Study on the use of Electronic Identification (eID) for the European Citizens' Initiative

DIGIT B.2

2 June 2017

The use of e-Identification for the ECI
Agenda

- Context and objectives
- Scope
- Presentation of the technical solutions under assessment
  1. Electronically signed PDF
  2. Integration of e-signature
  3. Direct integration of national eID
  4. Integration with the eIDAS framework
  5. Prefilling user's data with EU Login
  6. Prefilling user's data with Facebook
- Assessment

The use of e-Identification for the ECI
Context and objectives

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Context

(i) Revision of the ECI Regulation

(ii) Complement to the study on OCS & technical specifications

(iii) Integration of eID is particularly relevant in scenario 3 of the tech specs study (i.e. single online platform managed by the Commission).

Objectives

(i) Identify and describe potential solutions

(ii) Assess those solutions from legal, business and technical perspectives

(iii) Validate those solutions by implementing proofs of concept (POCs)

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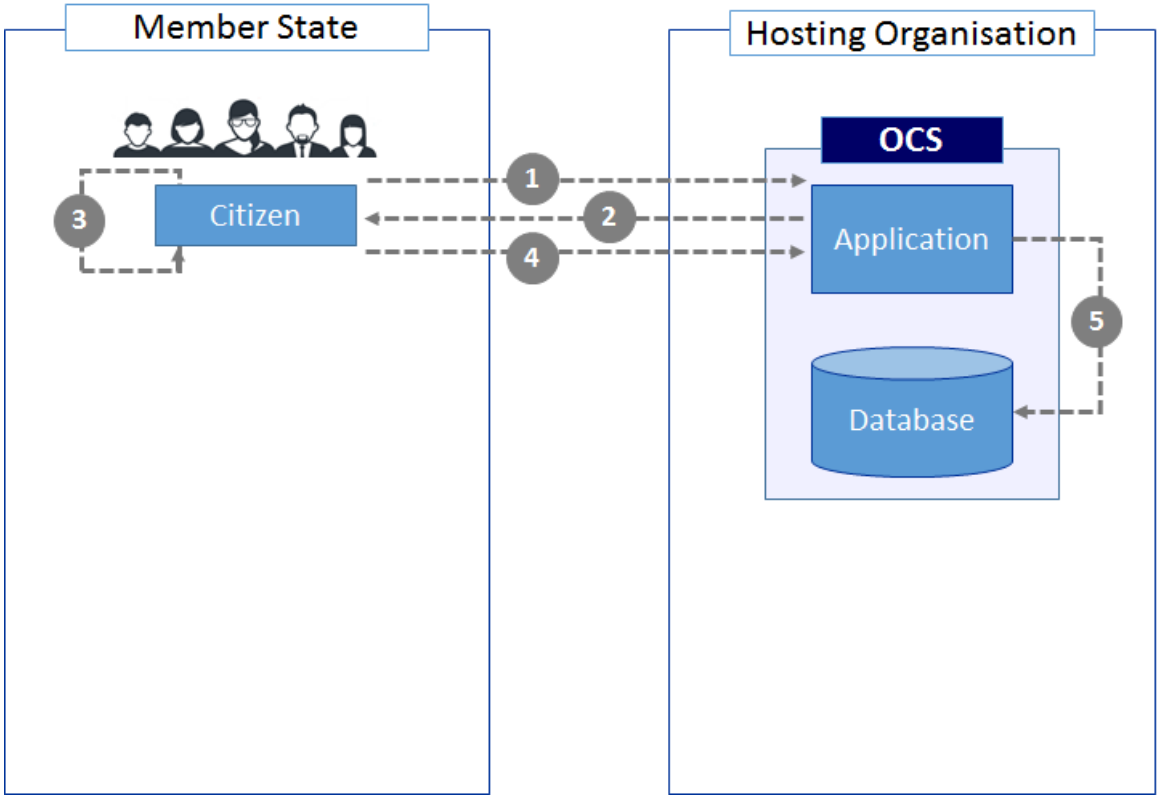
Scope

