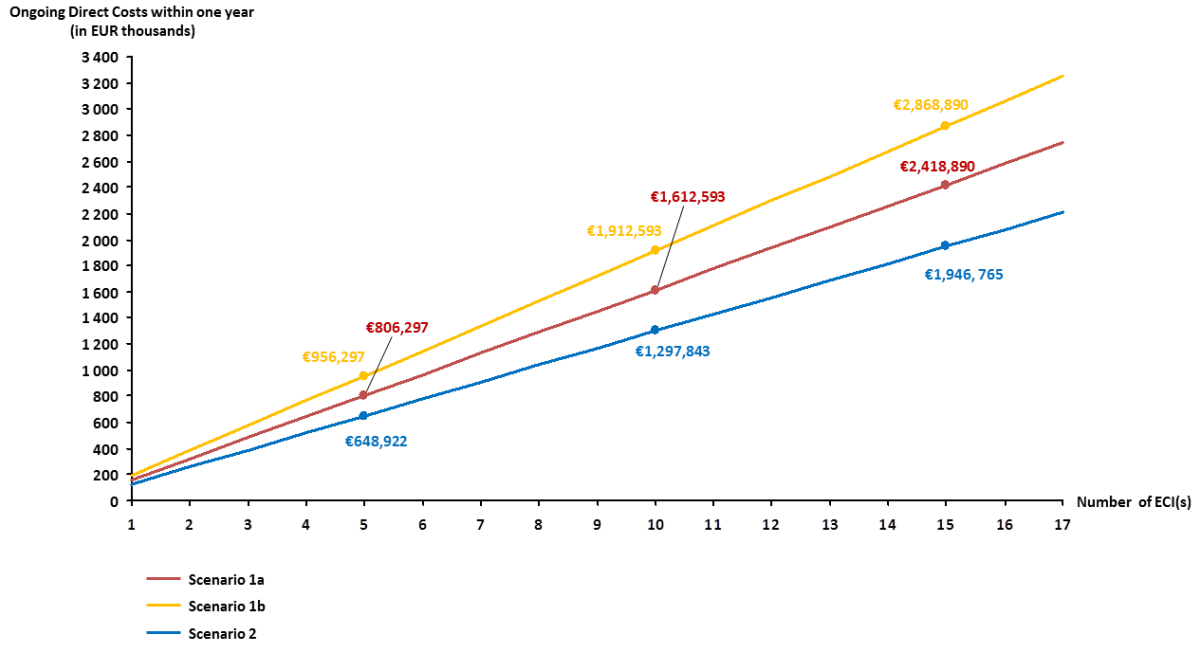
Cost Category	Sub-category	Scenario 1 (one ECI)		Scenario 2 (one ECI)
		Scenario 1a	Scenario 1b	
Direct costs	**Charges**	**€ 0**	**€ 0**	**€10,000**
	- European Commission *Ongoing costs (variable costs per ECI):*	€ 0	€ 0	€10,000
	Substantive compliance costs[136]	**€ 155,259**	**€ 185,259**	**€ 118,284**
	- ECI Organisers *Ongoing costs (variable costs per ECI):*	€10,000 - €45,000	€10,000 - €45,000	€ 0
	- European Commission *Ongoing costs (variable costs per ECI):*	€ 80,259	€ 80,259	€ 108,284
	- MS Authorities *Ongoing costs (variable costs per ECI):*	€ 30,000	€ 60,000	€5,000 - €10,000
	Administrative burden	**€ 6,000**	**€ 6,000**	**€ 1,500**
	- ECI Organisers *Ongoing costs (variable costs per ECI):*	€ 6,000	€ 6,000	€ 1,500
	- MS Authorities	N/A	N/A	N/A
	Hassle costs	**N/A**	**N/A**	**N/A**
	- ECI Organisers	N/A	N/A	N/A
TOTAL	**Direct costs**	**€ 161,259**	**€ 191,259**	**€ 129,784**

Based on the figures displayed in Table 10, the least cost scenario appears to be Scenario 2. As the costs are variable and have been calculated per ECI, the differences between the implementation costs of each scenario will increase, the more ECIs are taken into account, as displayed in Figure 30.

[135] The TCO of an information system defines the total estimated cost to develop the system, to put it into production, to operate it, to support it, to maintain it, to phase it out at the end.
[136] Calculated as the maximum summated value.

It should be noticed that the indirect costs, in particular for private software providers, are not included in the above table. However, based on the estimates received from two software providers, the costs for these two solutions[137] to be compliant with the ECI regulatory framework were respectively assessed between €40,000 and €130,000 (one-off costs) and between €4,000 and €20,000 (support costs on a yearly basis).

Figure 30 Ongoing (direct) costs per ECI (in one year)



As depicted in Figure 30, Scenario 2 would be the least costly scenario to implement compared to Scenario 1, independently of the number of ECI online collection systems certified and hosted per year. The (direct) cost of hosting and getting 1 ECI online collection system certified under Scenario 2 would indeed be €129,784 against €161,259 under Scenario 1a (i.e. €31,475 cost difference between the two scenarios) and €191,259 under Scenario 1b (i.e. €61,475 cost difference between the two scenarios).

The implementation costs differences are even greater the more ECIs are concerned. For example, to host and get 15 ECI online collections systems certified, the yearly costs would be €1,946,765 (Scenario 2) and €2,418,890 (Scenario 1a) and €2,868,890 (Scenario 1b) respectively (i.e. €472,125 and €922,125 cost difference between the two scenarios respectively).

From an efficiency point of view, we can thus consider that Scenario 2 is the most efficient scenario for the ECI. Should Scenario 2 be foreseen in the ECI Regulation as the only possible scenario, the overall cost could be probably still optimised (unique IT tool for the register and the software, no need for the 28 MS competent authorities to be ready to certify systems, etc.)

The costs of implementing Scenario 1a and Scenario 1b differs of €30,000 (additional effort required by national authorities to certify online collection systems that do not include the software developed by the European Commission). If the support costs related to private software solutions was taken into account, Scenario 1b would be even more expensive than the others.

[137] We Sign.it and Open ECI

3.4.2 Effectiveness

Effectiveness can be defined as the extent to which the scenarios achieve the requirements stipulated in the ECI Regulation in terms of increased benefits. In the context of this study, benefits are assessed from a qualitative perspective only, as they cannot be quantified.

The benefits of each scenario depend on the perspective of the stakeholders involved in the ECI. While Scenario 1 (1b in particular) is favoured by hosting providers, software providers and IT experts; ECI organisers, Member States authorities competent for certifying online collection systems and (to a lesser extent) ECI signatories tend to prefer Scenario 2.

Conclusions on effectiveness may thus only be drawn based on a set of objectives and relevant assessment criteria.

As mentioned in Appendix 7.2, from a methodological viewpoint[138], the direct benefits that apply to the context of this study can be expressed in terms of:

- Improved market efficiency, which might include improvements in the allocation of resources (i.e. availability, responsibility and expertise of the resources to set-up, operate and get the system certified) and cost savings. This criterion is assessed for the stakeholders having direct regulatory costs and benefits: ECI organisers, European Commission and national authorities competent for certifying online collection systems.
- Additional citizens' utility, welfare or satisfaction. In the context of this study, citizens' satisfaction was assessed, in particular for ECI organisers and, to a lesser extent, ECI signatories.
- Spillover effects related to third-party compliance with legal rules (so-called "indirect compliance benefits"), which include all those benefits that accrue to individuals or businesses that are not the addressees of the Regulation, but that enjoy positive effects due to the fact that others have to comply with the Regulation. This criterion is assessed for the stakeholders having indirect regulatory costs and benefits: software providers, hosting providers and IT experts.

These categories have been further drilled down into criteria aimed to assess the effectiveness of each scenario, as displayed in Table 11. A score ranking is used to differentiate the least effective scenario (●) from the most effective one (●●●) for each criterion.

The six following effectiveness criteria were thus defined:

(i) Improvement in the allocation of resources (availability of resources)
(ii) Improvement in the allocation of resources (responsibility of stakeholders)
(iii) Improvement in the allocation of resources (expertise of the resources)
(iv) Cost savings
(v) Citizens' satisfaction
(vi) Benefits from third-party compliance with legal rules

[138] Assessing the costs and benefits of Regulation, by CEPS, Economisti Associati, Study for the European Commission, Secretariat General, Brussels, 10.12.2013.

Table 11 Comparison of effectiveness of Scenario 1 and Scenario 2

Benefits Category	Assessment of effectiveness criteria per group of stakeholders		Scenario 1a	Scenario 1b	Scenario 2
Direct benefits	**Improved market efficiency**				
	Improvement in the allocation of resources (availability of resources)				
	ECI organisers	• In Scenario 2, the hosting service provided by the European Commission includes a comprehensive package to support ECI organisers (See details in Section 2.3), significantly reducing the amount of resources needed by ECI organisers. • Conversely, in scenario 1 finding a suitable hosting provider requires more involvement from ECI organisers. In Scenario 1b even more resources would be required as this scenario also implies finding suitable software for the online collection.	●●	●	●●●
	European Commission	• For the European Commission, Scenario 2 is the scenario requiring the greatest amount of resource as it plays the role of hosting provider, software provider and supports ECI organisers during the setting-up, certification and operation of the systems. • In Scenario 1, the hosting is not performed by the European Commission and support is thus due to a lesser extent, reducing the amount of resources required. In Scenario 1b the European Commission does not need either to provide support to the software, as private solutions can be used.	●●	●●●	●
	MS Authorities	• In Scenario 2, the burden of the certification is concentrated on one authority only (Luxembourg); the 27 other national authorities competent for certifying the online collection systems thus do not need to make their resources ready. • In Scenario 1, on the contrary, the 28 national authorities competent for certifying the online collection systems may be solicited for the certification of a system. In this regards, resources should be held ready as there is a legal obligation to certify the system within a month (potential need to outsource to external companies for additional resources, in case of a shortage within the administration). In Scenario 1b the certification procedure may require even more effort from the authorities as the software from the European Commission may not be used.	●●	●	●●●
	Total scoring on the availability of resources:		●●	●	●●●
	Improvement in the allocation of resources (responsibilities of stakeholders)				
	ECI Organisers	• While in Scenario 1, ECI organisers hold the full responsibility of their system and the data collected through it, part of the technical responsibility for the system is shifted to the European Commission in Scenario 2. • It should be noted that the responsibility of ECI organisers is higher in Scenario 1b than in Scenario 1a, as the ECI Online Collection Software is not used.	●●	●	●●●
	European Commission	• While in Scenario 1, the technical responsibility (security included) is fully borne by ECI organisers and private hosting providers, in Scenario 2 part of this responsibility is shifted to the European Commission, as the latter becomes the system provider of the ECI. • It should be noted that the responsibility of the European Commission is lower in Scenario 1b than in Scenario 1a, as the ECI Online Collection Software is not used.	●●	●●●	●
	MS Authorities	• In general, national authorities competent for certifying online collection systems are responsible for verifying the level of security of the online collection systems. In the case of Scenario 2, this only concerns one authority (Luxembourg), while in Scenario 1 it can be any in the EU. • Moreover, responsibilities of authorities are even greater when the ECI Online Collection Software is not used (Scenario 1b) as it also requires a certification (contrary to the ECI Online Collection Software which comes with a warranty from the European Commission).	●●	●	●●●
	Total scoring on the responsibility of stakeholders:		●●	●	●●●

Benefits Category	Assessment of effectiveness criteria per group of stakeholders		Scenario 1a	Scenario 1b	Scenario 2
	Improvement in the allocation of resources (expertise of the resources)				
	ECI Organisers	• Overall, IT skills are necessary for setting-up, operating and getting an online collection system certified in all cases; however installing, operating and getting an online collection system certified on a private server (i.e. not the European Commission server) not only requires skills but a real expertise on IT is necessary. • While ECI organisers need the support from IT experts to implement Scenario 1, their in-house skills are sufficient to implement Scenario 2, as the European Commission and competent authority in Luxembourg play the role of these IT experts and support organisers in the setting-up, operation and certification of their system. In this regards, Scenario 2 is easier to implement than Scenario 1 for ECI organisers. • Support and training being provided for free on how to operate the ECI Online Collection Software, Scenario 1a can be considered less complex to implement than Scenario 1b.	●●	●	●●●
	European Commission	• Based on the involvement of the European Commission in each Scenario, one can say that Scenario 2 is the most complex to implement for the European Commission as the complexity of the installation of the system, including its certification and hosting, are fully borne by the institution. • On the other hand, in Scenario 1a the complexity is lower for the European Commission as its scope of intervention and support is limited to the ECI Online Collection Software. In Scenario 1b, it is even less complex as the European Commission is not directly involved in the online collection process.	●●	●●●	●
	MS Authorities	• First, one should note that the use of the ECI Online Collection Software facilitates the certification procedure for authorities as the latter comes with a warranty from the European Commission. In this regards, certification is easier for authorities under Scenario 1a and 2. • The authority of Luxembourg having delivered 19 certificates of online collection systems, versus 4 only by Germany (using different private hosting providers) and none by the other national competent authorities, one can assume that the certification process is less complex for Luxembourg (Scenario 2) than any other authority. In fact, the certification procedure between the European Commission and the Luxembourgish authority is now optimised.	●●	●	●●●
	Total scoring on the responsibility of stakeholders:		●●	●	●●●
	Cost savings				
	ECI Organisers	• In Scenario 1, ECI organisers have to spend time on finding a suitable hosting provider, filling-in the necessary documents to get their system certified and bear the costs of hosting, they also tend to ask for the support of external IT experts to set-up, operate and get their system certified. These costs may be even higher in case private software is used: while the ECI Online Collection Software is available for free, private solutions may be based on a freemium model where some services have to be paid by ECI organisers. • Conversely, in Scenario 2 (as part of the comprehensive package provided by the European Commission), the hosting service is available for free to ECI organisers and administrative burden is reduced for ECI organisers (support from the European Commission and competent authority in Luxembourg).	●●	●	●●●

Benefits Category	Assessment of effectiveness criteria per group of stakeholders		Scenario 1a	Scenario 1b	Scenario 2
	European Commission	• The cost difference between Scenario 1 and Scenario 2 for ECI organisers is mostly absorbed by the European Commission. In fact, in Scenario 1 the European Commission saves time and money as the institution does not need to get involved in the technical settings and certification of systems while in Scenario 2 costs are high for the institution as it provides the hosting service, the software and overall support on the implementation of the scenario. • Scenario 1b can be considered as less costly than Scenario 1a for the European Commission as the ECI Online Collection Software is not used.	●●	●●●	●
	MS Authorities	• Overall, Scenario 2 saves costs to 27 national competent authorities as none has to be involved in the certification procedure. The burden is indeed fully concentrated on the authority of Luxembourg, who mitigated the costs of the certification procedure overall and audit process in particular by working in close collaboration with the European Commission. It thus remains overall the cheapest scenario to implement for all authorities. • The use of the ECI Online Collection Software facilitating the certification procedure, Scenario 1a requires less effort than Scenario 1b.	●●	●	●●●
	Total scoring on cost savings:		●●	●	●●●
	Additional citizens' satisfaction				
	ECI Organisers	• Based on the five answers received by ECI organisers, the average user satisfaction score for Scenario 1 reaches 1.4 (between 'very low' and 'low') while the score for Scenario 2 is equal to 3 (neutral/ medium). Scenario 2 thus seems to be the more satisfying scenario, mostly due to the lower costs of its implementation for ECI organisers. Even though the ability to adapt online collection system to ECI organisers' needs (choice of the hosting provider; choice of the software provider: alternative to the ECI Online Collection Software; modified version of the ECI Online Collection Software; ECI Online Collection Software in its current state) is more valid for Scenario 1 than Scenario 2, it seems that the main driver of their satisfaction is the cost incurred to them by each Scenario. In this respect Scenario 1a seems to satisfy better the organisers than Scenario 1b, which in addition has never been used until now. • The second benefit identified by KURT SALMON is related to the trust of ECI organisers (and citizens) in the European Commission. Based on the results from the survey, one of the reasons why organisers have used the software developed by the European Commission for their ECI is the trust for the European Commission: 3 respondents 'strongly agree' and 1 'agrees' that "**the fact that the European Commission developed [the tool] guarantees a certain level of security** and compliance with the ECI Regulation and related Commission Implementing Regulation N°1179/2011." Moreover several organisers tend to even use the image of reliability of the European Commission on their own campaigning websites to reassure potential signatories of the system security (e.g. "I sign the petition (secure website of the European Commission)[139]")	●●	●	●●●
	Signatories	• For signatories, access to the system is free of charge in any case. • The first benefit identified by KURT SALMON to distinguish the scenarios generating the highest satisfaction to signatories is the display of the ECIs. One can assume that having heterogeneous displays (use of a private software) of ECIs would require an extra effort for signatories to adapt while a consistent use of the ECI Online Collection Software would allow them to become familiar with the display and contribute to create an identity to ECI.	●●	●	●●●
	Total scoring on citizens' satisfaction		●●	●	●●●

[139] http://www.transparencyforall.org/

Benefits Category	Assessment of effectiveness criteria per group of stakeholders		Scenario 1a	Scenario 1b	Scenario 2
Indirect benefits	**Benefits from third-party compliance with legal rules**				
	Hosting providers	• Scenario 1 (whether 1a or 1b) is the only scenario where hosting providers have an opportunity to penetrate the ECI Market.	●●●	●●●	●
	Software providers	• Scenario 1b is the only scenario where software providers have an opportunity to penetrate the ECI Market (as in Scenario 1b private solutions may be used).	●	●●●	●
	IT experts	• While all scenarios allow IT experts to penetrate the ECI Market; this opportunity is rather limited in Scenario 2 as the European Commission and competent authority in Luxembourg play this role to support ECI organisers (for free). • As in Scenario 1b private solutions may be used, more support from IT experts may be expected.	●●	●●●	●
	Total scoring on the benefits from third-party compliance with legal rules		●●	●●●	●

With regards to effectiveness, even though results vary from the different stakeholder groups' perspectives, overall, Scenario 2 appears to be the favoured scenario with regards to (i) Improvement in the allocation of resources (availability of resources), (ii) Improvement in the allocation of resources (responsibility of stakeholders), (iii) Improvement in the allocation of resources (expertise of the resources), (iv) Cost savings, (v) Citizens' satisfaction. The only criterion for which Scenario 1 is ahead of Scenario 2 is the (vi) Benefits from third-party compliance with legal rules, as Scenario 2 does not allow hosting and software providers to penetrate the ECI market, and only to a limited extent for IT experts.

3.4.3 Conclusions

This sub-section summarises the evaluation of the efficiency and effectiveness of each scenario, based on the results from the previous sections.

Table 12 displays the result of the assessed efficiency and effectiveness of each scenario, using a score ranking from ● (lowest) to ●●● (highest).

Table 12 Overall evaluation of Scenario 1 and Scenario 2

	Scenario 1a	Scenario 1b	Scenario 2
Total Ongoing costs for 1 ECI (within a year)	€ 161,259	€ 191,259	€ 129,784
Total Ongoing costs for 15 ECIs (within a year)	€ 2,418,890	€ 2,868,890	€ 1 946,765
Efficiency	●●	●	●●●
Availability of resources	●●	●	●●●
Responsibility of stakeholders	●●	●	●●●
Expertise of the resources	●●	●	●●●
Cost savings	●●	●	●●●
Citizens' satisfaction	●●	●	●●●
Benefits from third-party compliance with legal rules	●●	●●●	●
Effectiveness	●●	●	●●●

Based on the two evaluation criteria defined by KURT SALMON, Scenario 2 prevails over Scenario 1 both in terms of efficiency and effectiveness.

One should however keep in mind that the evaluation of effectiveness is a general assessment and does not apply to the different perspectives from stakeholders.

Hosting providers, software providers and IT experts would indeed favour Scenario 1 over Scenario 2. On the other hand, the Regulation's primary objective is to make sure that all the necessary tools are put in place and offered to organisers to successfully launch and run their initiative. Thus, the perspective of the organisers should be regarded as being the most important one in assessing the effectiveness of the scenarios.

4. Comparative analysis

The section aims to compare the features of a set of 11 online collection solutions used by citizens' initiative, e-petition instruments or other related initiatives at national or local level and a sample of market solutions.
This comparative assessment is based on 15 main criteria based on what is required by the ECI Regulation and related Commission Implementing Regulation N°1179/2011 or the analysis performed in the previous sections.

The scope of the 11 comparative scenarios analysed and the criteria against which these comparative scenarios were analysed are respectively described in Section 4.1 and 4.2 while Section 4.3 and 4.4 go through the assessment of the 11 comparative scenarios in the scope of the analysis.
Based on the features identified in these solutions and on the extent to which the solutions cover the criteria defined, conclusions are then drawn on what could be further explored to improve the ECI online collection process and system, in Section 4.5.

4.1. Scope

Overall 12 interviews have been conducted for the purpose of the comparative analysis:

- One unit from the European Commission: DG CNECT, i.e. the stakeholders involved in eParticipation projects (i.e. My University, Parterre, Puzzled by policy, Immigration policy, Our Space).
- Five online Collection Software providers having developed online collection software for the purpose of ePetition initiatives.
- Six Member States having or planning to have online collection solutions in place in the context of national/local citizens' initiative or e-petition instruments.

The identification of the stakeholders was based on the inputs received from the Project Management Committee, the stakeholders consulted for the cost-benefit analysis of the current baseline scenarios and desk research performed by KURT SALMON.