Identified solutions are grouped in 3 categories:

1. Use of electronic signatures
    a. Submission of statements of support (SoS) through an **electronically signed PDF** that the user uploads in the Online Collection System (OCS)
    b. **Integration of e-signature solutions** across the EU into the OCS, allowing citizens to sign SoS online
2. Use of electronic identification
    a. **Direct integration of the preferred eID scheme** for each Member State in order to allow citizens to authenticate themselves and support initiatives online
    b. **Unique integration of eID through the eIDAS network**
3. Complementary solutions, aiming at easing the submission process and attracting more users to the ECI tool
    a. Allow **EU Login users** (formerly ECAS) **to pre-fill the data fields** with the data stored in their accounts
    b. Connection with a **social network**, namely Facebook, by which users would **pre-fill the data** requirements and **share** the content of the initiatives.

The use of e-Identification for the ECI
Solution 1 – Electronically signed PDF

This solution is based on the use of **electronic signature** for signing a statement of support in a **PDF format** document that contains the **personal data** of the signatory and a **specific reference** to the initiative supported.



1. The citizen (user) accesses the EC OCS web page to support an initiative and select the option "Download PDF form".
2. The OCS sends the information to generate the PDF on the device of the user.
3. The user selects the option to use her/his electronic signature, then picks up the right certificate and enters the PIN code if the certificate is stored on a cryptographic device.
4. The user uploads the digitally signed PDF in the OCS.
5. The OCS saves either the complete PDF or only the electronic signature in the OCS database.

The use of e-Identification for the ECI
Solution 1 – Electronically signed PDF

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Legal analysis

- Modification of **Annexes III and V** to include a more specific mention to the **use of e-signature** to submit a statement of support.
- Re-wording of **Article 5** is advisable to update the reference to the use of advanced electronic signature to **qualified electronic signature**.

Business analysis

- **Simplified verification** of the statements of support as the certificates can be directly checked against national databases.
- Enhanced **security and accuracy** of the data.
- **Longer input process** as more steps (downloading the PDF, uploading it, etc.) are required to finalise the submission of a valid statement of support.
- **Quantity of data** to be inserted manually by the user is reduced to zero.
- **Reduced legal risks** for campaign organisers, considered as data controllers.
- Good **level of penetration** in Member States but the **actual usage** by citizens may remain **limited**.

The use of e-Identification for the ECI
Solution 1 – Electronically signed PDF

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Technical analysis

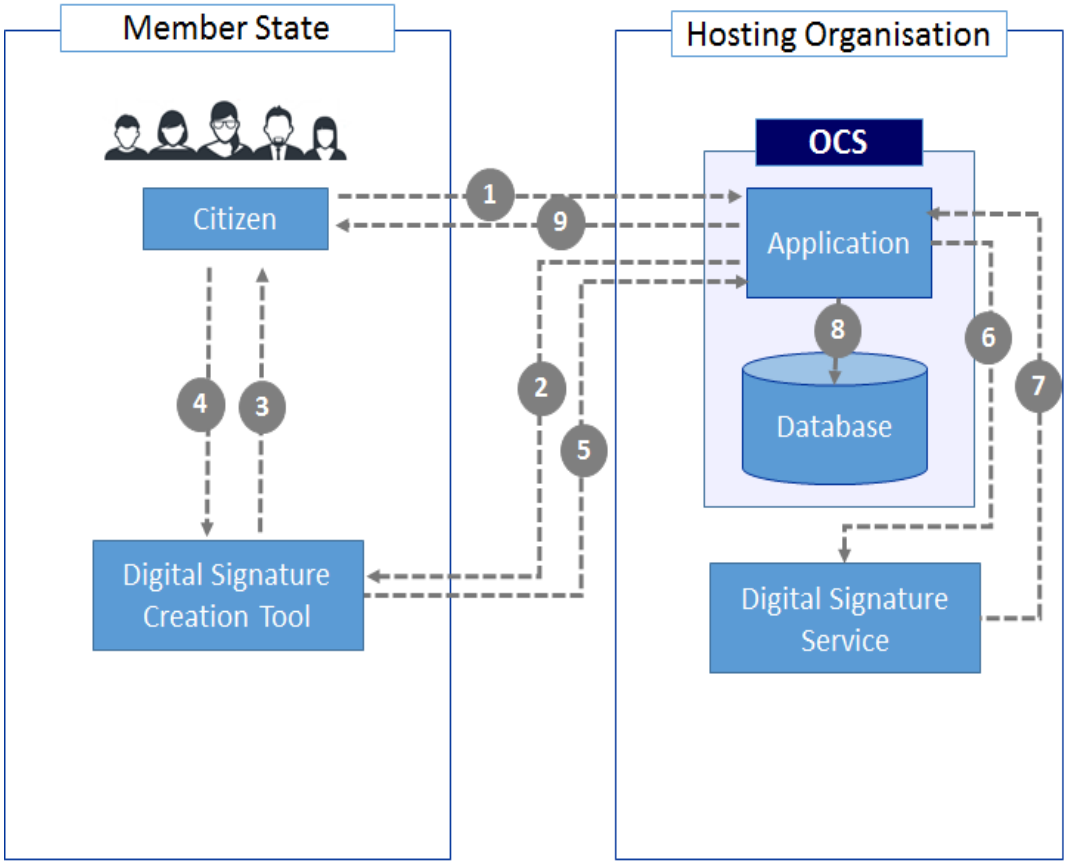
- Statements of support **cannot be copied** from one initiative to others without being detected. However, **non-European citizens could support** initiatives without being detected automatically at submission time.
- **Certificates** used for signing are not checked on-line for their (revocation) status, so this **must be checked during the verification phase**.
- Good **scalability**, **maintainability** and **ease of integration**.
- **Improved session management**, with the transmission in only one http session of the statement of support, and **guaranteed integrity of the data** during transmission and storage.

Verification

- **Online** during the collection phase (similar to solution 2) or **offline** during the verification phase (pdfs sent to verification authorities)

The use of e-Identification for the ECI
Solution 2 – Integration of e-signature

This solution is based on the integration of **electronic signature** to **sign** a statement of support **online**. In contrast with solution 1, the OCS establishes a connection with the Member State's e-signature creation tool and a seamless online validation is performed by the DSS module.



1. The citizen (user) accesses the EC OCS web page to support an initiative, selects her/his country and the option to sign the SoS with his electronic signature.
2. The OCS contacts the Digital Signature Creation Tool (DSCT) in the user's browser.
3. The DSCT requests the user to sign the displayed XML.
4. The user picks up the right certificate and enters the PIN code if the certificate is stored on a cryptographic device.
5. The DSCT creates the signature and sends it back to the OCS.
6. The OCS sends the signature to the DSS for validation.
7. The DSS replies with the validation result.
8. The OCS stores the result in the database.
9. The OCS confirms to the user that the SoS was successfully signed.

The use of e-Identification for the ECI
Solution 2 – Integration of e-signature

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Legal analysis

- Modification of **Article 8** to include the new **verification method** and the **indicator** (i.e., flag) proving that the information has already been validated.
- Modification of **Annex III** to include the **e-signature method**, with the subsequent reduction of the data requirement it entails.

Business analysis

- Added value of an **on-the-spot validation**.
- Enhanced **security and accuracy** of the data.
- **Reduced time** to complete the process: the **amount of data** the users need to introduce manually is reduced to zero.
- **Verification** similar to Solution 1.