In this section, a total of 11 comparative scenarios are thoroughly analysed while the inputs from DG CNECT were rather used as general guidelines on common advantages and disadvantages of online collection solutions. The analysis of the comparative scenarios developed by private operators and these established or planned to be established at national level by competent authorities are presented in two different sub-sections. In fact, while the analysis of the former is rather focused on the software, the analysis of the latter concerns the overall system. Conclusions on these analyses are drawn separately as well.

4.2. Assessment criteria

While the first part of this sub-section lists and explains the criteria against which each comparative scenario was assessed, the second part defines the rules put in place to assess their level of coverage (full, partial and no coverage at all) by the comparative scenarios.

4.2.1 Definition of the Assessment criteria

- Criterion 1 – Cost for end-users.
- Criterion 2 – Technical solution in place for collecting statements of support. In this regards, as the ECI can currently be implemented via two different scenarios, hosting offered by the European Commission (central platform) or by hosting providers (private systems), the comparative scenarios are assessed against each of these two solutions.
    - Criterion 2a – Possibility to collect statements of support via a central platform (allowing multiple initiatives).
    - Criterion 2b – Possibility to collect statements of support via (separate) private systems.

  This criterion has only been used to assess the solutions available at national level. This criterion is not applicable for the solutions (software) developed by private operators, as these can be configured so as to collect statements of support for multiple initiatives whether hosted on a central platform or in a private system.

- Criterion 3 – Type of data collected (and reason for collecting these data). Based on the ECI Regulation (Article 5 (1)), "only forms which comply with the models set out in Annex III […] may be used for the collection of statements of support". Our analysis aims to verify the extent to which the data requirements in the comparative scenarios are similar to the ones in ECI.
- Criterion 4 – Data validation process by public authorities. As mentioned in Article 8 (2) of the ECI Regulation, "the competent authorities shall, within a period not exceeding three months from receipt of the request, verify the statements of support submitted on the basis of appropriate checks, in accordance with national law and practice, as appropriate. On that basis they shall deliver to the organisers a certificate […] certifying the number of valid statements of support for the Member State concerned". Our analysis verifies whether the data collected are also validated by public authorities in the comparative scenarios and if so, how.
- Criterion 5 – Liability of the organisers towards the data collected. As stipulated in Article 5 (1) of the ECI Regulation "the organisers shall be responsible for the collection of the statements of support from signatories for a proposed citizens' initiative […]".Moreover, Article 13 of the ECI Regulation strengthens that "Organisers shall be liable for any damage they cause in the organisation of a citizens' initiative in accordance with applicable national law." Our analysis verifies whether the organisers of initiatives are also liable for the data collected in the comparative scenarios.

- Criterion 6 – Disclosure of and access to the data collected. As mentioned in Article 6 (4b) of the ECI Regulation, "the data provided online are securely collected and stored, in order to […] protect personal data against […] unauthorised disclosure or access". Taking into account that, according to Article 12 (1) of the ECI Regulation, "in processing personal data pursuant to this Regulation, the organisers of a citizens' initiative and the competent authorities of the Member State [considered as data controllers in accordance with Article 2(d) of Directive 95/46/EC] shall comply with Directive 95/46/EC", the privacy statement included in the Annex III of the ECI Regulation shall apply. In other words, the personal data provided in the statement of support forms shall only be made available to the competent authorities for the purpose of verification and certification of the number of valid statements of support received for an ECI, and, if necessary, further processed for the purpose of administrative or legal proceedings related to this ECI. The data may not be used for any other purpose. Data subjects are entitled to obtain access to their personal data. All statements of support shall be destroyed within at the latest 18 months after the date of registration of an ECI, or, in the case of administrative or legal proceedings, at the latest one week after the conclusion of the said proceedings.
  In this regards, our analysis verifies for each comparative scenario the stakeholders who have access to the data collected and whether these data (or part of these) are made public.
    - Criterion 6a – (Restricted) access to the data collected.
    - Criterion 6b – Publication of the data collected.
- Criterion 7 – Ability to integrate the solution with campaigning websites. With regards to the online collection software, based on the inputs received from ECI organisers, it is important to ensure that the software can easily be integrated into campaigning websites. Our analysis thus verifies whether the comparative scenarios allow a functional and graphical integration of the software inside campaigning websites through API or other interfaces.
- Criterion 8 – Ability to integrate the solution with social media. With regards to the online collection software, based on the inputs received from ECI organisers, it is important to ensure that the software can easily be integrated with social media. Our analysis thus verifies whether the comparative scenarios allow a functional and graphical integration of the software inside social media through API or other interfaces.
- Criterion 9 – Ability to integrate the solution with a national/local database of citizens, so that the process of verification of the data can be automatized.
- Criterion 10 – Possibility to combine both paper-based and online collection of signatures (from legal and/or technical point of view). As mentioned in Article 5 (2) of the ECI Regulation "the organisers may collect statements of support in paper form or electronically." In this regards our analysis verifies whether the collection of signatures can also be performed via both channels in the comparative scenarios.
    - Criterion 10a – Ability to combine both paper-based and online collection of signatures, from a technical perspective (functionality of the online collection solution).
    - Criterion 10b – Ability to combine both paper-based and online collection of signatures, from a legal perspective (legal provision).

Criterion 10b has only been used to assess the solutions available at national level. This criterion is not applicable for the solutions developed by private operators, as these are usually not bound by legislation[140].

- Criterion 11 – Ability to sign an initiative using an advanced electronic signature/ identification.
  As mentioned in Article 5 (2), "for the purpose of this Regulation, statements of support which are electronically signed using an advanced electronic signature […] shall be treated in the same way as statements of support in paper form". Moreover, even though its use is not specifically mentioned in the ECI Regulation, given the recent developments in the field of electronic identification (adoption of the eIDAS Regulation[141] on 23.07.2014), this aspect was also considered as a criterion against which the comparative scenarios were assessed.
  - Criterion 11a – Ability to sign a statement of support using an advanced electronic signature (eSignature).
  - Criterion 11b – Ability to fill-in a statement of support using electronic identification[142] (eID).

  As mentioned in Article 26 of the eIDAS Regulation, "an advanced electronic signature shall meet the following requirements:
  (a) It is uniquely linked to the signatory;
  (b) It is capable of identifying the signatory;
  (c) It is created using electronic signature creation data that the signatory can, with a high level of confidence, use under his sole control; and
  (d) It is linked to the data signed therewith in such a way that any subsequent change in the data is detectable."

- Criterion 12 – Accessibility. With regards to the online collection solution, based on the inputs received from ECI organisers, it is essential to ensure that the solution can be accessible to all. In this regards, our analysis verifies whether the comparative scenarios can be accessed by people with disabilities, in particular blindness and low vision, and whether the solution is adapted to mobile devices, such as smartphones and tablets.
  - Criterion 12a – Accessibility for visually impaired people.
  - Criterion 12b – User friendliness on smartphone and tablet.

- Criterion 13 – Multilingualism. The ECI Online Collection Software is translated in all official EU languages[143]. Our analysis verifies whether the comparative scenarios also tend to have a multilingual interface.

- Criterion 14 – Certification procedure. According to the ECI Regulation (Article 6(1)), "the online collection system shall be certified […] in the Member State in which the data collected through the online collection system will be stored." Our analysis verifies whether the analysed systems are also required to be certified.

[140] Two exceptions were made for 'Open ECI' and 'Open Ministry' as they were respectively developed for the ECI and the Finnish Citizens' Initiative Act specifically and thus aim to follow their related regulatory frameworks.
[141] Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC, OJ L 257/73, Brussels, 23.07.2014.
[142] Electronic identification is the process of using person identification data in electronic form uniquely representing either a natural or legal person, or a natural person representing a legal person, to ensure secure access to online services and to carry out electronic transactions in a safer way.
[143] At the time of the report, the following languages are the 24 official ones in the European Union: Bulgarian, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Irish, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovene, Spanish and Swedish.

- Criterion 15 – Hosting. When it comes to hosting, the main criteria that are of the study's interest are related to the type of hosting used, the location of the data centre[144] (i.e. in which country data are physically collected), the compliance of the data centre with ISO/IEC/27001, ISO/IEC/27002 and/or the Standard of Good Practice for Information Security[145] and the use of dedicated servers to host the related systems[146].

4.2.2 Rules on the criteria's coverage

The level of coverage of each criterion was assessed by KURT SALMON for each comparative scenario included in the scope of this study.

In this regards, three levels of coverage were identified: criteria can be fully covered by the comparative scenarios (it corresponds to 'YES' in the assessment of each scenario), partially covered (it corresponds to ''PARTIALLY' in the assessment of each scenario), or not covered (it corresponds to 'NO' in the assessment of each scenario). Table 13 presents the meaning of each level of coverage depending on the specificities of the criteria.

When a criterion can only be fully covered or not covered at all (binary option), the cell related to the partial coverage is highlighted in dark grey.

Table 13 Definition of the criteria's coverage

ID	Criterion name	Fully covered by the system ('YES')	Partially covered by the system ('PARTIALLY')	Not covered by the system ('NO')
1	Cost for end-users	Organisers and/ or signatories have to pay to access and use the system.	Some services related to the system are free of charge while for some others, organisers and/or signatories have to pay.	Using the system is completely free of charge for both organisers and signatories.
2	Possibility to collect statements of support via a central platform (2a)	A central platform is provided to organisers (by a public authority) for the collection of the statements of support		Organisers only have the possibility to host their online collection systems on private servers.
	Possibility to collect statements of support via (separate) private systems (2b)	Organisers have the possibility to collect statements of support on a private system		Organisers only have the possibility to use the central platform provided to them (by a public authority) for the collection of the statements of support
3	Type of data collected	An identification number is collected by the system[147].	Residence address, date and/or place of birth[148], are collected by the system.	Identification number, residence address, date and place of birth are NOT collected by the system.

[144] As stipulated in Article 6 (1) of the ECI Regulation "Where statements of support are collected online, the data obtained through the online collection system shall be stored in the territory of a Member State."
[145] As mentioned in criteria 2.1 and 2.2 of Commission Implementing Regulation N°1179/2011, "Organisers provide documentation showing that they fulfil the criteria of standard ISO/IEC/27001, short of adoption. […]. Organisers choose security controls based on the risk analysis in 2.1(a) from the following standards: (1) ISO/IEC 27002; or (2) the Information Security Forum's 'Standard of Good Practice".
[146] As stated in requirement 2.18.5 of Commission Implementing Regulation N°1179/2011 "Local area network (LAN) security measures are in place such as: the Demilitarized Zone is on a dedicated virtual local area network (VLAN)/LAN".
[147] The identification number is the most sensitive data collected for an ECI; it is therefore treated separately from the other data requirements.
[148] In addition to the identification number, these data are also considered by KURT SALMON as sensitive data collected for an ECI.

ID	Criterion name	Fully covered by the system ('YES')	Partially covered by the system ('PARTIALLY')	Not covered by the system ('NO')
4	Data validation process by public authorities	A validation process is in place to allow the verification of a signatory's identity (by a competent authority).	A validation process is in place. While it does not allow the verification of a signatory's identity, it verifies other aspects (e.g. person eligible, alive)	There is NO validation process in place.
5	Liability of the organisers towards the data collected.	The liability towards the data collected is borne by the organisers of an initiative.	The liability towards the data collected is shared between the organisers of an initiative and other stakeholders.	The liability towards the data collected is NOT borne (at all) by the organisers of an initiative.
6	(Restricted) access to the data collected (6a)	Access to the data collected is restricted to the authority competent for validating the data.		Access to the data collected is NOT restricted to the authority competent for validating the data.
	Publication of the data collected (6b)	Signatories' data are automatically published on the public interface of the initiative (by default).	Signatories can choose to (or not to) publish (part of) their data on the public interface of the initiative or data may be made public under certain conditions	Signatories' data are NOT published on the public interface of the initiative
7	Ability to integrate the solution with campaigning websites	The system is integrated with campaigning websites through APIs (or other similar interfaces) allowing an exchange of data between both solutions.	A widget to sign can be embedded within a campaigning website.	There is NO link between the system and campaigning websites.
8	Ability to integrate the solution with social media	The system is integrated with social media through APIs (or other similar interfaces) allowing an exchange of data between both solutions.	A widget to sign can easily be embedded on a social media. An initiative can also be shared / commented / "liked"/ "tweeted" on social media.	There is NO link between the system and social media.
9	Ability to integrate the solution with a national/ local database of citizens	The system is integrated with a national/ local database of citizens to facilitate the verification process.		The system is NOT integrated with a national/ local database of citizens.
10	Ability to combine both paper-based and online collection of signatures, from a technical perspective (10a)	The paper-based statements of support collected are inputted into the system (in addition to these collected online).	The number of paper-based statements of support collected is inputted into the system (in addition to these collected online) OR improvements are planned to input the paper-based statements of support collected into the online collection system.	The online collection system takes NO account of the paper-based statements of support potentially collected.
	Ability to combine both paper-based and online collection of signatures, from a legal perspective (10b)	Both paper-based and online statements of support can be collected, according to the legal provisions.		Online statements of support only can be collected, according to the legal provisions.
11	Ability to sign a statement of support using an advanced electronic signature (11a)	Electronic signature can be used to sign online statements of support.		Electronic signature CANNOT be used to sign online statements of support.
	Ability to fill-in a statement of support using electronic identification (11b)	Electronic identification can be used to fill-in online statements of support.	Improvements are planned to allow electronic identification to be used to fill-in online statements of support.	Electronic identification CANNOT be used to fill-in online statements of support.

ID	Criterion name	Fully covered by the system ('YES')	Partially covered by the system ('PARTIALLY')	Not covered by the system ('NO')
12	Accessibility for visually impaired people (12a)	The solution is accessible for visually impaired people.	Improvements are planned to make the solution (fully) accessible for visually impaired people.	The solution is NOT accessible for visually impaired people.
	User friendliness on smartphone and tablet (12b)	The initiative interface is user-friendly on any smartphones and tablets.	Improvements are planned to make the solution user-friendly on any smartphones and tablets.	The initiative interface is NOT user-friendly on smartphones and tablets.
13	Multilingualism	Initiatives are translated into the 24 official EU languages.	Initiatives are (planned to be) translated into more than one (but less than 24) official EU language.	Initiatives are only available into one EU language.
14	Certification procedure	The online collection system is to be certified (on a regular basis)		The online collection system is NOT to be certified (on a regular basis)
15	Data Centre location (15a)	The data centre is physically located in one EU Member State		The data centre is NOT physically located in one EU Member State
	ISO/IEC/27001 compliant (15b)	The data centre is compliant with the ISO/IEC/27001 standard		The data centre is NOT compliant with the ISO/IEC/27001 standard
	ISO/IEC/27002 compliant (15c)	The data centre is compliant with the ISO/IEC/27002 standard		The data centre is NOT compliant with the ISO/IEC/27002 standard
	Standard of Good Practice for Information Security compliant (15d)	The data centre is compliant with the Standard of Good Practice for Information Security		The data centre is NOT compliant with the Standard of Good Practice for Information Security
	Use of a dedicated server (15e)	Each initiative is hosted on a dedicated server.		Initiatives are NOT hosted on dedicated servers.

All the comparative scenarios are assessed against each of these criteria. When these data were made available by the respondents, the costs to build; operate and maintain the online collection system are also stated at the bottom of each assessment table.

While KURT SALMON also intended to assess the solutions against additional criteria such as security, integrity, confidentiality of the data, scalability, portability, performance, availability, integrity, identification, authentication, authorisations, data protection, testability and documentation (supporting the development of the system), the majority of respondents were not able to retrieve the extent to which their software applied these criteria. The results are thus not treated in this report.

The two following sub-sections thus aim to briefly introduce each solution analysed in the scope of our study (e.g. legal basis, driver) and assess them against the above stated criteria.

4.3. Solutions (software) developed by private operators

It should be noted that respondents were not always able to answer all questions. When no answer was received, then 'N/A' is noted. The solutions are thus assessed against the criteria for which inputs were collected.

4.3.1 Open ECI (alternative to the ECI Online Collection Software?)

Currently being tested, 'Open ECI' has been developed by a group of IT experts highly involved in eDemocracy and in the ECI in particular, in order to offer ECI organisers an alternative solution to the online collection software developed by the European Commission. The latter being assessed by the experts as too complex and time-consuming to adapt, they decided to start building new software from scratch rather than working on the one developed by the European Commission. Aimed to be available in the course of 2015, the next step is now to get the software certified by using it for a new ECI.

Table 14 Assessment of Open ECI

ID	Criterion	Coverage	Comments
1	Cost for end-users	**PARTIALLY**	- Open ECI is an open-source software, thus available free of charge. - The IT service provided around the software will however be chargeable
2a	Possibility to collect statements of support via a central platform	**N/A**	-
2b	Possibility to collect statements of support via (separate) private systems	**N/A**	-
3	Type of data collected	**YES**	- As defined by the ECI Regulation
4	Data validation process by public authorities	**YES**	- As defined by the ECI Regulation
5	Liability of the organisers towards the data collected	**YES**	- As defined by the ECI Regulation
6a	(Restricted) access to the data collected	**YES**	- As defined by the ECI Regulation
6b	Publication of the data collected	**NO**	- As defined by the ECI Regulation
7	Ability to integrate the solution with campaigning websites	**YES**	- Iframe in the campaigning website allowing citizens to fill in the statements of support and organisers to customise the statement of support forms (Stylesheet per ECI, channel to adjust the style, background colour and font).
8	Ability to integrate the solution with social media	**PARTIALLY**	- Ability to share the ECI with friends, 'like' or 'tweet' a statement of support.
9	Ability to integrate the solution with a national/ local database of citizens	**NO**	-
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**NO**	-
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	- Possible as defined by the ECI Regulation
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	-
11b	Ability to fill-in a statement of support using electronic identification	**NO**	-

ID	Criterion	Coverage	Comments
12a	Accessibility for visually impaired people	**N/A**	-
12b	User friendliness on smartphone and tablet	**YES**	- Smartphone and tablet friendly.
13	Multilingualism	**YES**	**- Pre-selection of the language based on the IP address:** If the country is not pre-selected, the language will be based on the visitor IP address. If the country is selected and appears to be monolingual, the language of that country will be pre-selected too (e.g. German for Austria and Germany, French for France) The user will still be able to modify the information if needed.
14	Certification procedure	**N/A**	**-**
15a	Data Centre location	**N/A**	-
15b	ISO/IEC/27001 compliant	**N/A**	-
15c	ISO/IEC/27002 compliant	**N/A**	-
15d	Standard of Good Practice for Information Security compliant	**N/A**	-
15e	Use of a dedicated server	**N/A**	-
Costs to build, operate and maintain		**[€44,000 - €55,000]** • Development costs in 2014: €20,000 • Development costs planned for 2015 (until the release of version 1.00): between €10,000 and €20,000 • Certification-related costs: €10,000 for performing the risk analysis and other documents requested for the certification. • Support costs (assessed by KURT SALMON as 10% of the total costs): between €4,000 and €5,000	

Main features of 'Open ECI' (not yet operational – information to be verified once the software is operational):

- Open source software free to use for signatories based on a freemium model[149] for the organisers of an initiative.
- Intended to be compliant with the ECI regulatory requirements, e.g. type of data collected, access to data, responsibility towards the data collected, data validation process.
- Ability to integrate the solution with campaigning websites: 'Open ECI' aims to allow the customisation of the statements of support forms as embedded forms in the campaigning websites (Iframe): style sheet per ECI; channel to adjust the form's style, background colour and font.
- Simplified online collection process: the process to submit a statement of support aims to be rationalized with the 'Open ECI' to only include one step.
  Moreover, the software aims to allow a pre-selection of the language based on the (potential) signatories' IP address.
- User friendliness on smartphone and tablet.
- Not yet operational: The software has never been used by ECI organisers as it is not yet operational but still in the testing phase at the time of this report. Each of these aspects (compliance with the ECI regulatory requirements, simplified online collection process, etc.) will thus need to be verified once the software is operational.

Aspects to explore in the context of the ECI:

- Ability to integrate the solution with campaigning websites
- Simplified online collection process
- User friendliness on smartphone and tablet

Recommendation(s) from the respondent on the ECI online collection process:

- Fostering electronic signatures for the ECI. Some systems already exist to authenticate and certify signatures; for example PGP is a system aimed to sign and encrypt emails and it may be used as well for signing and encrypting data in the context of the ECI. This would be a good way to make the eSignatures system more visible at EU level while solving issues about data privacy.

[149] Freemium is a pricing strategy by which a product or service (typically a digital offering or application such as software or web services) is provided free of charge, but money (premium) is charged for proprietary features, functionality, or virtual goods.

4.3.2 We Sign It

The ePetition platform 'WeSignIt' was initially launched by 'La Netscouade', a digital agency, driven by the willingness for the company to contribute to participatory democracy in Europe, to become a European platform, challenging the American ones and also to support the ECI. Wesign.it has indeed been operational since spring 2012, at the same period as the ECI Regulation started to apply.