The use of e-Identification for the ECI
Solution 2 – Integration of e-signature

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Technical analysis

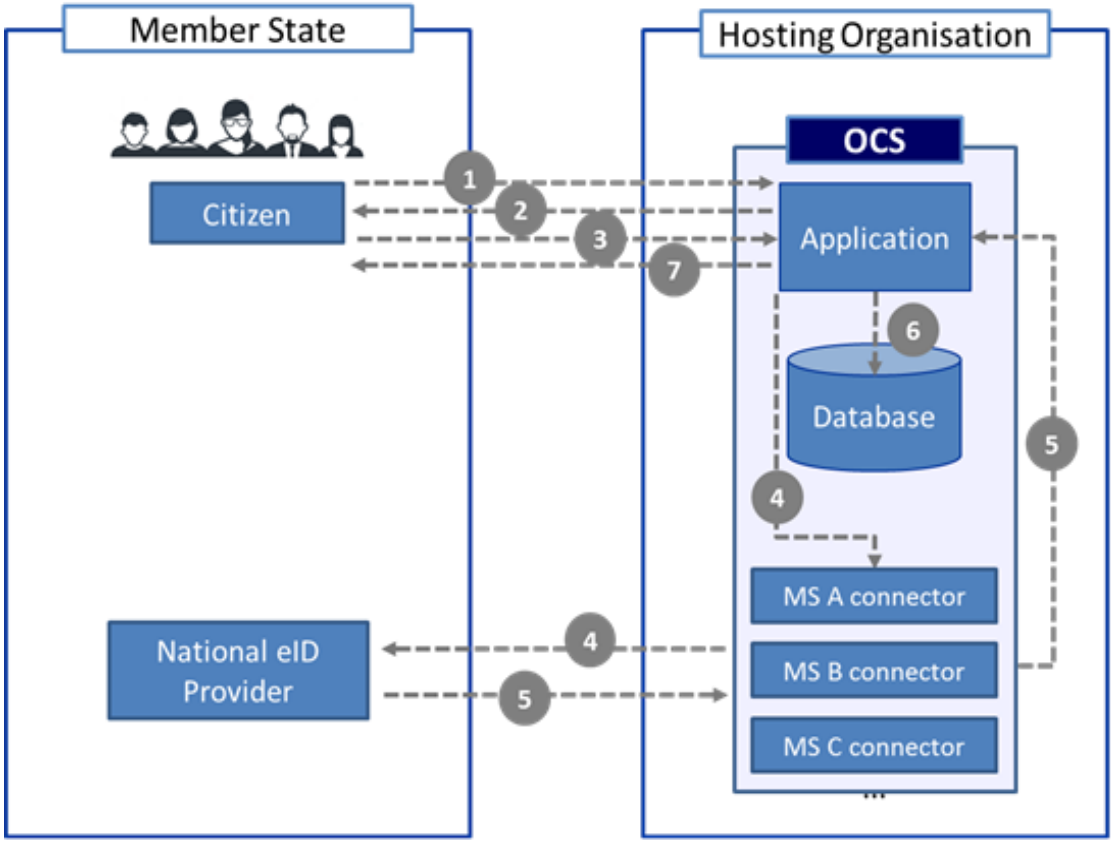
- Statements of support **cannot be copied** from one initiative to others without being detected.
- **Good scalability** but **moderate maintainability**.
- **Improved session management**, with the transmission in only one http session of the statement of support, and **guaranteed integrity of the data** during transmission and storage.

Verification

- **Automatic verification** of the identity of the signatory during the collection phase
- **Solution 2** is only applicable to countries which electronic signatures are already eIDAS compliant

The use of e-Identification for the ECI
Solution 3 – Direct integration of national eID

This solution consists in the integration of the **most widely used national eID** solution **into the OCS**. The **personal data** requested for a signatory to support an initiative is **retrieved from** the **national eID database** of each Member State.



1. The citizen (user) accesses the EC OCS web page to support an initiative, selects her/his country and the option to authenticate with her/his electronic identification.
2. The OCS requests the user to present his certificate.
3. The user selects the right certificate and enters the PIN code if the certificate is stored on a cryptographic device
4. The OCS sends a validation request to the National eID Provider through the MS connector
5. The National eID provider performs the online validation of the identity and sends back the confirmation to the OCS through the connector
6. The OCS saves the response to the database
7. The OCS confirms to the user that the SoS was successfully submitted

The use of e-Identification for the ECI
Solution 3 – Direct integration of national eID

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Legal analysis

- Modification of **Article 5** to add a specific mention to the possibility of **using eID to submit a statement of support**. The **model** for creating the statements of support (Article 6.1, paragraph 2) should also be modified.
- Amendment of **Article 8** to allow the **on-the-spot verification** of the signatories' identity that would be carried out by the system.
- Modification of **Annex III** to amend the **data requirements** when eID is used to submit a statement of support. This Annex should also be modified by adding a **specific criteria** for the statements of support submitted via **eID**.

Business analysis

- **Easier verification** of statements of support as the **integrity and correctness** of the signatory's **data** is guaranteed by the national eID database.
- More **secure** system and a **less time consuming** process for the user.

The use of e-Identification for the ECI
Solution 3 – Direct integration of national eID

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Technical analysis

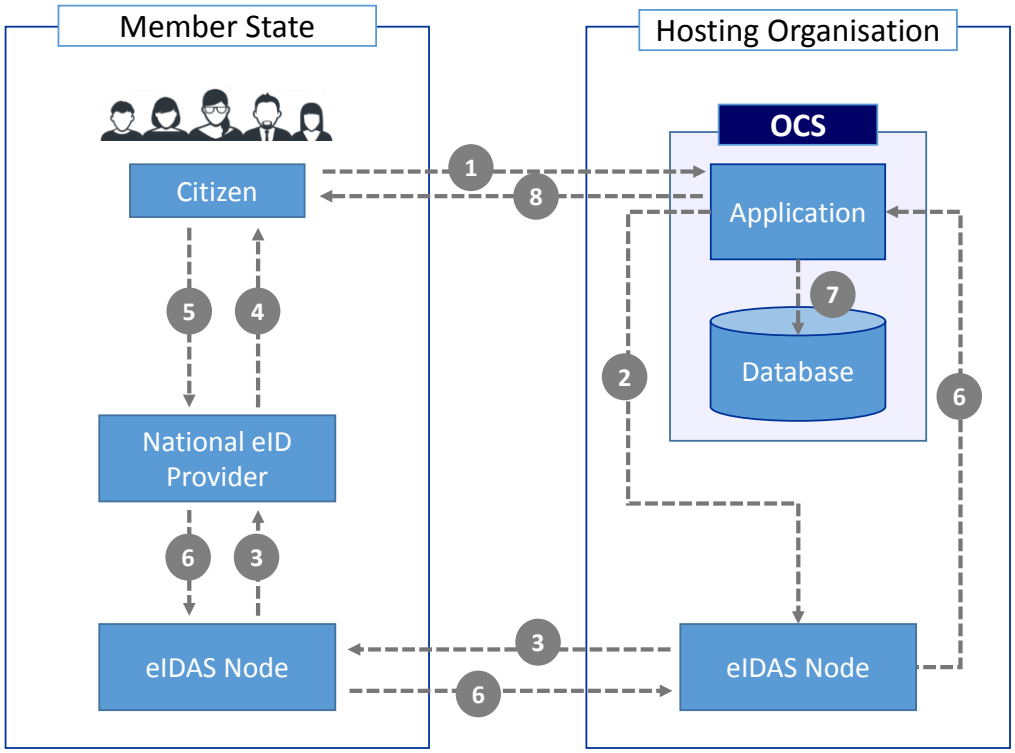
- The signature helps avoiding certain cases of fraud as it makes it more **difficult to support the same initiative twice**. However, **non-European citizens could support** initiatives without being detected automatically at submission time.
- Difficult **scalability** and **maintainability.**
- **Improved session management** with the transmission of the statement of support in only one http session.