Table 15 Assessment of We Sign It

ID	Criterion	Coverage	Comments
1	Cost for end-users	**PARTIALLY**	- Service free of charge for the signatories; - Combination of free and paid services for ePetitions' authors.
2a	Possibility to collect statements of support via a central platform	**N/A**	-
2b	Possibility to collect statements of support via (separate) private systems.	**N/A**	-
3	Type of data collected	**PARTIALLY**	- Email address, name (or nickname), country and postal code. Moreover, signatories need to check a box to certify they agree with the campaign. They can also add a comment but it remains optional. Selection criteria: the data collected has to be as simple as possible.
4	Data validation process by public authorities	**PARTIALLY**	- There is no prior verification of the email address, however an email is sent to the email address provided by the signatory to confirm his/her signature. If someone tries to sign with someone else's email address, the owner of that email address will thus notice it and be able to contact the administrators to modify their data and/or delete their support. - Suspicious identities can also be verified afterward through the following signs and methods: identification of suspicious peaks of activity; access to the platform from the same IP address (numerous times) or from IP addresses located in zones that do not match with the information contained in the signature; (too) high number of non-verified emails (email received once a person has signed an ePetition); thorough analysis of the data collected, in particular the name, email address and (potential) comments. - The platform automatically rejects someone who tried to sign the same ePetition twice.
5	Liability of the organisers towards the data collected	**NO**	- We Sign It is responsible for the data collected via the software.
6a	(Restricted) access to the data collected.	**NO**	- Administrators of Wesign.it have access to all the data collected. - Campaigners have access to all the data filled-in by the signatories for free, and to email addresses, as a paid service..
6b	Publication of the data collected	**PARTIALLY**	- The name (or nickname) and the comment of the last three signatories of each ePetition are made public. - However, in case a signatory does not want their data to be published, they always have the option to opt-out, by unchecking the corresponding checkbox.
7	Ability to integrate the solution with campaigning websites	**PARTIALLY**	- A widget to sign can be easily embedded in any website.
8	Ability to integrate the solution with social media	**YES**	- A Facebook connect button can be used to fill-in data automatically. - The ePetition can be sent via Twitter or Facebook, but cannot be signed on the social media page.
9	Ability to integrate the solution with a national/local database of citizens	**NO**	- All personal information needed to integrate the software with a national/local database of citizens is currently not collected.
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**NO**	- Most of the campaigners based their system on an online collection only. - However signatories' lists can always be exported so that it can easily be merged with any potential paper-based signature lists.

ID	Criterion	Coverage	Comments
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**N/A**	- 'We Sign It' is not bound by any petition or citizens' initiative legislation.
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	- Never requested by campaigners.
11b	Ability to fill-in a statement of support using electronic identification	**NO**	- Never requested by campaigners.
12a	Accessibility for visually impaired people.	**PARTIALLY**	- Work in progress for large campaigns.
12b	User friendliness on smartphone and tablet.	**N/A**	-
13	Multilingualism	**PARTIALLY**	- 'We Sign It' is available in 11 official EU languages.
14	Certification procedure	**N/A**	-
15a	Data Centre location	**YES**	- Ireland
15b	ISO/IEC/27001 compliant	**N/A**	-
15c	ISO/IEC/27002 compliant	**N/A**	-
15d	Standard of Good Practice for Information Security compliant	**N/A**	-
15e	Use of a dedicated server	**NO**	-
	Costs to build, operate and maintain	€ 100,000 until the end of 2014. Forecasts for 2015 are assessed at: - € 150,000 for further developments on the platform ergonomics, multilingualism, design; - € 65,000 of development to enable signatures via SMS. - € 20,000 support costs (per year).	

Main features of 'We Sign It':

- 'We Sign It' is free of charge for signatories and based on a freemium model[150] for the organisers of an initiative.
- Possibility for crowdfunding: 'We Sign It' partnered with 'mail for good' to allow campaigners to conduct crowdfunding campaigns for their ePetition.
- Ability to integrate the solution with social media: While it is not possible to sign an ePetition on a social media page, the ePetition can be sent via Twitter or Facebook and a Facebook connect button can be used to fill-in data automatically (for signatories).
- Improvements planned:
    - Enable the detection of signatories' language and display multilingual ePetitions accordingly not only to facilitate the use of the software by campaigners and signatories, but also to strengthen the company's international positioning.
    - Facilitate the signatures, through social media and SMS, e.g. an API[151] which allows to display signatures on other websites and to create ePetitions from other websites.
- Not compliant with the ECI regulatory requirements: The company assessed at €130,000 the investment to make to become compliant with both the ECI Regulation and the related ECI Commission Implementing Regulation N°1179/2011.

Aspects to explore in the context of the ECI:

- Possibility for crowdfunding
- Ability to integrate the solution with social media
- Detection of signatories' language and display multilingual ePetitions accordingly
- Foster signatures, through social media and SMS.

[150] Freemium is a pricing strategy by which a product or service (typically a digital offering or application such as software or web services) is provided free of charge, but money (premium) is charged for proprietary features, functionality, or virtual goods.
[151] API stands for Application Programming Interface.

Recommendation(s) from the respondent on the ECI online collection process:

- The European Commission should certify platforms and not “one-shot software”, or, even better, launch call for tenders, which would release platform managers (and partly campaign organisers) from the costs.
- The ECI Online Collection Software should be a signature widget that platforms and campaigners could easily use on their websites. Priority should be given to signatures, not to legal notices.
- Dedicated servers do not guarantee that data is more securely handled.

4.3.3 EPetitioner from Public-i

As a technical partner of the Europetition project between 01.02.2009 and 31.01.2011, Public-i was in charge of developing a technical solution for the project, based on their own existing ePetition software (already used with Bristol City Council and the Council of Kingston-upon-Thames), upgraded with additional functionalities, as requested in the requirements of the project specifications. At the time of this report, taking into account that the open-source version of the ePetitioner is not available anymore (too costly to maintain it and to build a large community around it) and that the software itself is not a priority for Public-i (based on their experience in the Europetition project, they concluded that there was no popular engagement process, no focus around the ePetition domain), the ePetitioner is not used anymore.

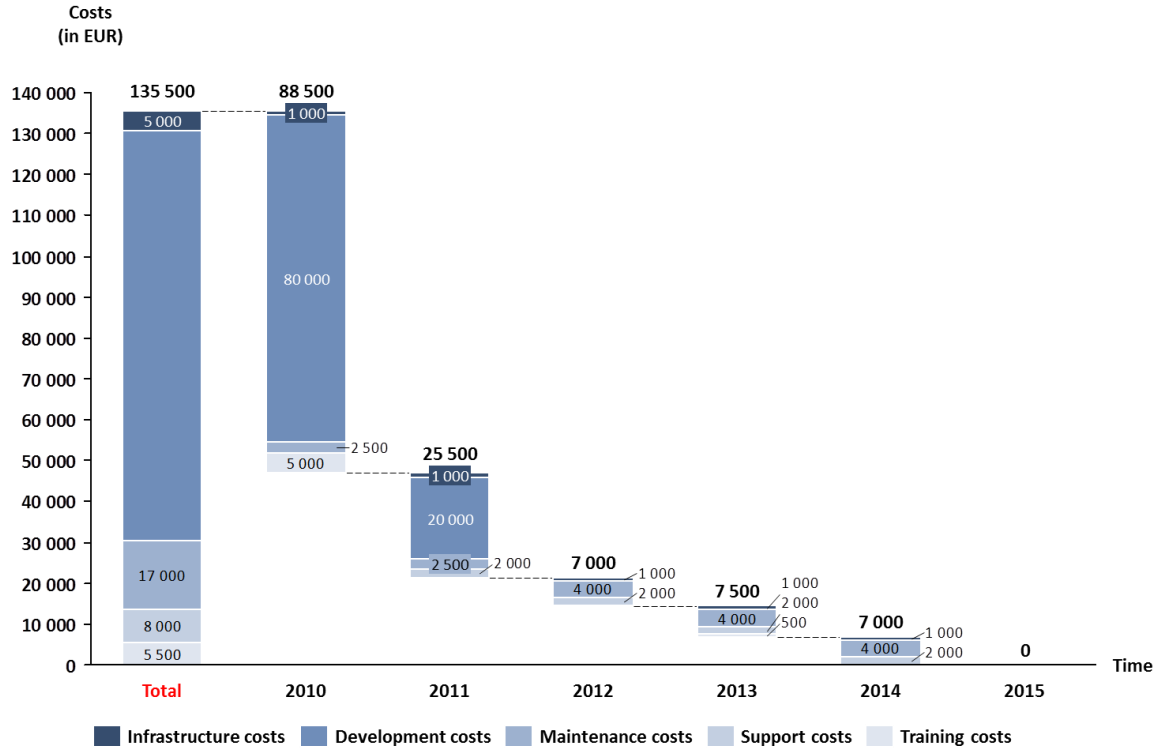
Table 16 Assessment of the ePetitioner

ID	Criterion	Coverage	Comments
1	Cost for end-users	**NO**	- The ePetitioner was fully free of charge for any ePetition users.
2a	Possibility to collect statements of support via a central platform	**N/A**	-
2b	Possibility to collect statements of support via (separate) private systems.	**N/A**	-
3	Type of data collected	**PARTIALLY**	- Email addresses, names and national identification number (in the specific case of the Spanish group). A national identification number was only collected in the specific case of the Spanish group; no identification card was collected in other cases as there was no simple way yet to verify this information.
4	Data validation process by public authorities	**PARTIALLY**	- In the Europetition project, the Spanish group did have an ID field which they used to lookup a valid identity card number. - For the rest, it was up to the authority to validate if necessary.
5	Liability of the organisers towards the data collected	**PARTIALLY**	- Liability is borne by the organisation operating the platform. In the case of the Bristol City Council and the Council of Kingston-upon-Thames, the Councils own the data and are bound by the Data protection law in the UK. - For the open-source version system owners bear the responsibility of the data collected.
6a	(Restricted) access to the data collected.	**YES**	- The authority who bought the software was the only stakeholder having access to the data collected.
6b	Publication of the data collected	**YES**	- Signatories' names were visible publicly. There is no anonymity in the software although users can sign using alternative names.
7	Ability to integrate the solution with campaigning websites	**NO**	- APIs are not easy to integrate in other tools. The system was thus limited to a function enabling the ePetition to be shared on social network.
8	Ability to integrate the solution with social media	**PARTIALLY**	- Capacity to share an ePetition on social media.
9	Ability to integrate the solution with a national/local database of citizens	**YES**	- This functionality was implemented for Spain as they had a system enabling to verify identifications at that time already.
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**PARTIALLY**	- Once the ePetition was created, a pdf was to be generated with the petition title, reference number and a logo. The petitioner could then print out the pdf and collect petitions on paper. Once the petition was closed, the petitioner entered manually into the system the count of the total number of paper petitions collected and no modification could be made by them afterwards. - The Council had the last say on the number of signatures (they can amend the number and the count on the website will be updated accordingly dispatching the number of signatures collected online and offline).
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**N/A**	- 'ePetitioner' is not bound by any petition or citizens' initiative legislation.

ID	Criterion	Coverage	Comments
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	- This functionality would have been implemented if the use of electronic signature or identification was growing.
11b	Ability to fill-in a statement of support using electronic identification	**NO**	- This functionality would have been implemented if the use of electronic signature or identification was growing.
12a	Accessibility for visually impaired people.	**YES**	- Version 2.00 and 3.00 of the ePetitioner were created to comply with Web Content Accessibility Guidelines 2.0 standards
12b	User friendliness on smartphone and tablet.	**N/A**	-
13	Multilingualism	**PARTIALLY**	- The ePetitioner was available in six official EU languages: English, Dutch, Swedish, Finnish, Spanish and Italian.
14	Certification procedure	**YES**	- The private version of the software was certified by each Council that was part of the Europetition project. Councils[152] were also responsible for setting the requirements to be fulfilled by the system.
15a	Data Centre location	**YES**	- London (private hosting by Amazon Web service)
15b	ISO/IEC/27001 compliant	**NO**	**-**
15c	ISO/IEC/27002 compliant	**NO**	**-**
15d	Standard of Good Practice for Information Security compliant	**YES**	**-**
15e	Use of a dedicated server	**YES**	**-**
	Costs to build, operate and maintain	See Figure 31 (below)	

[152] The following Councils have used the ePetitioner for running their ePetitions: Birmingham City Council, Bolsover ePetitioner, Bradford MDC Petitions, Braintree, Bristol City Council, Cambridgeshire ePetitions, Copeland Borough Council : ePetition, East Sussex, Eden District Council Epetitions, Epetition Sweden, ePetitions : Legislative Assembly of the NWT, ePetitions Andalucia, Great Yarmouth Borough Council ePetitions, Havering ePetitions, Kettering Borough Council e-Petitions, King's Lynn and West Norfolk, Maldon District Council ePetitions, Malmö City Council, Netherland EPetitioner, Norfolk County Council, North Hertfordshire District Council, North Lincolnshire Council, Royal Borough of Kingston upon Thames, Solihull, South Norfolk Council, Telford & Wrekin Council ePetitions, Vicenza, West Sussex Epetitions, Wolverhampton City Council.

Figure 31 Costs related to the ePetitioner



Main features of the 'ePetitioner':

- Ability to integrate the solution with a national/local database of citizens: This functionality was implemented for Spain as they had a system enabling to verify identifications at that time already.
- Mailing functionality: once a signatory supported an ePetition, an email was submitted to them for thanking them of their participation into the ePetition (in case they checked a box for being emailed).
- Ability to comment a statement of support: Comments could be added next to a signature.
- Display of a threshold to warn the administrator once the number of signatures targeted for the area was reached.
- Register and software as two separate solutions: The software is usually integrated in a (separate) micro website granted with the same colours and logo as the Council's official website and linked to the Council's official website.
- The ePetitioner is not open-source (anymore): While it used to be open-source (old version 2.00), it is not anymore the case. It was indeed costly to maintain it and to build a large community around it. Only one organisation decided to use the open-source version and had hard work to set it and operate it themselves.

Aspects to explore in the context of the ECI:

- Ability to comment a statement of support
- Ability to flag an initiative when it reaches the target number of signatures.
- Difficulty to maintain and build a large open-source community around the software.

Recommendation(s) from the respondent on the ECI online collection process:

- While Public-i was interested in proposing their service for the ECI, they then assessed the service as too complex, in particular with regards to data requirements. Moreover, by having participated in the Europetition project, the company realised that there was no popular engagement process, no focus around the ePetition.
- The ECI should provide organisers will a simple and efficient workflow to ensure that organisers keep their enthusiasm about their initiative.

4.3.4 Open Ministry

Open Ministry is one of the use cases of the EU-funded D-CENT (Decentralised Citizens ENgagement Technologies) project. The original idea of the project was to provide support to citizens and Civil Society Organisations willing to conduct citizens' initiatives and to lobby for having good quality eDemocracy tools at their service. In this regards, the main functionality of the Open Ministry was to crowd source and collaborate to develop an idea and turn it into a good quality law proposal that can then be launched as a citizens' initiative.

When the Citizens' Initiative Act was endorsed in Finland (December 2012)[153], Open Ministry decided to develop their own citizens' initiatives platform (as a separate system from the ideation), meeting the regulatory requirements of the Act and before the electronic signing platform to be provided by the Ministry of Justice was ready.
The platform remained temporary (two months) and shut down once the Ministry of Justice made theirs available, mostly due to the costs incurred to the NGO with regards to the electronic identification. Banks and mobile operators indeed charge a fee for verifying the electronic identifications. While small banks and mobile operators would provide the verification of the electronic identifications for free and others would provide a discount, the biggest players would charge it to the NGO as part of their business. In this regards, the Open Ministry decided to transfer this cost to the citizens willing to sign an initiative (before signing). On the other hand, the verification fees are borne by the Ministry of Justice and not transferred to the citizens on the Ministry of Justice electronic signing platform.

While at one point Open Ministry hoped to become an alternative platform to the one proposed by the Ministry of Justice, they decided to shut their platform down as they could not mitigate the costs for the identification verification and thus compete with the service provided by the Ministry of Justice (i.e. cost and extra step for citizens to sign on the platform, no additional functionalities).

Table 17 Assessment of the Open Ministry

ID	Criterion	Coverage	Comments
1	Cost for end-users	**PARTIALLY**	- Using the system was completely free to use for anyone, but in case citizens wanted to sign an initiative they could be charged a fee, depending on their bank (use of electronic identification).
2a	Possibility to collect statements of support via a central platform	**N/A**	-
2b	Possibility to collect statements of support via (separate) private systems.	**N/A**	-
3	Type of data collected	**PARTIALLY**	- Full name, date of birth, municipality of residence and (optionally) email addresses. - Identification code or social security numbers are NOT requested. - Selection criterion: Regulatory requirement from the Act on the Citizens' Initiative
4	Data validation process by public authorities	**YES**	- Signatories' data are verified by the National Population Register Centre, in case the initiative succeeds in collecting 50,000 statements of support.
5	Liability of the organisers towards the data collected	**YES**	- Organisers are responsible for the data collected on the Open Ministry.
6a	(Restricted) access to the data collected.	**YES**	- Data collected provided to Finland national census for verification. - Email addresses provided to researchers in case signatories allowed Open Ministry to do so.

[153] Citizens' Initiative Act passed in early December 2011, a recent addition to the Finnish Constitution including the provisions on the procedure to be followed when organising a citizens' initiative.

ID	Criterion	Coverage	Comments
6b	Publication of the data collected	**PARTIALLY**	- The names of the signatories may be made public only after the Population Register Centre has verified that the number of statements of support goes up to the required minimum number of 50,000.
7	Ability to integrate the solution with campaigning websites	**NO**	-
8	Ability to integrate the solution with social media	**NO**	- It is only possible to share an idea hosted on the Open Ministry in social media and also to share the link of the Open Ministry website on Facebook. - Another interesting functionality that could have been put in place in case the software would have been integrated with social media, is the counting on Twitter of the number of signatures and the automatic message generated each time a threshold is reached (20%, 40%, 60%, etc.).
9	Ability to integrate the solution with a national/local database of citizens	**NO**	- The system however ensures strong authentication and in particular prevents stakeholders from signing the same initiative several times. This cannot be guaranteed for initiatives collecting paper statements of support as several citizens can sign several times.
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**PARTIALLY**	- Collection of online statements of support only, to which the number of paper-based statements of support collected was added to the total count.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	- Possible as defined by the Finnish Citizens' Initiative Act.
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	-
11b	Ability to fill-in a statement of support using electronic identification	**YES**	- The Open Ministry enabled to support an initiative using advanced electronic identification.
12a	Accessibility for visually impaired people.	**NO**	- System not adapted for visually impaired people.
12b	User friendliness on smartphone and tablet.	**N/A**	-
13	Multilingualism	**PARTIALLY**	- 'Open Ministry' was available in two official EU languages: Finnish and Swedish.
14	Certification procedure	**YES**	- The FInnish COmmunications Regulatory Authority (FICORA) is legally responsible for all security-related certifications (checks, audits), legally imposed in the case of the citizens' initiative as well. - The Open Ministry system is divided into two different sub-systems, one dedicated to the main website (including the ideation) and one to the online collection. However, only the latter needs to be certified. It should indeed be noted that the online collection system is a separate module with its own architecture, separate set-up and server, physically located in Finland, as required by the certification requirements. - Costs for the certification are borne by the Open Ministry, mostly in terms of time spent on the task (1.5 months certification process).
15a	Data Centre location	**YES**	- **Finland** (private hosting) – Requirement to pass the certification
15b	ISO/IEC/27001 compliant	**YES**	-
15c	ISO/IEC/27002 compliant	**N/A**	-
15d	Standard of Good Practice for Information Security compliant	**N/A**	-
15e	Use of a dedicated server	**NO**	-
	Costs to build, operate and maintain	- € 30,000 development spent over two years for the software (one-off costs) - € 20,000 development for the interface (one-off costs) - € 600 per year for the hosting (ongoing costs) - € 6,000 per year for the online signing platform (ongoing costs)	

Main features of 'the Open Ministry':

- Open-source software (only an SSL license to ensure a secure connection between the web server and the web browser) free to use for organisers while signatories may be charged a fee for using electronic identification. In this regards, the Open Ministry decided to transfer this cost to the citizens willing to sign an initiative (before signing).
- Ability to fill-in a statement of support using electronic identification: The Open Ministry enabled to support an initiative using advanced electronic identification in its official platform.
- Use of the system to provide input to researchers: The data collected could be provided to researchers in case signatories allowed Open Ministry to send them their email addresses.
- Facilitates the collection of signatures for citizens' initiatives: The platform allows for crowdsourcing and collaboration to develop an idea and turn it into a good quality law proposal that can then be launched as citizens' initiative. Building a solid and sound proposal for a citizens' initiative, based on an exchange of ideas with other citizens or civil society organisations, aims to also facilitate the collection of signatures for citizens' initiatives, and in particular to reach the threshold of signatures needed.
- Not operational anymore (for the collection of statements of support for a citizens' initiative).

Aspects to explore in the context of the ECI:

- Possibility for crowdsourcing and collaborating to develop an idea
- Use of the system to provide input to researchers

Recommendation(s) from the respondent on the ECI online collection process:

- ECI organisers should focus on campaigning for their initiative instead of focusing on technical tasks. Having ECI hosted on the Commission platform is a step towards the right direction.
- The ECI Online Collection Software should still be improved by the European Commission so as to make the software evolve with additional functionalities and integrate it in ideation platforms and campaigning tools.
- A platform should be provided by the European Commission to enable people to meet, collaborate online, sign-up for notifications (in case a citizen is planning to or interested in a citizens' initiative, other citizens also interested in this topic in other countries could be notified) and finally develop ideas for the European Citizens' Initiative. Collaboration between citizens should be fostered.
- Tools could also be developed to improve communication, project planning and financial management, including crowd-funding tools, as funding is needed to run an initiative at national or even more European level.
- Security requirements for the certification are too high. Strong authentication should not be needed for these types of initiatives, whether the Finnish citizens' initiative or the ECI.

4.3.5 Petities.nl

The founder of Petities.nl participated in a public consultation launched in the Netherlands in 2004 by the Advisory Council for Science and Technology Policy (AWT) in order to stimulate innovation in the public sector and was awarded for his ePetition website. Authorities indeed recognised the potential of the solution as it aimed at creating an interface enabling a two-way dialogue between citizens and government while connecting them both online and offline. While in most ePetition solutions the direction is one way, from citizens towards the government, here the government would also be able to provide answers back to citizens.

Petities.nl thus started in 2004 as a prototype website funded by the Dutch government (facilitator). Following a first update in 2005, a complete new version of the software was released in 2009, again funded by the Dutch Government. More recently, in October 2014, additional funding was received from the Dutch Government to further improve the 2009 version, which is planned to be released in the course of 2015.

Table 18 Assessment of Petities.nl

ID	Criterion	Coverage	Comments
1	Cost for end-users	**PARTIALLY**	- Service free of charge for the signatories; - Combination of free and paid services for ePetitions' authors (e.g. fee on the funding raised via crowdfunding, fee on the messages sent from governments to citizens), based on a freemium model.
2a	Possibility to collect statements of support via a central platform	**N/A**	-
2b	Possibility to collect statements of support via (separate) private systems.	**N/A**	-
3	Type of data collected	**PARTIALLY**	- Identifier (e.g. name, surname, initials), city of residence and email address - Additional fields can be defined by local and national authorities, when it comes to citizens' initiatives, e.g., date of birth, place of birth. These are to be filled-in once the confirmation hyperlink is clicked on. Selection criteria: the data collected has to be as simple as possible.
4	Data validation process by public authorities	**PARTIALLY**	- After having entered their data, signatories receive a confirmation email including a unique hyperlink. The signatory will need to click on that hyperlink to confirm that he/she is the person that they claim they are and that they agree with the petition text. Only then the support is counted. The signatory also has the option to invite friends to sign the ePetition.
5	Liability of the organisers towards the data collected	**N/A**	-
6a	(Restricted) access to the data collected.	**NO**	- The administrators of the system have access to all the data collected. While the system technicians have a full access to the data, the moderator has a 'read-only' access. These are the only stakeholders accessing email addresses. - EPetitioners have access to names, cities and to the comments added by the signatories on a free text field. - Signatories always have access to their own data which they can change or shield for publication at any time.
6b	Publication of the data collected	**PARTIALLY**	- Possible for signatories not to display their information on the website: while filling-in their information, they just need to keep the default setting as such (set to make information invisible). The decision to keep data invisible is strongly linked to the sensitivity of the ePetition subject.
7	Ability to integrate the solution with campaigning websites	**PARTIALLY**	- A widget to sign can be easily embedded in any website. The signatures collected via these websites will all feed into the central database and a confirmation email is then automatically sent by the system to the signatory.

ID	Criterion	Coverage	Comments
8	Ability to integrate the solution with social media	**PARTIALLY**	**-** A widget to sign can be easily embedded in any social media**.** - However it is barely used: people rather put the ePetition hyperlink on their Facebook profile or use the social media sharing functionality available on the ePetition website page. Future improvements will be performed in this regards as many of the signatories visiting the ePetition website are coming from social media directly.
9	Ability to integrate the solution with a national/local database of citizens	**YES**	- Petities.nl was in charge of collecting the signatures of the citizens' initiatives of Utrecht and Amsterdam and to then handle the data in such a format that would enable the civil servants to automatically verify the signatures collected with these included in the database of their register. However, due to low technical skills of the resources (and lack of training) and the small scale of the ePetitions, the authorities ended up performing a manual verification (print-out of the signatures and manual check with these included in the database of their register).
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**NO**	- Signatures collected on paper or online are all submitted to the authorities as two different files. - Most authorities in the Netherlands, including the national parliament, receive petitions during a short ceremony where citizens can explain the petition and answer questions from politicians receiving it. The printed list of signatories from petities.nl can easily (often on the spot) be merged with signatures collected on paper only. In the case of citizens' initiatives there is both a ceremony and later the same week a practical exchange between civil servants and the initiator for the actual digital and physical signatories.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**N/A**	- 'Petities.nl' is not bound by any petition or citizens' initiative legislation with regards to the channel of collection of signatures (authorities can however define requirements regarding the fields to be included in the statements of support)
11a	Ability to sign a statement of support using an advanced electronic signature	**N/A**	-
11b	Ability to fill-in a statement of support using electronic identification	**PARTIALLY**	- **Work-in-progress:** Contact with the Dutch government to develop an eID which could be used by citizens to perform transactions online, as it already exists for some companies.
12a	Accessibility for visually impaired people.	**YES**	- Software accessible for visually impaired people (won a price in 2009).
12b	User friendliness on smartphone and tablet.	**PARTIALLY**	- Improvement planned to make the software accessible from tablet and smartphones. - A mobile version of the ePetition system will be available in 2015.
13	Multilingualism	**NO**	- Petities.nl is available in one official EU language only: Dutch.
14	Certification procedure	**NO**	- No certification needed on the software, as petities.nl only collects statements of support (signatures) for ePetitions conducted at national or local level (for which certification is not required).
15a	Data Centre location	**YES**	- The Netherlands (private hosting)
15b	ISO/IEC/27001 compliant	**YES**	**-**
15c	ISO/IEC/27002 compliant	**YES**	-
15d	Standard of Good Practice for Information Security compliant	**YES**	-
15e	Use of a dedicated server	**NO**	**-**
	Costs to build, operate and maintain	Petities.nl has been sponsored by the Dutch government between 2010 and 2015. - The only costs they had are related to the servers (change every 3 years for €3,000). - Maintenance is sponsored. - Training not applicable as the team is made of volunteers learning by themselves. - **Current interface (2009): € 12,000** **- Next version (2015): € 24,000**	

Main features of 'Petities.nl':

- 'Petities.nl' is free of charge for signatories and based on a freemium model[154] for the organisers of an initiative.
- Two-way interface enabling a two-way dialogue between citizens and governments.
- Accessibility: Software accessible for visually impaired people (won a price in 2009) and improvement planned to make the software accessible from tablet and smartphones.
- Staged approach regarding data collection: After having entered their data, signatories receive a confirmation email including a unique hyperlink. The signatory then needs to click on that hyperlink to confirm that he/she is the person that they claim they are and that they agree with the petition text. When additional fields (as defined by local and national authorities) have to be filled-in, e.g., date of birth, place of birth, they are asked once the confirmation hyperlink is clicked on. Using this method (cognitive dissonance) may ensure a lower abandon rate in the online collection process (to be further investigated).
- Reusability: The interface was reused for the Belgian website[155]. The modifications performed on the initial interface (e.g. different logo, rewriting of the pages) still required some costs of thousands of euros.
- Ability to integrate the solution with a national/local database of citizens: Petities.nl was in charge of collecting the signatures of the citizens' initiatives of Utrecht and Amsterdam and to then handle the data in such a format that would enable the civil servants to automatically verify the signatures collected with these included in the database of their register.

Aspects to explore in the context of the ECI:

- Staged approach regarding data collection

Recommendation(s) from the respondent on the ECI online collection process:

- It is too difficult to develop an EU version of the system, due to the heterogeneous requirements set across EU Member States. From signatories' perspective, the amount of data required to be filled-in by signatories should be lowered.
- Technical requirements should be lowered: technically speaking, it would be very easy to put hosting facilities in the hands of citizens, however due to the high restrictions of the current ECI Regulation this becomes impossible.
- Certification of the systems is a major obstacle for innovation and improvements of software. As after each improvement performed, the software would require a new certification, the capacity for a provider to innovate becomes limited.
- The open source community seems difficult to build and the process of hiring someone to solve the issues posted or perform the improvements requested very slow and implying too many requirements. Trust is fundamental here.
- ECI online collection systems should not be hosted by the European Commission. On the contrary the respondent suggested that the institution provide funding for contributions to the open source code base or organise hackathons in order to allow having online collection software that anyone could tailor to their (campaigners') needs and in order to facilitate the penetration of the ECI market by a few (private) competing certified centralised market solutions for embedding. The respondent insisted on the need to have more than one centralised market solutions in place: based on the current landscape of activists and their campaigning tools, private solutions providers are often ideologically motivated. Rather than offering a tool to everyone, they may refuse to host certain ECIs if these do not support their ideas. A monopolistic private solution provider may thus not be very democratic.
- Collaborating with other national ePetition websites in each Member State (e.g. Open Petition in Germany, Petitie.be in Belgium) and synchronising the data collected in each Member State to feed into a unique central database could be a new type of ECI. This would indeed not only enable to overcome the lack of awareness barrier faced by the ECI (as it would be easier to use local existing petition websites to explain to citizens what the ECI is rather than directing them to centralised ECI software) but also to adapt to the specificities of each Member State (e.g. language).

[154] Freemium is a pricing strategy by which a product or service (typically a digital offering or application such as software or web services) is provided free of charge, but money (premium) is charged for proprietary features, functionality, or virtual goods.
[155] http://petitie.be/

4.4. Solutions available at national level

It should be noted that respondents were not always able to answer all questions. When no answer was received, then 'N/A' is noted. The solutions are thus assessed against the assessment criteria for which inputs were collected.

Following the brief introduction of each solution and the description of their macro business processes, the results of the assessment performed by KURT SALMON is then displayed in a table.

4.4.1 Référendum d'initiative partagée (France)

Article 11 of the French Constitution N° 2008-724 of 23 July 2008 is the legal basis of the 'Référendum d' Initiative Partagée'. It states that a referendum related to the organisation of the public powers (i), the national economic, social or environmental policy or the public services contributing to it (ii) and the ratification of a Treaty which would have incidence of the functioning of the institutions (iii) can be initiated by a fifth of the Parliament. If the initiative then collects the support from at least 10% of the voting population, then it turns into a legislative proposal.

The conditions of the application of this article, which entered into force on 1 January 2015, are further defined in organic law N° 2013-1114 and law N° 2013-1116 of 6 December 2013.

Business processes:

Registration of the initiative:

- Article 11 of the French Constitution states that a referendum related to the organisation of the public powers (i), the national economic, social or environmental policy or the public services contributing to it (ii) and the ratification of a Treaty which would have incidence of the functioning of the institutions (iii) can be initiated by a fifth of the Parliament.

Collection of statements of support:

- The collection of statements of support starts within one month after the Constitutional Council has declared that a legislative proposal was conform to Article 11 of the French Constitution.
- From that on, the Ministry of the Interior is entitled to set up the system for the concerned legislative proposal, still under the control of the Constitutional Council, and displays it on the Ministry of Interior website.
- Voters have then nine months to support the legislative proposal, by filling-in the statement of support form, either directly on the Ministry of Interior website (by their own means or via one of the points of access put in place for the purpose of the initiative), or via a municipality agent. They then receive a receipt of their vote, including a registration number.
- Voters also have the possibility to make a complaint or lodge an appeal within the nine months collection period (e.g. if they contest having supported the legislative proposal or on the contrary if they did support but did not appear on the support list). The Constitutional Council is in charge of these complaints and appeal.

Validation of the statements of support

- Administrative verifications are performed by the Ministry of Interior within five days after the end of the collection of statements of support.

  Three validity checks are performed:

  (i) **Control on the national identification card or passport is positive,**
  (ii) **Control of the person's identity towards the national registry of physical persons is positive**,
  (iii) **Control that the voter has not yet voted for the same legislative proposal.**
- If the statements of support are considered as valid by the Ministry of Interior, then the first and last names, municipality or consulate where the person is registered on the electoral list shall be displayed on the Ministry of Interior website.

Submission of the online collection results to the competent authority.

It is the Constitutional Council who attests whether statements of support from more than 10% of the voting population were collected.

If this is the case, the legislative proposal is then further examined by the National Assembly and the Senate and transferred to the Constitutional Council.

Table 19 Assessment of 'Référendum d'initiative partagée' (France)

ID	Criterion	Coverage	Comments
1	Cost for end-users	**NO**	-
2a	Possibility to collect statements of support via a central platform	**YES**	Information Systems' policy of the Ministry of interior: - System centralised - System components fully integrated, including both the collection of statements of support and the system of complaints and appeal.
2b	Possibility to collect statements of support via (separate) private systems.	**NO**	-

ID	Criterion	Coverage	Comments
3	Type of data collected	**YES**	- Names, last names, gender, date-, country-, department- and municipality of birth as well as the municipality or consulate where the person is registered on the electoral list are collected. - Email addresses (or mail addresses in case the person does not have any electronic one or in case of a paper-based statement of support) are also due to be collected in the case of complaints or appeal. - Elements related to the national identification cards or passports are also needed to control the correctness of an identity, e.g. National identification card or passport number, date of issue and department or authority having issued it. - Other elements, such as IP addresses, are also collected by the system but not directly requested to the voter. Selection criteria: Ability to identify a person towards the national registry of physical persons to ensure that the person is alive and entitled to vote.
4	Data validation process by public authorities	**YES**	- Three validity checks are performed by the Ministry of Interior within five days after the collection of the statements of support: (i) Control on the national identification card or passport is positive, (ii) Control of the person's identity towards the national registry of physical persons is positive**,** (iii) Control that the voter has not yet voted for the same legislative proposal.
5	Liability of the organisers towards the data collected	**NO**	**-** The Ministry of Interior is responsible for the online collection system and for the data collected through the system, under the control of the Constitutional Council (i) and is also empowered to give municipality agents the rights to enter a paper-based statement of support into the system (ii).
6a	(Restricted) access to the data collected.	**YES**	- The Ministry of Interior has access to some data (e.g. list of statements of support) and the Constitutional Council can access them all, given that it is the competent authority in case of complaints and appeal.
6b	Publication of the data collected	**YES**	- First and last names, municipality or consulate where the person is registered on the electoral list shall be displayed on the Ministry of Interior website, if the related statement of support is considered as valid by the Ministry of Interior (as expressed in organic law N° 2013-1114).
7	Ability to integrate the solution with campaigning websites	**N/A**	-
8	Ability to integrate the solution with social media	**N/A**	-
9	Ability to integrate the solution with a national/local database of citizens	**N/A**	-
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**YES**	- As mentioned in the Article 6 of organic law N° 2013-1114, voters can request a municipal or consulate agent to enter their paper-based statement of support into the electronic system. Their votes are then added to the other electronic statements of support.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	- As mentioned in the Article 6 of organic law N° 2013-1114, voters can request a municipal or consulate agent to enter their paper-based statement of support into the electronic system. Their votes are then added to the other electronic statements of support.
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	- Not stipulated in/ required by the legislation; thus not implemented in the system
11b	Ability to fill-in a statement of support using electronic identification	**NO**	- Not stipulated in/ required by the legislation; thus not implemented in the system
12a	Accessibility for visually impaired people.	**YES**	- System accessible for visually impaired people.
12b	User friendliness on smartphone and tablet.	**N/A**	**-**
13	Multilingualism	**NO**	- The solution will be available in one official EU language only: French.

ID	Criterion	Coverage	Comments
14	Certification procedure	**YES**	- Every two years, the Senior Defense and Security Official secretary is in charge of certifying the online collection system and thus deliver a certificate to the Ministry of Interior.
15a	Data Centre location (MS)	**YES**	- France (System hosted internally, in the Ministry of Interior)
15b	ISO/IEC/27001 compliant	**NO**	**-**
15c	ISO/IEC/27002 compliant	**NO**	**-**
15d	Standard of Good Practice for Information Security compliant	**YES**	- Compliant with PSSI -MI policy
15e	Use of a dedicated server	**NO**	**-**
	Costs to build, operate and maintain	- **Development costs:** € 4,000,000 (fixed cost) - **Maintenance costs:** € 50,000 per year Software developed internally by the 'Ministry of the Interior in France, for the unique purpose of the 'Référendum d'initiative Partagée'	

Main features of the 'Référendum d'initiative partagée':

- Ability to combine both paper-based and online collection of signatures: As mentioned in Article 6 of organic law N° 2013-1114, voters can request a municipal or consulate agent to enter their paper-based statement of support into the electronic system. Their votes are then added to the other electronic statements of support so as to have a single online collection channel.
- Verification of the statements of support collected: Statements of support are considered as valid not only when the control of the person's identity towards the national registry of physical persons is positive but also when the control on the national identification card or passport elements is positive.
- System not used yet: the 'Référendum d'initiative Partagée' will be improved step by step, based on the feedback received during the collection of statements of support. The system will be in place from 1 January 2015 and usable from 1 March 2015.

Aspects to explore in the context of the ECI:

- Ability to combine both paper-based and online collection of signatures

Recommendation(s) from the respondent on the ECI online collection process:

- N/A

4.4.2 www.kansalaisaloite.fi (Finland)

A new provision in the Constitution, which entered into force in March 2012, states that at least 50,000 Finnish citizens entitled to vote have the right to submit an initiative for the enactment of an Act to the Parliament. Following the adoption of this provision, the Citizens' Initiative Act (December 2012) further details the procedure to follow when organising a citizens' initiative.

Several technical solutions can be used to collect statements of support (even though it is not currently the case). One solution developed by the Finnish Ministry of Justice is offered to citizens; however other online collection systems could potentially be used according to the Citizens' Initiative Act ("Open Ministry" was one such system).

Business processes:

Registration of the initiative: NONE

- Citizens' initiatives are not registered by any authority.

Collection of statements of support:

- The organisers of the initiative are in charge of collecting the statements of support, within six months after the date of the initiative.
- The signatories must have access to the initiative, the information on its organiser and representative and the contact information of the representative during the collection of statements of support.
- Once the collection of statements of support has been started, the initiative must not be altered.

Validation of the statements of support

- The National Population Register Centre Officer at the National Population Register Centre can access all the initiatives displayed on Kansalaisaloite.fi website, as long as at least 50,000 statements of support were collected and as long as the organiser has marked the initiative as "sent to the National Population Register Centre".

Submission of the online collection results to the competent authority.

- The organiser of the initiative is the person in charge of submitting the statements of support collected to the competent authority.

Table 20 Assessment of www.kansalaisaloite.fi (Finland)

ID	Criterion	Coverage	Comments
1	Cost for end-users	**NO**	-
2a	Possibility to collect statements of support via a central platform	**YES**	- One solution developed by the Finnish Ministry of Justice is offered to citizens; however other online collection systems could potentially be used according to the Act on Citizens' Initiative.
2b	Possibility to collect statements of support via (separate) private systems.	**YES**	- One solution developed by the Finnish Ministry of Justice is offered to citizens; however other online collection systems could potentially be used according to the Act on Citizens' Initiative.
3	Type of data collected	**PARTIALLY**	- The title and date of the citizens' initiative; - Full name, date of birth and municipality of residence; - An affirmation by the signatory that he or she is a Finnish citizen entitled to vote and that he or she has submitted only one statement of support for the same initiative; - The date of the statement of support. Selection criterion: Regulatory requirement from the Citizens' Initiative Act
4	Data validation process by public authorities	**YES**	- National Population Register Centre: Access to the signatories' data collected, for verification purpose, in case the initiative succeeds in collecting 50,000 statements of support.
5	Liability of the organisers towards the data collected	**PARTIALLY**	- Ministry of Justice Finland: responsible for the website Kansalaisaloite.fi - Organisers: Responsible for the statements of support collected in paper form.

ID	Criterion	Coverage	Comments
6a	(Restricted) access to the data collected.	**YES**	**-** National Population Register Centre: Access to the signatories' data collected, for verification purpose, in case the initiative succeeds in collecting 50,000 statements of support.
6b	Publication of the data collected	**NO**	- Signatories' data are not published.
7	Ability to integrate the solution with campaigning websites	**N/A**	-
8	Ability to integrate the solution with social media	**N/A**	-
9	Ability to integrate the solution with a national/local database of citizens	**N/A**	-
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**PARTIALLY**	- The organiser of the initiative has the possibility to report the total number of statements of support collected in paper form in the Kansalaisaloite.fi – site if he uses these both ways to collect statements of support.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	- Signatures supporting a citizens' initiative (statements of support) shall be collected either in paper form or electronically online. Provisions on the form to be used in the collection of statements of support on paper are laid down by a decree of the Ministry of Justice.
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	-
11b	Ability to fill-in a statement of support using electronic identification	**YES**	- One of the prerequisites for the certification is the use of strong electronic identification as referred to in the Act on Strong Electronic Identification and Electronic Signatures (617/2009) in the collection of statements of support - An initiative that is instituted online and for which the statements of support are collected online always require so called strong e-identification, for example the use of online banking codes or a mobile certificate provided by teleoperators.
12a	Accessibility for visually impaired people.	**YES**	**-**
12b	User friendliness on smartphone and tablet.	**N/A**	**-**
13	Multilingualism	**PARTIALLY**	- 'www.kansalaisaloite.fi' is available in two official EU languages: Finnish and Swedish.
14	Certification procedure	**YES**	- The information system used for online collection of statements of support (whether public or private) is to be certified by the Finnish Communications Regulatory Authority, each time a new version is released. - No fee is charged for the certification of an information system (whether public or private). Information on the certification by the Finnish Communications Regulatory Authority must be displayed for the signatories of the citizens' initiative on the website used for the collection of statements of support.
15a	Data Centre location (MS)	**YES**	Finland
15b	ISO/IEC/27001 compliant	**N/A**	-
15c	ISO/IEC/27002 compliant	**N/A**	-
15d	Standard of Good Practice for Information Security compliant	**N/A**	-
15e	Use of a dedicated server	**N/A**	-
	Costs to build, operate and maintain	**N/A**	- Software developed by Solita oy (http://www.solita.fi/) and fully integrated with the interface accessed by the public.