Verification

- **verification** of the identity of the signatory during the collection phase storing in the OCS a flag or an indicator that would indicate SoS being validated (certificates sent to verifying authorities)

The use of e-Identification for the ECI
Solution 4 – Integration with the eIDAS framework

This solution also foresees **integration of eID into the OCS**, but in this case with an **indirect** approach. Instead of including all the different Member States' nodes as required in the direct integration of eID (solution 3), implementing this solution requires to establish a **connection with the eIDAS framework of interoperability**.



1. The citizen (user) accesses the EC OCS web page to support an initiative, selects her/his country and the option to authenticate with her/his electronic identification.
2. The OCS redirects the request to the eIDAS node of the country where it is deployed.
3. The OCS eIDAS node contacts the eIDAS node of the user's country and forwards the request to the National eID Provider.
4. The National eID Provider displays the screen corresponding to its electronic identification scheme.
5. The user picks up the right certificate and enters the PIN code if the certificate is stored on a cryptographic device.
6. The National eID Provider performs the online validation of the identity and sends back the confirmation to the OCS through eIDAS nodes.
7. The OCS saves the response to the database.
8. The OCS confirms to the user that the SoS was successfully submitted.

The use of e-Identification for the ECI
Solution 4 – Integration with the eIDAS framework

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Legal analysis

- Modification of **Article 5** to include a specific **reference to the use of eID** and to **the eIDAS network** as a connection pathway to grant an automatic validation of the statements of support. The **model** for creating the statements of support should also be modified.
- Modification of **Article 8** to allow and accept the **on-the-spot verification** of the signatories' identity carried out by the system through eIDAS.
- Modification of **Annex III** to amend the **data requirements** as only the minimum dataset provided by eIDAS will be available.

Business analysis

- **Reduced** number of statements of support requiring **verification** once the collection phase has ended.
- The **information** retrieved can be **trusted** and the **verification** task is **easier.**
- **Smooth, user friendly** and **fast** process for the user, the **quantity of data** to be input is reduced to zero.

The use of e-Identification for the ECI
Solution 4 – Integration with the eIDAS framework