Main features of 'www.kansalaisaloite.fi':

- Ability to combine both paper-based and online collection of signatures, track of the progress of an initiative, in terms of total number of signatures collected (whether via paper or online): Signatures supporting a citizens' initiative (statements of support) shall be collected either in paper form or electronically online. The organiser of the initiative has the possibility to report the total number of statements of support collected in paper form in the Kansalaisaloite.fi website.
- Ability to fill-in a statement of support using electronic identification**:** One of the prerequisites for the certification is the use of strong electronic identification as referred to in the Act on Strong Electronic Identification and Electronic Signatures (617/2009) in the collection of statements of support. In this regards, bank codes, mobile ID or e ID card can be used to sign.
- The software do not track statistical data on the website (e.g. traffic)
- Several technical solutions can be used to collect statements of support (even though it is not currently the case). One solution developed by the Finnish Ministry of Justice is offered to citizens; however other online collection systems could potentially be used according to the Act on Citizens' Initiative.

Aspects to explore in the context of the ECI:

- Ability to combine both paper-based and online collection of signatures, track of the progress of an initiative, in terms of total number of signatures collected (whether via paper or online)
- Several technical solutions can be used to collect statements of support
- Certification of the online collection system each time a new version is released
- Ability to fill-in a statement of support using electronic identification

Recommendation(s) from the respondent on the ECI online collection process:

- N/A

4.4.3 EPetition system Chambre des Députés (Luxembourg)

The right to petition is set in the Constitution. As stated in Article 27 of the Constitution in Luxembourg, everyone has the right to initiate and address to the competent Luxembourgish public authorities, petitions that are signed by at least one person.

The rules related to the ePetition system itself are then described in Article 154 and Article 155 of the Regulation of the Chamber of Deputies. These articles will be modified in 2015.

Business processes:

Registration of the initiative:

- Each person who is 15 years old at least and registered in the National Register (i.e. not necessarily Luxembourgish citizen or resident) can conduct an ePetition, by filling-in a form available on the Chamber of Deputies website.
- The 'Commission des Pétitions' then advises the 'Conférence des Présidents' with regards to the ePetition admissibility, based on two main criteria: the ePetition is accepted if (i) it covers a topic of general and national interest and (ii) does not fall into the exclusion criteria (e.g. unethical, outside of the competencies of the Chamber of Deputies).

Collection of statements of support:

- Once accepted, the ePetition is 'open' on the Chamber of Deputies website for six weeks. In order for an ePetition to be successful it should gather 4,500 signatures.

Validation of the statements of support

- The Chamber of Deputies is authorised to automatically verify signatures towards the National Register.

Submission of the online collection results to the competent authority.

- In case the threshold of 4,500 signatures is reached by the petition, a public hearing takes place including the 'Commission des Pétitions', the competent parliamentary commission and the competent Minister concerned by the petition.
- Up to six petitioners can attend the public hearing, which is also broadcasted (in live) on the Chamber of Deputies TV channel.

Table 21 Assessment of the ePetition system (Luxembourg)

ID	Criterion	Coverage	Comments
1	Cost for end-users	**NO**	**-**
2a	Possibility to collect statements of support via a central platform	**YES**	- Unique database hosted at the Chamber of Deputies: guarantee of an optimal security, reliability and control of the data collected.
2b	Possibility to collect statements of support via (separate) private systems.	**NO**	- Unique database hosted at the Chamber of Deputies: guarantee of an optimal security, reliability and control of the data collected.
3	Type of data collected	**PARTIALLY**	- First and last name, mailing and email address, date and place of birth. Selection criterion: Ability to identify a person in the national Register. While at first the national social security number was aimed to be collected (as it is for the national citizens' initiatives), it was decided instead to only request the first and last name, mailing and email address, and date and place of birth for data protection reasons.
4	Data validation process by public authorities	**YES**	- The Chamber of Deputies is authorised to automatically verify signatures towards the National Register.
5	Liability of the organisers towards the data collected	**NO**	**- Chamber of Deputies:** responsible for the system and the data collected
6a	(Restricted) access to the data collected.	**YES**	- Only the Chamber of Deputies has access to the system and the data collected.
6b	Publication of the data collected	**PARTIALLY**	- While signing an ePetition, it is up to the signatory to display his/her name, first name and address on the website. - Between 25 and 30% of the signatories decide not to make their data visible on the website, since this functionality is in place (rough estimates as the software does not enable to track statistical data).

ID	Criterion	Coverage	Comments
7	Ability to integrate the solution with campaigning websites	**N/A**	-
8	Ability to integrate the solution with social media	**N/A**	-
9	Ability to integrate the solution with a national/local database of citizens	**YES**	- The Chamber of Deputies is authorised to automatically verify signatures towards the National Register.
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**PARTIALLY**	- Improvement planned for 2015: A standard paper form will be provided by the Chamber of Deputies enabling petitioners to enter the data collected on paper into the system at the end of the collection period.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	-
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	- Low demand: too few people have an advanced electronic signature. It is thus not a priority to implement this functionality as of now; maybe later on in the future.
11b	Ability to fill-in a statement of support using electronic identification	**NO**	- Low demand: too few people have an electronic identification. It is thus not a priority to implement this functionality as of now; maybe later on in the future.
12a	Accessibility for visually impaired people.	**PARTIALLY**	- Improvement planned for 2015: Access to visually impaired people.
12b	User friendliness on smartphone and tablet.	**N/A**	-
13	Multilingualism	**NO**	- The ePetition system in Luxembourg is available in one official EU language only: French. - In the future it could also be translated in German and (less likely) in Luxembourgish.
14	Certification procedure	**NO**	- No certification of the ePetition System, as it is a tailored solution, built based on the Chamber of Deputies' requirements and hosted by the Chamber of Deputies itself.
15a	Data Centre location (MS)	**YES**	- **Luxembourg** (System hosted internally, in the Chamber of Deputy)
15b	ISO/IEC/27001 compliant	**NO**	-
15c	ISO/IEC/27002 compliant	**NO**	-
15d	Standard of Good Practice for Information Security compliant	**NO**	-
15e	Use of a dedicated server	**NO**	-
	Costs to build, operate and maintain	- Development and maintenance of the ePetition system: € 120,000. - Software developed by Vision IT and fully integrated with the interface accessed by the public	

Main features of the 'CDD ePetition system':

- Software tailor-made: Software developed based on the functional specifications drafted by the Chamber of Deputies (tailor-made solution).
- Track of the progress of an initiative, in terms of number of signatures collected: duplicates of signature are deleted periodically (normally once a day), and thus removed from the indicator.
- Ability to integrate the solution with a national/local database of citizens**:** The Chamber of Deputies is authorised to automatically verify signatures towards the National Register

Aspects to explore in the context of the ECI:

- No certification of the online collection system

Recommendation(s) from the respondent on the ECI online collection process:

- N/A

4.4.4 Danish online collection system

Based on the feedback from voters and from small political parties wishing to run in an election, the current paper-based system in place to get new non-incumbent political parties starting collecting votes was assessed as very cumbersome and unpractical. It indeed requires a lot of organisation and money for a new party to be able to run in an election, creating a barrier to democratic participation.

As a response, the Ministry turned this public demand into a political demand, which led to the preparation of an amendment of the current legal framework and a public tender aimed at finding a supplier that would be able to produce a voting solution that would make it easier for new non-incumbent parties to run for an election.

The amendment will be established, stating that the current system for endorsing new non-incumbent political parties shall be replaced by an electronic process. This system aims to be established in the half of 2015.

Business processes:

Registration of the initiative:

- Firstly, the political parties willing to run for an election shall apply at the Ministry of Home Affairs.
- If their application is approved (e.g. agreement on the terms and conditions signed by the parties), the Ministry set them as system users (administrator of the system).

  Once logged with their EC ID (a common national log-in community for public self-service, online banking, etc.) they can start collecting signatures.

Collection of statements of support:

- A party wishing to collect endorsement needs first to collect the email address of the citizens willing to vote for them and to input these into the system (via their administrator access).
- The concerned citizens will then receive via email an invitation (containing a hyperlink) to vote for that political party.

  By clicking on the hyperlink, the citizen will be required to log in with their EC ID and then to accept the invitation.
- Once the invitation is accepted, the citizen receives on their Digital Post mailbox the receipt of their vote. The receipt will also include the procedure to follow in order to withdraw one's vote: it should be noted that each citizen is only allowed to vote once and for one party, for each election period.

Validation of the statements of support

- The identity of a voter (and therefore their eligibility for the vote) is verified by the Central Person Registry.

Submission of the online collection results to the competent authority.

- Based on the number of endorsements collected by the political party, the competent Ministry will decide whether its application for running an election is approved (threshold of endorsements reached) or disapproved (insufficient number of endorsements collected).

Table 22 Assessment of the online collection system (Denmark)

ID	Criterion	Coverage	Comments
1	Cost for end-users	**PARTIALLY**	- Cost incurred to political parties only if they choose to add a functionality on their website enabling citizens to directly register their email address and thus receive via email an invitation (containing a hyperlink) to vote for that political party. - While the Ministry has foreseen this functionality in the system, it remains up to the parties to implement it at their costs.
2a	Possibility to collect statements of support via a central platform	**YES**	- This is the best way to ensure that the endorsements are securely collected, and that the Ministry can trust them as it will base their decision of accepting or disapproving a party's application for running an election, based on the endorsements collected. - In addition, it was the only possible option to integrate the national digital infrastructures into the system (and ensure that the data collected are secured and trustable): political parties would not be able to cope with the cost of integrating these infrastructures to private systems.
2b	Possibility to collect statements of support via (separate) private systems.	**NO**	-

ID	Criterion	Coverage	Comments
3	Type of data collected	**YES**	- Online collection: email addresses and electronic identification of citizens. - Paper-based collection: form including their name, address, social security number and signature. Selection criterion: The data to be collected have to be sufficient to enable the unique identification of the voter, and thus the verification of their eligibility for the vote, and they should also be legal to collect and store. Following discussions with technical experts and the national authorities on the use and storage of data, it resulted that the EC ID was fulfilling these criteria.
4	Data validation process by public authorities	**YES**	- The identity of a voter (and therefore their eligibility for the vote) is verified by the Central Person Registry.
5	Liability of the organisers towards the data collected	**PARTIALLY**	- Political party collecting endorsement: first data handler. - System supplier: second data handler. - System owner (competent Ministry) responsible for the IT system: third data handler. Data handler refers to both data processor and data controller.
6a	(Restricted) access to the data collected.	**NO**	- Political parties will have access to the voters' email addresses, but will not be allowed to use the data collected else than to put them into the online collection system. - The competent Ministry will not access any data during the data collection period and will only have a view on the number of signatures collected. Once the number of signatures needed to apply for an election is reached, then the Ministry will probably access these data. This is however still under discussion and not yet decided.
6b	Publication of the data collected	**NO**	-
7	Ability to integrate the solution with campaigning websites	**N/A**	-
8	Ability to integrate the solution with social media	**N/A**	-
9	Ability to integrate the solution with a national/local database of citizens	**YES**	- The identity of a voter (and therefore their eligibility for the vote) is verified by the Central Person Registry.
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**YES**	- Citizens will be requested to fill-out a form including their name, address, social security number and signature. The party will then input the information into the system (administrator access). - If eligible for the vote, the citizen will then receive via mail a physical receipt of their vote. The receipt will also include the procedure to follow in order to withdraw one's vote.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	-
11a	Ability to sign a statement of support using an advanced electronic signature	**YES**	- EC ID is an advanced electronic signature: Denmark established a signature system, where the user is able to activate its signature over an internet portal after receiving an activation code.
11b	Ability to fill-in a statement of support using electronic identification	**NO**	-
12a	Accessibility for visually impaired people.	**YES**	- System designed in accordance w/ WCAG 2.0, W3C standards in HTML and CSS as well as PDF A //1a
12b	User friendliness on smartphone and tablet.	**N/A**	-
13	Multilingualism	**NO**	- The system in Denmark will be available in one official EU language only: Danish.
14	Certification procedure	**YES**	- Certification once a year by the system owner (competent Ministry). - €20,000 a year, i.e. two full-time resources during one week.
15a	Data Centre location (MS)	**YES**	Denmark (European cloud)
15b	ISO/IEC/27001 compliant	**YES**	-
15c	ISO/IEC/27002 compliant	**NO**	-

ID	Criterion	Coverage	Comments
15d	Standard of Good Practice for Information Security compliant	**NO**	**-**
15e	Use of a dedicated server	**NO**	**-**
Costs to build, operate and maintain		**Total € 434,000** - Infrastructure costs: € 4000 in 2015 - Development costs: € 430,000 over 2014 and 2015	

Main features of the 'Danish online collection system':

- Solution based on open standards
- Solution built from scratch reusing existing national infrastructures:
  - **'Central Person Registry':** In Denmark each person has a personal registration number, which is called a Central Person Register number, as this number is essential in relation to any contact with the Danish authorities and especially in connection to tax and social security issues.
  - **'EC ID':** a common national log-in community for public self-service, online banking, etc.;
  - '**Digital Post mailbox**': available since 01.11.2013, that third component of the system is a secure mailbox that people can access using their EC ID, itself coming from the Central Person Registry, for letters from public authorities.
- Ability to combine both paper-based and online collection of signatures: Citizens will be requested to fill-out a form including their name, address, social security number and signature. The party will then input the information into the system.
- Ability to sign a statement of support using an advanced electronic signature: EC ID is an advanced electronic signature
- Ability to integrate the solution with a national/local database of citizens: The identity of a voter (and therefore their eligibility for the vote) is verified by the Central Person Registry.

Aspects to explore in the context of the ECI:

- Reuse of existing infrastructures
- Ability to sign a statement of support using an advanced electronic signature
- Data hosted on a European cloud
- Ability to combine both paper-based and online collection of signatures

Recommendation(s) from the respondent on the ECI online collection process:

- N/A

4.4.5 German Parliament ePetition system

Article 17 of the Basic Law of the Federal Republic of Germany established the right to petition, stating that "Every person shall have the right individually or jointly with others to address written requests or complaints to competent authorities and to the legislature." The electronic petition is thus included in these principles.

Article 45 of the Basic Law of the Federal Republic of Germany, states that "(1) the Bundestag shall appoint a Petitions Committee to deal with requests and complaints addressed to the Bundestag pursuant to Article 17 [and] (2) The powers of the Committee to consider complaints shall be regulated by a federal law." Based on this article, the Petitions Committee has adopted a policy Act to make use of their power, as prescribed by that Article 45. The latter policy Act also describes how to deal with ePetition.

Business processes:

Registration of the initiative:

- Two types of ePetitions can be conducted: (i) individual petitions dealing with individual issues faced by citizens and (ii) public petitions. In total, 15,000 petitions (including ePetitions) have so far been submitted to the German Parliament. It should be noted that most of the ePetitions (around two third) are sent as public petitions.
- Once prepared (including the names and addresses of the petitioners as well as the purpose of the ePetition) the ePetition must be sent to the Petitions Committee, who verifies that the ePetition meets the administrative requirements and these related to the content (general interest, capacity to implement the petition, issues under debate in the Parliament already, federal competences of the German Parliament).
- Once validated by the Petitions Committee, the ePetition is published (for four weeks) and a forum page related to the ePetition is also created online, to enable citizens to comment on it.
- Only one ePetition can be registered per person at the same time.

Collection of statements of support:

- If one ePetition collects 50,000 signatures (i.e. including both online and paper-based signatures) over the four weeks of data collection, there may be a possibility for a public hearing where petitioners are invited and can explain their petitions in front of the Petitions committee and members of the federal government.
  So far 1 million signatures have been collected through the ePetition system.

Validation of the statements of support

- An email is submitted to each signatory to verify that the person is real and not a machine. A unique hyperlink on which the signatory must click to confirm his/her signature is included in the email.
- Letters can also be sent at signatories' addressees (based on a random sample) to verify that the address exists, is correct and that the person having signed the ePetition is alive. These signatures can be collected from anyone (citizens, residents or non-residents), verifying each address would thus be impossible.

Submission of the online collection results to the competent authority.

- Once the data collection period is completed and that the threshold in terms of number of supports collected is reached, then a member of the federal ministry under which competencies the ePetition falls is requested to give an opinion on the ePetition. Two members of the Petitions Committee (rapporteurs), one from the governing party and one from the opposition, will also check the ePetition.
- Based on these opinions, on the outcomes of the public hearing and on the political situation, the Petitions service then prepares a proposal on how the ePetition should be dealt with. This proposal will be the ground material for the Petitions Committee to discuss and vote on the ePetition in their weekly meeting.
- After the vote, the proposal can be sent to the Parliament, to the parliamentary group in the Bundestag or to the federal government including a degree of urgency.

Table 23 Assessment of the German Parliament ePetition system

ID	Criterion	Coverage	Comments
1	Cost for end-users	**NO**	- Right of petitions standing among the basic rights in Germany, the system had to be easy to use and free of charge for citizens.
2a	Possibility to collect statements of support via a central platform	**YES**	- Easiest technical solution for citizens to conduct or sign ePetitions (approach chosen in 2008)

ID	Criterion	Coverage	Comments
2b	Possibility to collect statements of support via (separate) private systems.	**NO**	-
3	Type of data collected	**PARTIALLY**	- Paper-based collection: name, address and signature. - Online collection: name, address, email address to be filled-in by citizens online, on the German Parliament website, via an electronic template. Selection criterion: the Policy Act adopted by the Petitions Committee sets out the information needed which is the name, address and signature (paper-based petition) or email (electronic petition). Additional fields can be filled-in by the signatory but these remain optional.
4	Data validation process by public authorities	**PARTIALLY**	- An email is submitted to the signatories to verify that the person is real and not a machine. A unique hyperlink on which the signatory must click to confirm his/her signature is included in the email. - Letters can also be sent at signatories' addressees (based on a random sample) to verify that the address exists, is correct and that the person having signed the ePetition is alive.
5	Liability of the organisers towards the data collected	**NO**	- The German Bundestag is responsible for the data collected, as system owner.
6a	(Restricted) access to the data collected.	**YES**	- Only the administrators of the Petitions Committee (who are part of the German Bundestag) can access the data, not the organisers of an ePetition.
6b	Publication of the data collected	**PARTIALLY**	- Until August 2012, the names of the supporters of an ePetition were automatically displayed on the German Bundestag website. Since then, signatories can choose to make their data visible or not. Since this change, over two thirds of the signatories keep their data invisible.
7	Ability to integrate the solution with campaigning websites	**N/A**	-
8	Ability to integrate the solution with social media	**N/A**	-
9	Ability to integrate the solution with a national/local database of citizens	**N/A**	-
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**NO**	- The statements of support collected on paper and online are submitted to the German Parliament via two different channels: the online collection system takes no account of the paper-based statements of support.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	- The German Parliament inputs the paper-based statements of support in the ePetition system so as to end up with a single channel of data collection (online and paper-based)
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	-
11b	Ability to fill-in a statement of support using electronic identification	**YES**	- Since August 2014 the ePetition system enables citizens to use their electronic identification card to create a user account or sign a petition online. - The name and address of the signatory will then be taken out of this eID card directly (no email submitted with the unique link to confirm one's identity) while the email address will still need to be filled-in. As each time that an answer is provided to a comment posted on the ePetition website forum, the author of the comment receives an email notification stating so; email addresses need to be collected anyway for this purpose. - The interviewee mentioned that only few people use the eID yet.
12a	Accessibility for visually impaired people.	**YES**	- The German Parliament ePetition system has been accessible for visually impaired people since 2008.
12b	User friendliness on smartphone and tablet.	**N/A**	-
13	Multilingualism	**NO**	- The German Parliament ePetition system is available in one official EU language only: German.

ID	Criterion	Coverage	Comments
14	Certification procedure	**YES**	- Bundesamt für Sicherheit in der Informationstechnik in charge of certifying the hosting provider directly; this data is thus not available to the German Bundestag.
15a	Data Centre location (MS)	**YES**	- Germany (Private hosting by Babiel GmbH)
15b	ISO/IEC/27001 compliant	**NO**	-
15c	ISO/IEC/27002 compliant	**NO**	-
15d	Standard of Good Practice for Information Security compliant	**NO**	-
15e	Use of a dedicated server	**NO**	-
	Costs to build, operate and maintain	Infrastructure costs: € 20,000 per year (hosting) Development costs: € 500,000 in total Maintenance costs: € 50,000 per year Software developed by Condat and fully integrated to the interface accessed by the public.	

Main features of the 'German Parliament ePetition system':

- Real-time update of the count of signatures on the website. The number of online statements of support collected is automatically (real-time) added to the count of signatures on the website, when the signatory has filled-in their information and confirmed their support (see below the staged approach followed). At the end of the data collection period, the German Parliament then inputs the paper-based statements of support in the ePetition system so as to end up with a single channel of data collection (online and paper-based) and a website indicating the accurate total number of signatures collected for each initiative.