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Technical analysis

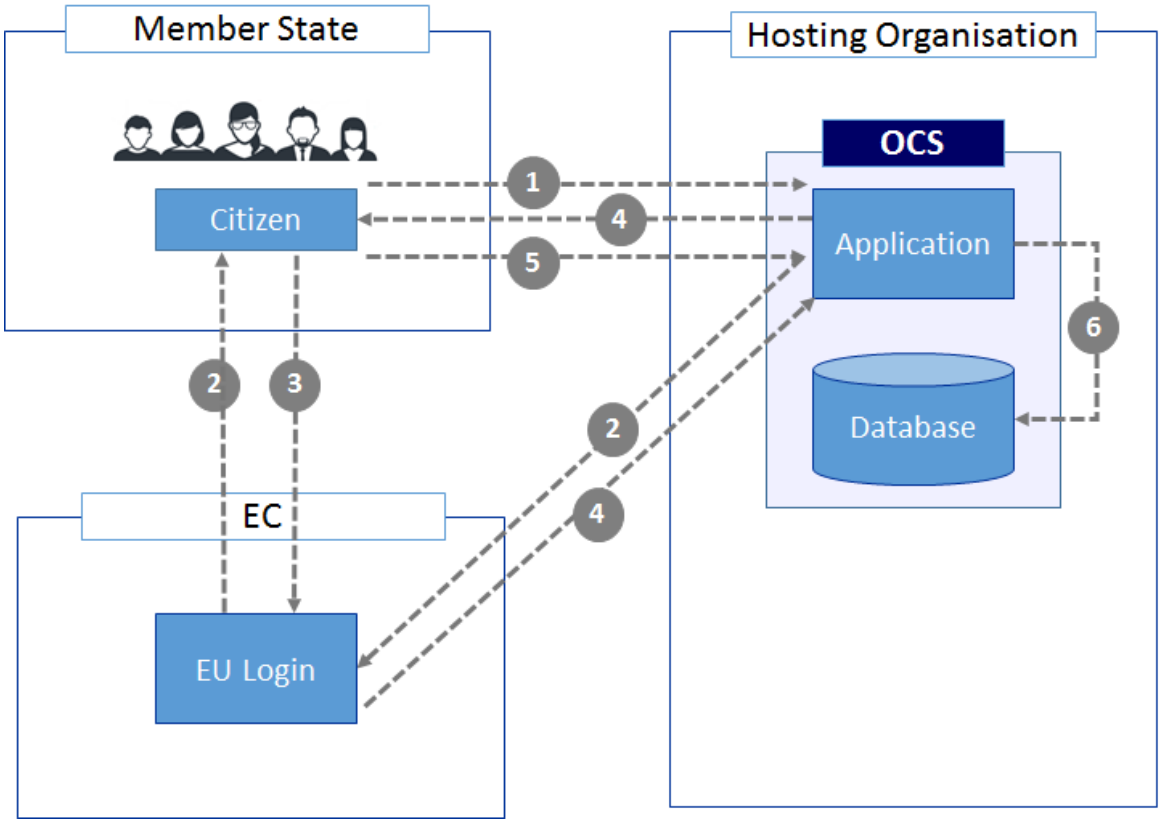
- The eIDAS integration makes it **more difficult to support twice** the same initiative, although not impossible using eIDs from different Member States. Moreover, **non-European citizens could support** initiatives without being detected automatically at submission time. These two drawbacks would be resolved if the **nationality** of the citizen could be included **in the eIDAS specifications**.
- Good **scalability** and **maintainability .**
- **Improved session management**, with the transmission in only one http session of the statement of support, and **guaranteed integrity of the data** during transmission and storage.

Verification

- **Validity** of user's eID is performed by MS. Similarly to Solution 1, the rows of databases are sent as CSV to verifying authorities

The use of e-Identification for the ECI
Solution 5 – Prefilling user's data with EU Login

EU Login is analysed here as a **complementing tool** for prefilling a statement of support. It is used to retrieve data from the user's account and possibly removing the CAPTCHA feature.



1. The citizen (user) accesses the EC OCS web page to support an initiative and select the option "Fill with EU Login".
2. The OCS redirects the user towards EU Login module.
3. The user introduces his credentials and sends them back to EU Login for authentication.
4. EU Login informs the OCS of the successful authentication and the OCS requests the user to introduce the missing data.
5. The user introduces the missing data and confirms the SoS.
6. OCS stores the SoS in the database.

The use of e-Identification for the ECI
Solution 5 – Prefilling user's data with EU Login

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Legal analysis

- EU Login presents **security features** that make it a **suitable** solution for a potential integration with the OCS.