Aspects to explore in the context of the ECI:

- Staged approach regarding data collection: once a signatory has filled-in their information on the online statement of support form, an email is submitted to them, including a unique hyperlink on which the signatory must click to confirm their support. A staged approach is also put in place for paper-based collection of statements of support, but the submission of a letter to confirm the signatory's identity and support is not submitted automatically.

Recommendation(s) from the respondent on the ECI online collection process:

- N/A

4.4.6 UK Parliament ePetition system

Citizens were very often emailing/submitting petitions online to the government and expected the government to respond. Pilots to petition the parliament directly were thus conducted and the website http://epetitions.direct.gov.uk/ was launched in August 2011. Today, over 10 million people use this service.

Business processes:

Registration of the initiative:

- The organiser of the petition registers a petition on the website by filling-in the subject of the ePetition, the part of the Government responsible for it and their contact details (which are the same as these requested to sign an ePetition).
- The proposal for an ePetition is then submitted to the competent members of the Leader's office of the House of Common to verify the ePetition validity, i.e. whether it is within the scope of the UK Parliament and ethically acceptable.
- It is finally sent to the relevant government department responsible for the ePetition for the duration of its cycle.

Collection of statements of support:

- Organisers of the ePetition disseminate the link to the ePetition page to potential signatories.
- Usually an e-petition stays open for 12 months. However ePetition organisers can choose to close it sooner than this. If a shorter period was set by the organisers, 100,000 signatures still need to be collected to have a debate on the subject of the ePetition in the House of Commons. At the end of the set period, the e-petition closes. No further signatures can be added to it.

Validation of the statements of support

- The email addresses and postal addresses are verified in addition to it being checked that the signatories have not already signed the ePetition.

Submission of the online collection results to the competent authority.

- If 10,000 signatures are collected, then the proposal of the relevant government department responsible for the ePetition will be published.
- If 100,000 signatures are collected the petition will go to the business committee in the House of Commons to be considered for debate and finally will be scheduled in their programme to discuss.

Table 24 Assessment of the UK Parliament ePetition system

ID	Criterion	Coverage	Comments
1	Cost for end-users	**NO**	**-**
2a	Possibility to collect statements of support via a central platform	**YES**	- To ensure that the petitions coming through the system are relevant to the Parliament - To ensure that citizens' personal information can be provided to third parties in a trusted environment.
2b	Possibility to collect statements of support via (separate) private systems.	**NO**	**-**
3	Type of data collected	**PARTIALLY**	**- Name, email address (twice to confirm the accuracy of the address), address, town, postcode, country and citizenship are to be collected.** Selection criterion: email addresses are used to reply to the participants and to provide them with information about the petitions they supported; while postal addresses are mainly collected to dissuade people to sign on behalf of another person or creating spoof petitions.
4	Data validation process by public authorities	**PARTIALLY**	- The email addresses and postal addresses are verified in addition to it being checked that the signatories have not already signed the ePetition.
5	Liability of the organisers towards the data collected	**NO**	**-** The Leader's office of the House of Commons is responsible for the data collected from the signatories, including their security.

ID	Criterion	Coverage	Comments
6a	(Restricted) access to the data collected.	**YES**	- The members of the Leader's office of the House of Commons can access the system.
6b	Publication of the data collected	**NO**	- No personal data are published on the website; but only the number of signatories.
7	Ability to integrate the solution with campaigning websites	**N/A**	-
8	Ability to integrate the solution with social media	**PARTIALLY**	- Links are currently provided to allow people to share their petition through social media, such as Facebook, Twitter or LinkedIn. - The next improvement planned would be to also provide live feeds to these ePetitions.
9	Ability to integrate the solution with a national/local database of citizens	**N/A**	-
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	**NO**	- The system takes no account of the paper-based petitions.
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	**YES**	-
11a	Ability to sign a statement of support using an advanced electronic signature	**NO**	- Not implemented because electronic signatures are not commonly used in the UK.
11b	Ability to fill-in a statement of support using electronic identification	**NO**	-
12a	Accessibility for visually impaired people.	**YES**	-
12b	User friendliness on smartphone and tablet.	**N/A**	-
13	Multilingualism	**NO**	- The UK Parliament ePetition system is available in one official EU language only: English. - It is also translated into Welsh, however Welsh is not an official language of the European Union.
14	Certification procedure	**YES**	- The UK Parliament is responsible for the security validation of the data, which is held in a cloud. € 10,000 per year borne by the UK Parliament.
15a	Data Centre location (MS)	**YES**	- **United Kingdom** (European cloud)
15b	ISO/IEC/27001 compliant	**YES**	-
15c	ISO/IEC/27002 compliant	**YES**	-
15d	Standard of Good Practice for Information Security compliant	**YES**	-
15e	Use of a dedicated server	**NO**	-
	Costs to build, operate and maintain	- Infrastructure costs: €20,000 per year - Development costs: €50,000 in 2011 - Maintenance costs: €20,000 per year (including support) - No cost to run the service as the team in charge of the system was already in place. - No training costs as it was designed in a similar way to previous systems.	

Main features of the 'UK Parliament ePetition system':

- 70% of signatories subscribe to the updates when they sign an e-petition.
- Name, email address, address, town, postcode, country and citizenship are to be collected but none is published.
- Improvements planned to display ePetitions by area, to integrate the software with social media, to provide the signatories with the details about their local member of parliament and any related upcoming local political events, to develop reporting tools for the ePetition organisers (as so far only the number of signatories is reported to them).

Aspects to explore in the context of the ECI:

- Ability for signatories to sign up for updates on the initiative
- Data hosted on a European cloud
- Reporting tools under development

Recommendation(s) from the respondent on the ECI online collection process:

- The challenge for the ECI is that it is over complex for what it is trying to achieve. The fact that it is engineered in the same way as an e-voting system has a clear impact on the number of ECIs conducted and is definitely correlated with the ECI's success. On the contrary, the UK ePetition system was quickly adopted by the people. When it was created back in 2011, the organisation had no idea how many people would use it. It is now part and parcel of the democratic landscape in the UK and it would be impossible to imagine a return to the old system. It has been disappointing to see the ECI has not been as successful with such poor uptake, despite the size of the European Union and the potential it has to be a really powerful tool to enhance engagement in the democratic process.
- Instead of being over complex it should be treated as an ePetition system through more appropriate security systems.
- EU Member States should ask for appropriate information (i.e. not too personal).
- Greater clarity should be brought over what steps follow the raising of a petition.
- The awareness on the ECI should be raised among EU citizens, by convincing campaign organisations to think it is worth using, as well as the Commission publicising it more.

4.5. Results

This section aims at synthesising the key findings displayed in Section 4.3 and Section 4.4.

Table 25 and Table 26 respectively display the results of the assessment performed by KURT SALMON, including five software developed by private providers and six online collection systems currently in place or to be established soon at national level.

Based on the same rules as previously defined, ‘YES’, ‘PARTIALLY’ and ‘NO’ respectively mean that the solution fully covers / partially covers / does not cover a criterion. When no answer was received, N/A is noted.

Table 25 Conclusions on the solutions (software) developed by private vendors

ID	Criteria	Solution 1 Open ECI	Solution 2 We Sign It	Solution 3 ePetitioner	Solution 4 Open Ministry	Solution 5 Petities.nl
1	Cost for end-users	PARTIALLY	PARTIALLY	NO	PARTIALLY	PARTIALLY
2a	Possibility to collect statements of support via a central platform	N/A	N/A	N/A	N/A	N/A
2b	Possibility to collect statements of support via (separate) private systems	N/A	N/A	N/A	N/A	N/A
3	Type of data collected	YES	PARTIALLY	PARTIALLY	PARTIALLY	PARTIALLY
4	Data validation process by public authorities	YES	PARTIALLY	PARTIALLY	YES	PARTIALLY
5	Liability of the organisers towards the data collected	YES	NO	PARTIALLY	YES	N/A
6a	(Restricted) access to the data collected	YES	NO	YES	YES	NO
6b	Publication of the data collected	NO	PARTIALLY	YES	PARTIALLY	PARTIALLY
7	Ability to integrate the solution with campaigning websites	YES	PARTIALLY	NO	NO	PARTIALLY
8	Ability to integrate the solution with social media	PARTIALLY	YES	PARTIALLY	NO	PARTIALLY
9	Ability to integrate the solution with a national/ local database of citizens	NO	NO	YES	NO	YES
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	NO	NO	PARTIALLY	PARTIALLY	NO
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	YES	N/A	N/A	YES	N/A
11a	Ability to sign a statement of support using an advanced electronic signature	NO	NO	NO	NO	N/A
11b	Ability to fill-in a statement of support using electronic identification	NO	NO	NO	YES	PARTIALLY
12a	Accessibility for visually impaired people	N/A	PARTIALLY	YES	NO	YES
12b	User friendliness on smartphone and tablet	YES	N/A	N/A	N/A	PARTIALLY
13	Multilingualism	YES	PARTIALLY	PARTIALLY	PARTIALLY	NO
14	Certification procedure	N/A	N/A	YES	YES	NO
15a	Data Centre location	N/A	YES	YES	YES	YES
15b	ISO/IEC/27001 compliant	N/A	N/A	NO	YES	YES
15c	ISO/IEC/27002 compliant	N/A	N/A	NO	N/A	YES
15d	Standard of Good Practice for Information Security compliant	N/A	N/A	YES	N/A	YES
15e	Use of a dedicated server	N/A	NO	YES	NO	NO

ID	Criteria	Solution 1 Open ECI	Solution 2 We Sign It	Solution 3 ePetitioner	Solution 4 Open Ministry	Solution 5 Petities.nl
	Costs to build, operate and maintain	**One-off costs: €40,000 to 50,000** **Ongoing costs: €4,000 to 5,000/ year:** - Development costs in 2014: €20,000 - Development costs planned for 2015: between €10,000 and €20,000 - Certification-related costs: €10,000 - Support costs: between €4,000 and €5,000	**One-off costs: €315,000**[156] **Ongoing costs:** **€20,000/ year:** - €100,000 until the end of 2014. Forecasts for 2015 are assessed at: - € 150,000 for further developments on the platform ergonomics, multilingualism, design; - € 65,000 of development to enable signatures via SMS. - € 20,000 support costs (per year).	**One-off costs: €135,500:** See Figure 31	**One-off costs: € 50,000** **Ongoing costs:** **€ 6,600/ year:** - € 30,000 development spent over two years for the software (one-off costs) - € 20,000 development for the interface (one-off costs) - € 600 per year for the hosting (ongoing costs) - € 6,000 per year for the online signing platform (ongoing costs)	**One-off costs: € 36,000**[157]**:** - Petities.nl has been sponsored by the Dutch government between 2010 and 2015. - Current interface (2009): € 12,000 - Next version (2015): € 24,000

[156] This includes the costs of the development to be performed to become compliant with the ECI regulatory framework.
[157] This figure does not reflect the real cost of the interface and software as the funding received by the Dutch Government to develop the solution has significantly reduced the costs related to the solution for the founder of Petities.nl.

Table 26 Conclusions on the online collection system available at national level

ID	Criteria	Solution 6 (France)	Solution7 (Finland)	Solution 8 (Luxembourg)	Solution 9 (Denmark)	Solution 10 (Germany)	Solution 11 (UK)
1	Cost for end-users	NO	NO	NO	PARTIALLY	NO	NO
2a	Possibility to collect statements of support via a central platform	YES	YES	YES	YES	YES	YES
2b	Possibility to collect statements of support via (separate) private systems	NO	YES	NO	NO	NO	NO
3	Type of data collected	YES	PARTIALLY	PARTIALLY	YES	PARTIALLY	PARTIALLY
4	Data validation process by public authorities	YES	YES	YES	YES	PARTIALLY	PARTIALLY
5	Liability of the organisers towards the data collected	NO	PARTIALLY	NO	PARTIALLY	NO	NO
6a	(Restricted) access to the data collected	YES	YES	YES	NO	YES	YES
6b	Publication of the data collected	YES	NO	PARTIALLY	NO	PARTIALLY	NO
7	Ability to integrate the solution with campaigning websites	N/A	N/A	N/A	N/A	N/A	N/A
8	Ability to integrate the solution with social media	N/A	N/A	N/A	N/A	N/A	PARTIALLY
9	Ability to integrate the solution with a national/ local database of citizens	N/A	N/A	YES	YES	N/A	N/A
10a	Ability to combine both paper-based and online collection of signatures, from a technical perspective	YES	PARTIALLY	PARTIALLY	YES	NO	NO
10b	Ability to combine both paper-based and online collection of signatures, from a legal perspective	YES	YES	YES	YES	YES	YES
11a	Ability to sign a statement of support using an advanced electronic signature	NO	NO	NO	YES	NO	NO
11b	Ability to fill-in a statement of support using electronic identification	NO	YES	NO	NO	YES	NO
12a	Accessibility for visually impaired people	YES	YES	PARTIALLY	YES	YES	YES
12b	User friendliness on smartphone and tablet	N/A	N/A	N/A	N/A	N/A	N/A
13	Multilingualism	NO	PARTIALLY	NO	NO	NO	NO
14	Certification procedure	YES	YES	NO	YES	YES	YES
15a	Data Centre location	YES	YES	YES	YES	YES	YES
15b	ISO/IEC/27001 compliant	NO	N/A	NO	YES	NO	YES
15c	ISO/IEC/27002 compliant	NO	N/A	NO	NO	NO	YES
15d	Standard of Good Practice for Information Security compliant	YES	N/A	NO	NO	NO	YES
15e	Use of a dedicated server	NO	N/A	NO	NO	NO	NO

ID	Criteria	Solution 6 (France)	Solution7 (Finland)	Solution 8 (Luxembourg)	Solution 9 (Denmark)	Solution 10 (Germany)	Solution 11 (UK)
	Costs to build, operate and maintain	**One-off costs: €4,000,000** **Ongoing costs: €50,000/ year:** - Development costs: € 4,000,000 (fixed cost) - Maintenance costs: € 50,000 per year	N/A	**Total: €120,000:** - Development and maintenance of the system: € 120,000.	**Total € 434,000:** - Infrastructure costs: € 4000 in 2015 - Development costs: € 430,000 over 2014 and 2015	**One-off costs: €500,000** **Ongoing costs: €70,000/ year** - Infrastructure costs: € 20,000 per year (hosting) - Development costs: € 500,000 in total - Maintenance costs: € 50,000 per year	**One-off costs: €50,000** **Ongoing costs: €40,000/ year** - Infrastructure costs: €20,000 per year - Development costs: €50,000 in 2011 - Maintenance costs: €20,000 per year (including support)

5. Conclusions and recommendations

The conclusions and recommendations listed in this section are organised as they appear in the report and not articulated around the proposed technical scenario(s) to which they belong. The conclusions of the study also refer to the comparative scenarios that can be further explored and possibly re-used in order to implement the recommendations proposed.

5.1. Conclusion N°1: Register, a great tool to enhance transparency

Overall, the Register can be considered as a great tool to enhance transparency to all actors concerned in the implementation of the ECI. It indeed provides general information on how to conduct an ECI, from the registration to the submission of the statements of support to the European Commission but also displays the core information related to each ECI (including their stage). The main weakness of the component is that it is not integrated with the ECI Online Collection Software.

Recommendation N°1: Integrate the ECI Online Collection Software and the Register.

While the ECI Online Collection Software and the Register are currently two independent and separate solutions, integration between the tools should be considered. In this regards, depending on whether the regulatory framework evolves or not, several levels of integration are possible and should be further investigated.

(i) Integration of both tools into a single solution.

Having the ECI Online Collection Software and the Register integrated in a single solution would ensure that:

- The efforts spent and resources used by the European Commission to operate both solutions are not duplicated;
- The XML files related to an ECI are automatically transferred from the Register to the ECI Online Collection Software. This would save the time for ECI organisers to export XML files from the Register and import them into the system (e.g. when the information on an ECI is published in the Register in an additional language, this new language version can be used in the ECI statement of support forms made available in the online collection software);
- Member States do not need to certify any online collection systems anymore;
- ECI signatories can support an ECI straight from the Register and thus rationalise the data collection process.

The integration of both tools into a single solution would be the easiest type of integration to put in place; however it implies a review of the ECI Regulation (online collection systems, data liability) and ECI Commission implementing Regulation N°1179/2011 (network security requirements, e.g. DMZ is on a dedicated virtual local area network (VLAN)/LAN) – the latter may not be necessary anymore. Moreover, this also implies that the hosting service for the ECI online collection systems is provided by the European Commission as a permanent but also unique solution.

(ii) Integration through APIs.

API integration focuses on workflows and provides secure access to encapsulated data. Automation between the Register and the ECI Online Collection Software could thus be ensured via exposure/consumption of web-services, allowing the software to get connected to the Register and thus enabling signatories to support an ECI straight from the Register. As a result, ECI organisers could for instance have the option to display on the Register a progress bar indicating the number of online statements of support collected.

As a matter of fact, the integration through APIs includes setting an interface which allows exchanging data between tools that are otherwise unconnected. This type of integration would also allow an automatic transfer of the XML files from the Register to the ECI Online Collection Software and may thus simplify the import and export of files for ECI organisers.

Integration through APIs is only possible if the Commission Implementing Regulation N°1179/2011 evolves, in particular the specifications related to the demilitarized zone (DMZ). Moreover, taking into account that the European Commission needs to provide equal treatment to all ECI organisers, this could be very costly to implement and add complexity to the architecture of the solution, especially in case systems are hosted outside the Commission's servers. Moreover, whether this automatic transfer would simplify the import and export of XML files for ECI organisers should be further investigated, as putting in place authentication over web services would require more IT expertise (for ECI organisers) than connecting to an administration interface.

These potential impacts should be assessed against the added-value of this type of integration for the ECI.

(iii) Option to redirect signatories from the Register to the signing page of the ECI Online Collection Software.

While the Register currently redirects signatories to the ECI website home page, the option could be given to ECI organisers to have a hyperlink or a 'Sign' button instead (on the Register) redirecting the potential ECI signatories to the ECI signing page.

If the regulatory framework is not reviewed (and that the hosting of ECI online collection systems can be provided by private vendors), then other types of integration should be further explored.

The cheapest (and simplest) solution would be to give the option to organisers to redirect potential signatories from the Register to the signing page directly. However; this scenario would not allow the automatic transfer of XML files from one solution to another. This scenario is the closest to the baseline scenario.

5.2. Conclusion N°2: ECI software, a solution chosen by default

Overall, the main advantage of the ECI Online Collection Software is the fact that it is already set-up in compliance with the ECI regulatory requirements; in particular, the statement of support forms generated by the ECI Online Collection Software are aligned with the data requirements of each EU Member State. Moreover, the software is free of charge for ECI organisers.

However, as the ECI Online Collection Software is for now the only available solution on the market to collect online statements of support in the context of the ECI, organisers strongly call for improvements in order to better meet their needs.

Recommendation N°2: Continue to improve the ECI Online Collection Software.

If no other solution is released on the market for the ECI, then the ECI Online Collection Software should continue to evolve in order to meet ECI organisers' needs:

- While the ECI Online Collection Software is at the time of the report the only solution available on the market for the ECI, should there be any alternative open-source solution released, the European Commission should include the contributions into the existing software through the existing development process, verify that the resulting version of the software complies with the regulatory framework and make it available as open-source so that it can be run on the European Commission own servers or integrated to private systems.
- While the ECI Online Collection Software complies with the Web Content Accessibility Guidelines 2.0, the audio captcha system, so far only available in English, should be made available in all official EU languages to ensure access to all citizens, including visually impaired people.
- While ECI organisers already have the possibility of customising the interface (through modification of the default OCS style sheets) without modifying the software[158], the European Commission should continue working on an improved default look and feel interface of the software.
- While the ECI Online Collection Software can already be integrated into campaigning websites and social media, as implemented by several ECIs, and allows sharing an ECI on social media, e.g. Facebook or Twitter, the next version of the software should add further social media actions, such as an option to share the initiative on LinkedIn.

No change in the ECI regulatory framework is needed to implement this recommendation. Moreover, at the time of this report, work is ongoing to implement some of these functionalities on the ECI Online Collection Software. Nonetheless, the possibility to embed/ integrate the ECI Online Collection Software in other websites should be further analysed in phase II.

Input from the comparative analysis:

Based on the comparative scenarios, KURT SALMON identified additional features that should be further explored for the ECI: user-friendliness on smartphones and tablets so as to then foster signatures from SMS and social media (two solutions aim to be made available in smartphone and tablet compatible formats), signing up for updates on the initiative, detecting signatories' language and display multilingual statements of support accordingly.

[158] As the default OCS style sheets are not part of the core features of the software, these can be modified without compromising the compliance with the ECI Regulation.

- Overall, 7 out of 10 are accessible to visually impaired people, while this is an improvement planned for two other solutions (2). The ECI Online Collection Software should be further developed to increase accessibility.
- Similarly to the ECI Online Collection Software, 2 comparative scenarios can be embedded in any website via a widget. In this case, the signatures collected via these websites all feed into the central database of the initiative. Another solution, not yet operational but an interesting option for future developments, foresees that an Iframe will be able to be integrated in the campaigning website allowing citizens to sign the statements of support and organisers to customise the statement of support forms.
- Finally, as regards social media, the comparative analysis has shown that solutions which could not be integrated to any social media (1) are not operational anymore. The majority of the solutions (4 out of 6) allow people to share their petition through social media, such as Facebook, Twitter or LinkedIn, while one allows signatories to feed their statements of support directly from their Facebook data (1).

As mentioned, the ECI Online Collection Software is currently the only solution available for collecting statements of support in the context of the ECI. Based on KURT SALMON analysis, two reasons may explain this situation: on the one hand, the barriers faced by providers to develop a private solution that would be compliant with the ECI regulatory framework; on the other hand, their lack of interest in the subject.

With regards to the first reason, when asked about the potential barriers software providers may face while developing a software that would be compliant with the ECI regulatory framework, Civil Society Organisations (3) and IT experts (2), all mentioned the regulatory requirements imposed by the ECI Regulation (i.e. Article 5 (1) related to data requirements, Article 6 on online collection systems, Article 13 linked to stakeholders' liability towards data) and related Commission Implementing Regulation N°1179/2011 (i.e. the technical specifications aiming at implementing the Article 6 (4) of the ECI Regulation, in particular the need to produce a risk analysis document for the solution).

As an alternative, software providers could have participated in the open-source community established by the European Commission and contributed to improve upon the ECI Online Collection Software source code and share the changes within the community. Stakeholders' involvement remained however generally low, limiting the collaborative effort around the improvement of the software. For example, a release management process was put in place in order to allow the community to influence the content of next releases of the software, but there was only a very low participation from the community of open-source developers. While this can be due to a lack of interest from vendors, it can also be related to the fact that their expectations with regards to the software were not met: most of the requirements were not feasible or accepted because of the constraints of the regulatory framework.

Recommendation N°3: Continue to encourage stakeholders' participation in the ECI process

It is essential to foster the participation of European Commission officials, ECI organisers, IT experts and private vendors in the ECI process to ensure that solutions (technical or not) are developed based on a collaborative approach and contribute to the success of the ECI.

The vain efforts by the European Commission in building a large open-source community around the ECI Online Collection Software prove that stakeholders' participation on the IT aspects is difficult to stimulate. The scope of the open-source community on Joinup should however continue to strictly focus on the IT aspects of the ECI implementation, in particular the ECI Online Collection Software (e.g. transparency on the improvements planned and the related schedule). In addition, for the non-technical aspects, a community of practice should be created to foster stakeholders' interactions:

- Firstly, the community of practice could be a place for ideation. Fostering the exchange of views and opinions among citizens and civil society organisations could contribute to develop ideas and turn them into solid and sound proposals for an ECI, which could then facilitate the collection of signatures and reach the threshold needed.
- Second, the community of practice could also enhance crowdfunding so as to help ECI organisers raising funds and partnerships for conducting a successful campaign.
- Third, the community of practice could be a place where ECI organisers share their experience and knowledge in running campaigns and setting up ECI online collection systems.
- Fourth, the European Commission could take the opportunity of this community to ask ECI organisers to provide their feedback on the ECI online collection process all along the process, so as to capture the 'momentum'. In this regards the European Commission could design standard online satisfaction surveys, via applications such as EU Survey[159], address them directly to organisers at the different stages of the process, publish the results on the Register and take the feedbacks into account (when possible) to improve the ECI online collection process.

By clarifying the scope of the open-source community and putting efforts in building a community of practice, the institution would disseminate a positive message and signal to citizens, showing that the institution has a positive attitude towards the ECI instrument and is willing to assist the citizens that would be willing to engage in the ECI.

No change in the ECI regulatory framework is needed to implement this recommendation.

The Register could be used to foster the creation of the community by providing links towards the platform of the community of practice itself. The latter should be established by ECI organisers themselves, or Civil Society Organisations and follow the example of some initiatives conducted by DG CNECT in the field of eParticipation, such as 'Puzzled by Policy', an online platform that encourages stakeholders' interactions in discussions concerning immigration policies across Europe; 'Ourspace', a platform offering typical social networking services (user profiles, membership, rating, etc.), e-Participation and Web 2.0 services (polls, blogs, surveys, forums) and multiple communication channels (mobile and Facebook app, iGadget) as well as the necessary content.

Synergies with the ISA Action 4.1.1 – Raising interoperability awareness, Communication activities[160], could also be envisaged, as the latter covers issues and activities related to the ISA programme[161] and spans the whole communication process right from the establishment of a global strategy to its implementation at action level through the holding of conferences and workshops and the publication of folders, magazines etc.

[159] https://ec.europa.eu/eusurvey/
[160] http://ec.europa.eu/isa/actions/04-accompanying-measures/4-1-1action_en.htm
[161] The ECI Online Collection Software was developed in the framework of the ISA programme (ISA Action 1.12 - OSS platform for online collection of statements of support for European citizens' initiative.

5.3. Conclusion N°3: EC hosting service, saviour of the ECI

The main reasons mentioned by ECI organisers for not having used the hosting service provided by the European Commission is that it was not yet offered or that the initiatives did not have the chance to reach that stage of the online collection process and were rejected before (at the registration) by the European Commission. This proves that the community of ECI organisers is satisfied with this service (being also aware that it is exceptionally offered by the European Commission).

Not only free of charge for ECI organisers, the service provided by the European Commission significantly reduces the administrative burden of the certification process for organisers and is ensured to meet the ECI regulatory requirements. As far as the Luxembourgish competent authority for certifying the online collection systems and the European Commission are concerned, the audit of 20 systems enabled both authorities to streamline and optimise processes. Its only disadvantage is the compulsory use of the ECI Online Collection Software.

Using this service avoids ECI organisers to invest time in researching a suitable hosting provider and then bear the costs related to their hosting service. The time and money spent in installing and setting-up the system (whether on their own or by requesting the assistance from an IT expert) is also saved as this is performed by the European Commission. The support received by the European Commission and the competent authority in Luxembourg significantly reduces the administrative burden for ECI organisers and makes the certification process easier and faster for them. These are important assets that can be invested in their ECI campaign instead (e.g. campaign website).

Also appreciated by ECI organisers, the hosting service offered by the European Commission enables a partial shift of the technical responsibilities from ECI organisers to the European Commission.

Recommendation N°4: A central platform should be made available to ECI organisers as a permanent solution.

Just like all the comparative scenarios available at national level[162] allow the online collection of statements of support via a central platform provided by the public authority responsible for the initiative, a central platform free-of-charge should be made available to ECI organisers as a permanent solution.

In this regards, changes should be made in the ECI Regulation to establish such a platform as a permanent solution that would benefit most stakeholders involved in the ECI. Following the example of the Finnish citizens' initiative, Scenario 1 may remain an option for ECI organisers, so as to still allow private vendors to penetrate the ECI market and increase the chance to have an active open-source community. However, the efficiency of such a solution remains questionable, in particular given the need to maintain the certification capacity in all Member States, although it will most likely be of a very limited use (organisers of Finnish citizens' initiatives, at the time of the report had also never used the private hosting option).

All solutions available at the national level are comprehensive and free-of-charge for initiatives' organisers (ready-to-use platforms). The only solution that may not be free of charge for initiatives' organisers is the one to be established in Denmark, where political parties would need to pay for the related costs in setting up the functionality on their website enabling citizens to directly register their email address and vote for that political party.

[162] This statement is based on the sample of six comparative scenarios available at national level (Section 4.4).

According to the current Regulation, the EU Member State where the system is hosted is responsible for the certification of the online collection system. However, if the service offered by the European Commission becomes permanent, then the ECI Regulation should be reviewed to ensure that the certification of the systems hosted by the European Commission can be performed by the European Commission itself, on a regular basis. As for the majority of the comparative scenarios (7 out of 9) the certification could occur on a regular basis, varying between 1 and 2 years, or when a new version of the information system is released and take the form of an audit aimed to obtain evidence on whether the information systems are safeguarding assets, maintaining data integrity and operating effectively.

This recommendation would require changes in the ECI Regulation, with regards to the certification procedure (Article 6). Amendments should also be added to set the hosting service provided by the European Commission as a permanent solution.

The use of the European Commission servers or private ones financed by the Commission for the hosting service should be further investigated, as well as the possibility to host on European clouds, as it is the case for two comparative scenarios. In the latter cases, a procedure of call for tender should be put in place.

Recommendation N°4 should also be seen in perspective with the results of the cost-benefit analysis, where it appears that, based on the two evaluation criteria defined by KURT SALMON, Scenario 2 prevails over Scenario 1 both in terms of efficiency and effectiveness.

With regards to efficiency, Scenario 2 would be the least costly scenario to implement compared to Scenario 1, independently of the number of ECI online collection systems certified and hosted per year. The (direct) cost of hosting and getting 1 ECI online collections system certified under Scenario 2 would indeed be €129, 784 against €161,259 under Scenario 1a (i.e. €31,475 cost difference between the two scenarios) and €191,259 under Scenario 1b (i.e. €61,475 cost difference between the two scenarios).
The implementation costs differences are even greater the more ECIs are concerned. For example, to host and get 15 ECI online collections systems certified, the yearly costs would be €1,946,765 (Scenario 2) and €2,418,890 (Scenario 1a) and €2,868,890 (Scenario 1b) respectively (i.e. €472,125 and €922,125 cost difference between the two scenarios respectively).

Indeed, should Scenario 2 be foreseen in the ECI Regulation as the only possible scenario, its overall cost could be probably optimised (unique IT tool for the register and the software, no need for the 28 MS competent authorities to be ready to certify systems, etc.)

With regards to effectiveness, even though results vary from the different stakeholder groups' perspectives, overall, Scenario 2 appears to be the favoured scenario with regards to (i) Improvement in the allocation of resources (availability of resources), (ii) Improvement in the allocation of resources (responsibility of stakeholders), (iii) Improvement in the allocation of resources (expertise of the resources), (iv) Cost savings, (v) Citizens' satisfaction.

The only criterion for which Scenario 1 is ahead of Scenario 2 is the (vi) Benefits from third-party compliance with legal rules, as Scenario 2 does not allow hosting and software providers to penetrate the ECI market, and only to a limited extent for IT experts.

5.4. Conclusion N°4: Registration and certification, which should be first?

Each stage of the online collection process has a specific timeline: registration of an initiative within two months; certification of the online collection system within one month; collection of statements of support within 12 months; verification of the statements of support by national competent authorities within three months; and conclusions of the European Commission on the ECI within three months.

Taking into account that the 12-month collection period starts once the European Commission has accepted the registration of an ECI, organisers try to get their system certified by then as well. However as demonstrated by the results of our study, few ECI organisers managed to conduct both steps in parallel: on the contrary, they sometimes get their system certified several weeks or even months after their request for registration is approved, shortening the actual online collection period.

Recommendation N°5: Review the online collection timeline

For the reasons abovementioned, the ECI Regulation should be reviewed as one of the following options:

- The start of the data collection period should be decided by the ECI organisers themselves, as long as it is within three months after the validation of the request for registration by the European Commission.
- The data collection period should only start when the request for registration of an initiative is validated by the European Commission and the online collection system certified by the national competent authority**,** within a fixed time limit (e.g. three months)**.** The collection in paper form should start at the same date.

This recommendation would require changes in the ECI Regulation, with regards to the certification procedure (Article 5: “All statements of support shall be collected after the date of registration of the proposed citizens’ initiative and within a period not exceeding 12 months”).

5.5. Conclusion N°5: Data requirements are not appropriate

ECI organisers' responses tend to assess the actual collection of statements of support as one of the most difficult parts of the ECI online collection process, mostly due to the heterogeneous data requirements that are set across EU Member States for the purposes of verification. These data requirements also represent one of the main barriers for software providers to develop software that would be compliant with the ECI Regulation and related Commission Implementing Regulation N°1179/2011. Conversely, one of the advantages of the ECI Online Collection Software is that it complies with the heterogeneous requirements.
In addition to their heterogeneity, the amount of data required to be filled-in by potential signatories can also be a barrier to the success of an ECI as the more data are requested, the more time-consuming it is for potential signatories, the higher their abandon rate.

Currently, the validity of an ECI statement of support is evaluated using personal information from the signatory and (for some Member States) personal identification number/document number[163].

Input from the comparative analysis:

- The comparative scenarios show that only 3 out of 11 solutions collect signatories' identification number; however 7 collect other types of sensitive data, such as the residence address or the date and/or place of birth. Only 1 solution does not collect any of this information and limits the data collection to signatories' email addresses and names.
- All the solutions from the comparative analysis ensure a minimum validation of the data inputted by signatories (e.g. submission of an email containing a hyperlink to the signatories' email addresses to allow them to confirm their identity and support, methods in place to verify suspicious identities).
- The data collected by most of the solutions available at national level (4) and by two solutions developed by private operators (2) are specifically verified by public authorities. In order to ensure the validity of the signatures, authorities tend to compare the data collected for the initiative with the information from the national Register.
- Only 1 out of 10 solutions[164] allows signatories to use an advanced electronic signature to sign a statement of support. Denmark indeed established the 'EC ID', a signature system, where the user is able to activate its signature over an internet portal after receiving an activation code. The use of electronic identification seems to be better implemented across the comparative scenarios, as it can be used by two solutions available at national level and one solution developed by private operators (and two soon)[165].

[163] Research paper on eSignatures from CTIE Luxembourg
[164] No input was provided on this aspect for one comparative scenario.
[165] One operator is currently in contact with the Dutch government to develop an eID which could be used by citizens to perform transactions online, as it already exists for some companies.

Recommendation N°6: Solutions to facilitate data entry and validation should be investigated.

Taking into account the heterogeneity of data requirements as well as of eGovernment maturity of EU Member States, a one-size-fits-all approach for collecting statements of support may not be the most adequate.
In this regards, KURT SALMON identified a set of compatible options for identifying a person (when collecting statements of support) while facilitating data entry and data validation in the ECI Online Collection Software:

- Electronic Identification (eID): several EU Member States[166] already provide citizens with the possibility to access public services via eID authentication. The use of eID would enable secure access to ECI software and guarantee the unambiguous identification of users when collecting statements of support. At EU level an eID building block was developed and piloted by STORK large scale pilot and it is currently taken over by the Connecting Europe Facility (CEF) initiative. Additionally, the European Commission, in the context of the eIDAS regulation[167], fosters the cross border recognition (voluntary recognition as from 2015 and mandatory recognition as from 2018).

- Electronic Signature (eSignature): the use of eSignature[168] in the ECI Online Collection Software can facilitate signing and validation of statements of support. The European Commission developed two open software components to enable the use of eSignature in applications in any domains (i) Trusted lists (since 2009, each Member State must publish a Trusted List of accredited certification service providers issuing qualified certificates to the public) and (ii) Digital Signature Service (open-source software package released in 2011 by the European Commission under the ISA Work Programme (DG DIGIT.B6)) allowing to sign documents and to validate a signature versus the Trusted Lists. Following the example of the Danish online collection system, the reuse of existing components and infrastructures should be fostered.

  The use of these components by any software provider enables automated validation of eSignatures and eSeals coming from any EU Member State, based on the Member States' 'Trusted Lists' (the public lists of supervised / accredited services issuing qualified certificates to the public).

- The European Commission Authentication System (ECAS): ECAS is used by numerous electronic services provided by the European Commission that require user authentication. Additionally, ECAS is currently being integrated with STORK (eID)[169]; in this way, Member States' eIDs can be used to access the services using ECAS Authentication.

All the above mentioned solutions can be considered in the light of a revision of the data requirements: this recommendation would indeed require changes in the ECI Regulation, in particular Annex III.

In this context, KURT SALMON suggest using the Core Person Vocabulary[170] to initiate these changes and obtain consensus among Member States, with regards to data requirement. The Core Person Vocabulary can be described a simplified, reusable and extensible data model that captures the fundamental characteristics (core set) of a person, e.g. the name (including birth name), gender, place and date of birth, citizenship and residency. Created in the context of the ISA Action 1.1[171] by a multi-disciplinary Working Group including 69 experts from 22 countries, 18 EU and 4 non-EU countries, following an open and inclusive process of consensus building, the Core Person

[166] At the time of the report 15 EU Member States have issued Electronic Identity Card: Belgium, Bulgaria, Germany, Italy, Luxembourg, the Netherlands, Portugal, Romania, Estonia, Latvia, Spain, Slovakia, Malta, Sweden and Finland
[167] Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC, 23.07.2014, Brussels
[168] The Directive on electronic signature has established an automatic legal equivalence between qualified electronic signatures and handwritten signatures in all Member States.
[169] STORK Pilot 6 – ECAS Integration: More information available at https://www.eid-stork.eu/pilots/pilot6.htm
[170] Detailed information on the Core Person Vocabulary available at https://joinup.ec.europa.eu/asset/core_person/description
[171] More information on ISA Action 1.1: http://ec.europa.eu/isa/actions/01-trusted-information-exchange/1-1action_en.htm

vocabulary was endorsed by Member States in the context of the ISA Coordination Group on 23 May 2012. This endorsement may be considered as a starting point to ensure harmonised data requirements among Member States (in the context of the ECI).

It would also be important to reach an agreement on an application profile[172] for the ECI Online Collection Software. Data entry, data validation and the software development itself would indeed be facilitated if specific mandatory fields and controlled vocabularies to be used in each data element collected via the ECI Online Collection Software would be defined.

All these options should be further investigated and evaluated in Phase II. Nonetheless, it should be noted that the European Commission has already moved towards that direction and started an analysis for developing eSignatures and/or eIdentification as part of the ECI Online Collection Software.

These solutions may not only ensure harmonised data requirements for the ECI but also simplify the online collection process and solve another issue faced by ECI organisers: their liability towards the data collected. This provision stands in contrast to the comparative scenarios, where the public authority responsible for an initiative (4) or the private solution provider (1) bear all the responsibility for the data in 5 out of 10 cases[173] whereas organisers are liable towards the data collected and processed in 2 out of 10 cases. Liability is shared between organisers and authorities in the 3 other solutions.

The fact that ECI Organisers are responsible for the validation of the signatures by the Member States and liable for any damage they cause in the organisation of a citizens' initiative in accordance with applicable national law (Article 13 of the ECI Regulation) may indeed represent major barriers to starting an ECI:

(i) The use of eIdentification may lead EU Member States reconsidering the personal data they require from signatories and limit these to the data fields included already in the eIdentification card.

(ii) In case data requirements are lowered and their processing reviewed, the liability of ECI organisers will reduce accordingly and the specifications on the system security (Commission Implementing Regulation N°1179/2011) may also be revised (lowered), facilitating the penetration of the ECI market by private providers.

As mentioned, based on the ECI Regulation, only the data needed for validation of the statements of support is allowed to be collected and they must be destroyed within strict time limits. Allowing organisers to collect, as part of the statement of support form, data that may be used for other purposes is thus not possible in the current state of the regulatory framework.

[172] An Application Profile is a specification that re-uses terms from one or more base standards, adding more specificity by identifying mandatory, recommended and optional elements to be used for a particular application, as well as recommendations for controlled vocabularies to be used.
[173] No input was provided on this aspect for one comparative scenario.

However, from a campaigner perspective, collecting email addresses is essential as it allows reaching more people and to be able to follow-up with them, keeping them updated on the progress of the initiative, etc.

Recommendation N°7: Email addresses should be part of the data to be optionally provided when supporting an ECI

An optional field should be included in the statement of support form to allow ECI organisers collecting signatories' email addresses in order to be able to keep signatories informed on the developments around the ECI. This thus implies appropriate data protection rules in the ECI Regulation, allowing the collection of this data under strict conditions: up to the signatory to communicate this information, use of this data by the ECI organisers limited to the purpose of an ECI campaign, appropriate retention period and possibly authorisation to pass the data to researchers.

With regards to the latter point, involving the academic world into the ECI and the eDemocracy field overall by allowing researchers to access ECI signatories' email addresses would indeed be a way for the ECI to get valuable inputs on the trends in eDemocracy and adapt the ECI online collection system accordingly for a successful implementation of the ECI.

This recommendation would require changes in the data protection rules set out in the ECI Regulation (Article 12) and in Annex III of the ECI Regulation, where the email address optional field should be added and the privacy statement should be modified.

This recommendation would have an additional advantage, as it would allow for a staged approach regarding data collection. Following the procedure in place for several solutions identified in the comparative analysis, such an approach would require that after having entered their data, signatories receive a confirmation email including a unique hyperlink. The signatory then needs to click on that hyperlink to confirm that he/she is the person that they claim they are; that they agree with the petition text; and then additional fields (national data requirements) have to be filled-in. Based on stakeholders' consultation on the comparative scenarios, using this method (cognitive dissonance) seems to ensure a lower abandon rate in the online collection.

This path should be further examined in phase II.

6. Proposed technical scenarios

Based on the results of the analysis of the baseline scenarios and on the comparative analysis of the solutions used in the context of other e-petitions and citizens' initiatives tools, KURT SALMON was able to draw a shortlist of proposed technical scenarios, to be further analysed for improving the implementation of the ECI.

The objective of this section is to define a set of proposed technical scenarios that could be considered in the future for implementing the ECI in a more efficient and effective way. Once further analysed, these scenarios should assist the decision-making of the Commission as regards the following questions:

- Does the temporary hosting solution offered by the Commission need to be continued?
- Are there alternative solutions that could serve better and more efficiently the needs of the stakeholders concerned?
- What are the best scenarios for the online collection:
    - A public central platform?
    - Private online collection systems?
    - Choice of ECI organisers between collecting on a public centralised platform and via a private system?

This Section is divided into two main parts in order to define the proposed technical scenarios to consider if the current framework does not evolve (Section 6.1) and if the ECI Regulation and possibly ECI Commission implementing Regulation N°1179/2011 are modified (Section 6.2).

6.1. Scenarios to consider under the current regulatory framework

In case the current regulatory framework is not reviewed, the European Commission should continue offering its hosting service for free to ECI organisers. Changes should however be performed on the software side:

- The ECI Online Collection Software should be improved in order to better meet ECI organisers' needs. The main improvements should be the following: (i) the audio captcha should be made available in all official EU languages; (ii) the European Commission should continue working on an improved default look and feel interface of the software; (iii) the next version of the software should feature additional social media actions by default in the application. Moreover should there be any alternative open-source solution released, the European Commission should include the related contributions into the existing software through the existing development process, verify that the resulting version of the software complies with the regulatory framework and make it available as open-source so that it can be run on the European Commission servers or integrated to private systems. [Recommendation N°2]
- Stakeholders' participation should be encouraged in the ECI process: the scope of the open-source community on Joinup should continue being focused on the IT aspects of the ECI implementation, in particular the ECI Online Collection Software (e.g. transparency on the improvements planned and the related schedule). For the non-technical aspects, a community of practice should be created to foster stakeholders' interactions. [Recommendation N°3]
- An option should allow signatories to be redirected from the Register to the signing page of the ECI online collection system, to rationalise the online collection process. [Recommendation N°1]

6.2. Scenarios to consider in case of a review of the regulatory framework

In case the current regulatory framework is reviewed, the changes requiring no specific review of the current regulatory framework (Section 6.1) should be implemented but also the hosting service offered by the European Commission should become a permanent offer [Recommendation N°4], possibly still allowing in parallel hosting from private vendors.

In case the current regulatory framework is reviewed, the following changes should also be performed on the ECI Regulation and related Commission Implementing Regulation N°1179/2011:

- The Register should be further integrated with the ECI Online Collection Software: it should be further investigated whether a full integration between the solutions or a simple integration of these through APIs is the most appropriate. [Recommendation N°1]
- The hosting service provided by the European Commission should be stipulated as a permanent option for ECI organisers to host their ECI online collection systems. [Recommendation N°4]
- The online collection process timeline should also be revised to ensure that the online collection period is not reduced due to certification hurdles[174]. [Recommendation N°5]
- Data requirements imposed by Member States should be reviewed. [Recommendation N°6].
- The online collection of email addresses should be allowed but their processing regulated. [Recommendation N°7].

The specific changes required in the regulatory framework are included in Section 5.

[174] This change only applies if hosting by private vendors remains an option for ECI organisers, in parallel to the hosting service provided by the European Commission. In the latter case, the processes in place guarantee ECI organisers to have a 12-month data collection period (please refer to Figure 3).

7. Appendix

7.1. Stakeholder analysis

The Expert Group

Led by the Expert Group facilitators, i.e. DG DIGIT.B.6 and KURT SALMON, this Expert Group aims at joining legal and business experts with ICT professionals experienced in working with the business and interpreting business processes as an input for ICT assessments.

In this regards, two services from the Commission have been directly involved in the ECI implementation; their inputs on both the policy (Secretariat-General, as system owner) and technical side (DG DIGIT, as system supplier) were thus highly valuable to this study, so as to well understand the baseline scenarios and gather inputs on the costs incurred to the Commission, for complying with the ECI Regulation.

- **Business and legal experts:** As one of the central services of the Commission, with the mission to facilitate its smooth and effective functioning and to provide strategic direction, the Secretariat-General, and in particular the Direction on Smart Regulation and Work Programme, is responsible for the European Citizens' Initiative, as both the system owner and business project manager.
- **ICT experts:** In order to comply with the ECI Regulation, the Commission had to set up by 1 January 2012 open-source software incorporating the relevant technical and security features necessary for compliance with the provisions of this Regulation regarding the online collection systems (Article 6 (2)) which it also has to maintain. Moreover, the Commission had to develop an online register ('the Register') for displaying the information about all the registered initiatives and the stage of lifecycle they have reached. In this regards, DG DIGIT (B.2) is responsible for the development, coordination and maintenance of the ECI interface and online collection software for ECI.

DG DIGIT (B.2 and C.3) has also laid the foundations for a hosting model for ECIs, e.g. a central platform managed by the Commission, and manages the hosting service which has been offered to organisers as an option since the summer 2012.

This Expert Group was further supported by one unit from DG CNECT that is dealing with eParticipation tools (i.e. one interview was performed with DG CNECT, who was also invited to the workshop of the final phase). Their mission is to lead the development and deployment of EU Digital Public Services, based on the eGovernment Action Plan 2011-2015; one priority of the latter being related to citizens' empowerment. For that purpose, several projects led in the field of eParticipation, such as 'my university', 'immigration policy 2.0', 'our space', 'puzzled by policy', 'parterre', were of interest for the comparative analysis performed by KURT SALMON.

MS authorities competent for certifying the Online Collection Systems

Member States also play an essential role in the implementation of the ECI. In fact, in each Member State, one competent authority was designated to be responsible for certifying online collection systems (in case the data obtained through the online collection system is stored in their territory). In this regards, the inputs of these authorities having certified at least one ECI online collection system[175] already were highly valuable to this study, so as to well understand the baseline scenarios and the costs incurred to them, for complying with the ECI Regulation.

An expert group on ECI, composed by Member States' authorities, has been set up by the Commission in order to exchange views and facilitate the coordination amongst Member States in relation to the implementation of the ECI Regulation.

ECI organisers

As already mentioned, the ECI was initiated to reinforce citizenship of the Union and enhance further the democratic functioning of the Union by providing that every citizen is to have the right to participate in the democratic life of the Union by way of an ECI. In this regards, citizens, whether organisers of an ECI or signatories, are the main beneficiaries of the ECI Regulation.

A citizens' committee of at least seven organisers who are residents of at least seven different Member States is responsible for each initiative, as stated in Article 3 of the ECI Regulation.

Receiving the inputs from the organisers whose initiatives have been collecting statements of support at the time of data collection for this report or had already completed the collection phase, including these withdrawn before the end of the collection phase, was thus highly valuable to this study, to well understand the potential problems encountered and the costs incurred to them, for complying with the ECI Regulation.

It should also be noted that, even though the vast majority of ECI organisers have made use of the Commission servers, the organisers of four initiatives have used or planned to use private servers hosted and certified in Germany. All of them were consulted as their inputs were essential to understand the advantages and disadvantages of existing market solutions.

Civil Society Organisations

In order to complement the support already put in place by the Commission, civil society organisations also provide information, advice and help to ECI organisers before and during the process of launching and implementing an ECI. As the main channel of the ECI organisers' voices, these non-profit organisations did not only provide inputs on the current situation with regards to the ECI but they also helped us identifying existing online collection solutions.

Three Civil Society Organisations, i.e. European Citizen Action Service, Democracy International and Initiative and Referendum Institute Europe, have put in place an ECI support centre. They were all consulted in the course of our study.

[175] Two authorities were consulted, Luxembourg and Germany, as they have both been requested by organisers to certify their Online Collection Systems. At the time of the report, they are the only two authorities having certified at least one ECI online collection system.

ECI signatories

In order to be examined and responded by the European Commission, a citizens' initiative has to be backed by at least one million EU citizens, coming from at least 7 out of the 28 Member States (with a minimum number of signatories required in each of those 7 Member States)[176].
All EU citizens (nationals of a Member State) old enough to vote in the European Parliament elections (18 except in Austria, where the voting age is 16) are entitled to sign a citizens' initiative. To support an ECI, they have to fill-in a specific statement of support form provided by the organisers, on paper or online.

ECI signatories have not been consulted directly in the course of this study, but the organisers have reported on the feedback they received from signatories of their initiatives.

IT experts

Even though all the organisers have so far used Commission software to gather online statements of support, some did not install it on the Commission server. In these cases, IT experts can assist the organisers for setting up and operating the Online Collection System: for example, 'Tech To The People' and 'More onion' assisted the organisers of the 'Right to Water' and 'My Voice against nuclear power' initiatives, respectively, for setting up their Online Collection System.

One IT expert was consulted in the course of our study to provide inputs on the baseline scenario, in particular to identify the main advantages and disadvantages of the software developed by the Commission.

Online Collection Software providers

To build their online collection system, organisers may choose to use the software provided by the Commission, which already complies with the technical specifications provided by the ECI Regulation and Commission Implementing Regulation, or to develop their own software ensuring that these requirements are met.

The open source software the Commission developed is available free of charge and provides all the necessary functionalities to collect statements of support online, securely store signatories' data and export the data for verification by the competent national authorities.

To date the organisers have not used any other software than the one developed by the Commission.

However, at the time this report was written; one IT provider was finalising software for the ECI. As this solution could be an alternative to the ECI Online Collection Software, one of the developers of this software was consulted for the purpose of the comparative analysis.

Furthermore, a study mandated by the Commission in 2011[177] identified existing EU and Member State open source software systems in the area of online collection, based on the requirements set in the ECI Regulation.
The two following software were analysed in our study:

1. Public-i: Provider of net services for local council modernisation, including webcasting of Council meetings, public consultation, and online voting; they developed the ePetition tool of the European Parliament;

[176] The threshold to reach in each EU Member State is presented at the following hyperlink: http://ec.europa.eu/citizens-initiative/public/signatories
[177] Inventory of existing online collection of statements of support system software, final version, Deloitte, Brussels, 05.04.2011.

2. Petities.nl: Provider of the national signature data collection system in the Netherlands, part of the EuroPetition.eu project.

The providers of these two additional online collection software were also consulted as part of the comparative scenarios.

Hosting providers

As the software is only a part of the Online Collection System, the organiser should also have appropriate hardware, operating software and hosting environment complying with the technical specifications set out in the Commission Implementing Regulation.

Organisers must thus find a service provider to host their Online Collection System, taking into account that the data collected must be stored on the territory of an EU member state. Organisers must also ensure that the hosting provider – and in particular the servers used to host the Online Collection System – comply with the relevant requirements of the technical specifications.

Some organisers having struggled to find suitable host providers on the market, the Commission offered to them a hosting platform on its own servers in Luxembourg for the ECI using the online collection software developed by the Commission. However, this is a temporary and exceptional solution.

As a result, only four initiatives did not use or did not plan to use the Commission servers. In fact, these have used or planned to use servers hosted and certified in Germany.

Unfortunately, KURT SALMON was not able to gather the inputs from the hosting providers having hosted these four initiatives and only relied on the costs assessed by IT experts and ECI organisers.

Additionally, a vendor consultation among the hosting providers was launched to understand the advantages and disadvantages, and the costs and benefits, of the current situation (as set in the ECI Regulation and related Commission Implementing Regulation). The identification of these stakeholders was mostly based on desk research.

Member States and third countries having online collection solutions in place

Furthermore, several countries, namely France, Finland, Germany, Luxembourg and the United Kingdom having their own national citizens' initiative or e-petition solution; or Denmark planning to establish their own online collection solution for endorsing political parties, were also consulted, as part of the comparative scenarios.

Summary

Table 27 aims to recap the type of involvement of each of the above mentioned stakeholder groups. More information on each of them is provided in Appendix 7.1

Table 27 ICT impacts related to the Online Collection System on each stakeholder group

ID	Stakeholders' groups	Size of the stakeholder group[178]	ICT impacts identified on each stakeholder group (with regards to the Online Collection System)	Cost-benefit analysis		Comparative analysis
				Scenario 1	Scenario 2	
1	Expert group	• 2 units from DG DIGIT (B.2 and C.3)	• **Developing the online register** (Article 4 of the ECI Regulation)	✓	✓	
			• **Developing an open-source Online Collection Software** (Art. 6 (2) of the ECI Regulation)	✓	✓	
			• **Hosting the ECI** (Press Release, Commission Vice-President Maroš Šefčovič, 18.07.2012)		✓	
			• **Supporting ECI organisers to prepare the certification process** (Press Release, Commission Vice-President Maroš Šefčovič, 18.07.2012)		✓	
		• 1 unit from DG CNECT (H.3)	• None			✓
		• 1 unit from DG DIGIT (B.6) • 1 unit from Secretariat General (C.4)	• None[179]			
2	MS authorities competent for certifying the Online Collection Systems	• 28 Member States	• **Certifying the Online Collection System used for the collection of statements of support** (Art. 6 (2) of the ECI Regulation)	✓	✓	
3	ECI organisers	After three years of implementation: • 25 ECI organisers whose ECI were registered by the Commission and collected online • 2 ECI organisers who had their systems certified but the ECI not registered Other potential groups of at least 7 EU citizens old enough to vote in EP elections and living in at least 7 different countries	• **Being responsible for the collection of the statements of support from signatories for a proposed citizens' initiative which has been registered** (Art. 5 of the ECI Regulation)	✓	✓	
			• **Having an Online Collection System certified by the relevant competent authority** (Art. 6 (2) of the ECI Regulation)	✓	✓	
			• **Use of the online register made available by the Commission ('the register')** (Art. 4 (1) of the ECI Regulation)	✓	✓	
4	Civil Society Organisations	• Mainly 3 Civil Society Organisations composing the ECI support centre	• None			

[178] At the time of data collection
[179] These units from the European Commission have acted as quality experts in the course of our study.

ID	Stakeholders' groups	Size of the stakeholder group[178]	ICT impacts identified on each stakeholder group (with regards to the Online Collection System)	Cost-benefit analysis		Comparative analysis
				Scenario 1	Scenario 2	
5	ECI signatories	After three years of implementation: • More than 6 million ECI signatories EU citizens	• None			
6	IT experts	After three years of implementation: • 2 IT experts having assisted the organisers for setting up their Online Collection System • Additional IT experts identified during the consultation of stakeholders	• **Providing IT advice to ECI organisers.**	✓	✓	✓
7	Online Collection Software providers	After three years of implementation: • Providers of software potentially complying with security and technical features for the online collection systems and identified during the consultation of stakeholders	• **Providing adequate software complying with security and technical features for the online collection systems** (Art. 6 (4) of the ECI Regulation and Commission Implementing Regulation)	✓		✓
8	Hosting providers	After three years of implementation: • 4 providers having supported ECI organisers who did not use or plan to use the Commission serversAdditional hosting providers complying with the ECI Regulation and related Commission Implementing Regulation, and identified during the vendor consultation.	• **Storing data in the territory of a Member State where statements of support are collected** (Art. 6 of the ECI Regulation)	✓		✓
			• **Providing adequate security and technical features for the online collection system and the information needed for the certification of the system** (Art. 6 (4) of the ECI Regulation and Commission Implementing Regulation)	✓		✓
9	Member States and third countries having online collection solutions in place in the context of national/local citizens' initiative or e-petition instruments		• None			✓

7.2. Definitions (regulatory costs and benefits)

Regulatory costs can be categorized as direct and indirect costs. Direct costs can be broken down into charges, substantive compliance costs, administrative burden and hassle costs:

- **Charges:** a Regulation can affect stakeholders directly by imposing the payment of fees, levies, or taxes on them. In the context of the ECI Regulation, for example, the Commission pays a fee to the Luxembourgish authority responsible for the certification of the systems hosted on the Commission servers in Luxembourg.

  A Regulation can also affect stakeholders indirectly when the direct costs incurred on entities directly targeted by the legal rule are passed-on to other entities. For example, the ECI Regulation does not exclude that MS authorities competent for certifying the Online Collection Systems may charge the ECI organisers for the certification of their system (the latter stakeholder group may thus be subject to charges). This has however never been the case so far (at the time of the report).

- **Substantive compliance costs** encompass those investments and expenses that are faced by stakeholders in order to comply with substantive obligations or requirements contained in a legal rule.
  As mentioned in the Guidelines on the Identification and Presentation of Compliance Costs in Legislative Proposals by the Federal Government of Germany[180], substantive compliance costs emerge as a result of obligations included in legislation, defined as "individual provisions inducing direct changes in costs, time expenditure or both for its addressees", which "oblige addressees to comply with certain objectives or orders, or to refrain from certain actions", or also "demand cooperation with third parties or to monitor and control conditions, actions, figures or types of behaviour". In this regards, substantive compliance costs are included in the ECI Regulation for three stakeholder groups: (i) the European Commission, to develop online collection software and the Register; (ii) MS authorities competent for certifying the Online Collection Systems of the initiatives hosted in their country; and (iii) ECI organisers, to run their initiatives, from their registration to the submission of the collected statements of support to Member States' competent authorities for verification.

- **Administrative burden**: borne by businesses, citizens, civil society organisations and public authorities, administrative burden is related to the cost of the administrative activities performed to comply with information obligations included in legal rules. More specifically, administrative burdens are the part of the administrative costs which is caused by regulatory requirements: accordingly, they do not include so-called Business-as-Usual costs[181]. In this regards, as the main addressees of the ECI Regulation, the European Commission, MS authorities competent for certifying the Online Collection Systems and ECI organisers bear administrative burden while performing their tasks to comply with the ECI Regulation, e.g. organisers are required to complete and sign documentation (covering security policy, business impact assessment, risk assessment and treatment, and a statement of applicability) before submitting it to the national competent authorities, for the certification of their systems.; the European Commission supports ECI organisers to ensure that this documentation is successfully prepared.

[180] Federal Government of Germany, Normenkontrollrat and Destatis, Guidelines on the Identification and Presentation of Compliance Costs in Legislative Proposals by the Federal Government, 2011, at page 8.
[181] Costs that would also emerge also in the absence of a Regulation

- **Hassle costs** include the costs related to administrative delays (when not directly attributable to an information obligation) and the opportunity cost of waiting time when dealing with administrative or litigation procedures. In the context of the ECI Regulation, organisers are subject to these costs, in particular while waiting for the registration of their initiative by the Commission[182] and the certification of their system by the relevant national competent authorities[183].

Indirect costs refer to the costs incurred in related markets or experienced by consumers, government agencies or other stakeholders that are not under the direct scope of the Regulation. These mostly relate to indirect compliance costs but also other types of costs:

- **Indirect compliance costs** are related to the fact that stakeholders, other than these directly targeted by the legal rule, have to comply with legislation. In this regards, online collection software providers and hosting providers have to comply with the ECI Regulation and related Commission Implementing Regulation in order to provide their services in the context of the ECI.
- **Other indirect costs** concern the costs related to substitution effects (negative consequences of the change in the behaviour of people, following the entry into force of a legal rule), transaction costs (increased costs of e.g. searching for a counter-party to the acquisition of information related to the transaction or to the opportunity cost of the time spent negotiating the agreement, following the entry into force of a legal rule) but also reduced competition, reduced market access, reduced investment and innovation, uncertainty. In this regards, hosting providers, software providers and IT experts may have so-called 'lost opportunity' costs in Scenario 2, i.e. the 'lost' value (benefits) for them of implementing Scenario 1. These costs also apply for software providers in the case of Scenario 2 and 1a (use of the ECI Online Collection Software).
  Furthermore, the cost of adapting to any different software, in case the ECI Online Collection Software is not used by the ECI organisers (Scenario 1b), may also be a cost to consider for ECI signatories.

Similarly, benefits can also be categorized as direct and indirect benefits.
Direct benefits can be expressed in terms of additional citizens' utility, welfare or satisfaction and improved market efficiency, as further explained below:

- **Improved market efficiency** might include improvements in the allocation of resources, removal of regulatory or market failures, or cost savings generated by regulation. The ability for ECI organisers to collect statements of support online and the capacity for signatories to sign these online as well, enables these two groups of stakeholders to gain time compared to the use of paper-based statements of support. As a result the costs for them should also have decreased.
  Moreover, the European Commission and MSs Authorities competent for certifying the Online Collection Systems of the initiatives hosted in their country can also be considered as benefiting from market efficiency. The implementation of Scenario 1 indeed allows the former to save time and money (no need to get involved in the technical settings and certification of the systems) that could be used for other public initiatives. The implementation of Scenario 2 as the sole scenario would allow 27 competent authorities to also save time and money by no longer needing to be ready to potentially carry out a certification procedure (only the authority of Luxembourg would do so).

[182] As stipulated in the Article 4 (2) of the ECI Regulation: "Within two months from the receipt of the information set out in Annex II, the Commission shall register a proposed citizens' initiative under a unique registration number and send a confirmation to the organisers".
[183] As stipulated in the Article 6 (3) of the ECI Regulation: "Where the online collection system complies with paragraph 4, the relevant competent authority shall within one month issue a certificate to that effect

- **Additional citizens' utility, welfare or satisfaction** most notably concern health, safety and environmental benefits, as perceived by individuals for a future state of the current situation. In the context of the ECI Regulation, the main benefit for ECI organisers and signatories, and as a result for the European Commission, is the opportunity to transform European democratic life and to reduce the widening 'Democratic Deficit' largely affecting modern democracies in the EU, via the ECI participatory democracy tool.

On the other hand, indirect benefits mostly include indirect compliance benefits (also called 'spillover effects related to third-party compliance with legal rules').

Indirect compliance benefits can be defined as all those benefits that accrue to individuals or businesses that are not the addressees of the Regulation, but that enjoy positive effects due to the fact that others have to comply with the Regulation. In the context of the ECI Regulation, IT experts, online collection software providers and hosting providers, which are not the addressees of the Regulation, benefit from it as they assist organisers (and thus access a new market) installing and running their online collection system by providing their services.