Business analysis

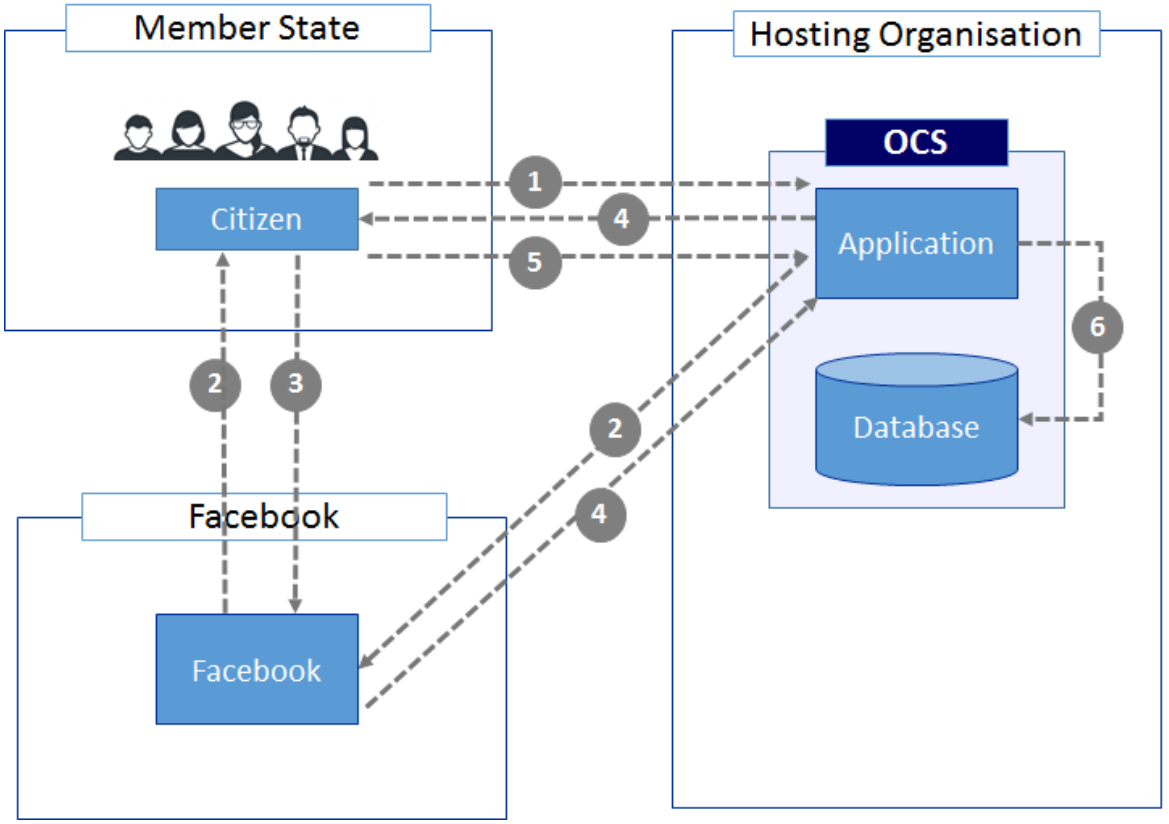
- The process requires some **extra steps** but the user would not be required to complete the **CAPTCHA** before submitting the statement of support.
- Very **little information is stored** on the account, most of the data still need to be **entered manually.**
- EU Login is **not yet used** by a significant part of the EU population.

Technical analysis

- Good **scalability**, **maintainability** and **ease of integration.**
- No significant impact on the overall **security.**

The use of e-Identification for the ECI
Solution 6 – Prefilling user's data with Facebook

Facebook is analysed here as a **complementing tool** for prefilling a statement of support. It is used to retrieve data from the user's account and possibly removing the CAPTCHA.



1. The citizen (user) accesses the EC OCS web page to support an initiative and select the option "Fill with Facebook".
2. The OCS redirects the user towards Facebook login module.
3. The user introduces his credentials and sends them back to Facebook for authentication.
4. Facebook informs the OCS of the successful authentication and the OCS requests the user to introduce the missing data.
5. The user introduces the missing data and confirms the SoS.
6. OCS stores the SoS in the database

The use of e-Identification for the ECI
Solution 6 – Prefilling user's data with Facebook

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Legal analysis

- There is a **concern** regarding what specific **information** Facebook would have **access to**, and where it would be **stored**.
- Information sharing agreements are based on **confidentiality obligations** that both parties must adhere to.

Business analysis

- After authorisation, the statement of support is **automatically prefilled** with the data from the Facebook account. Then the user just need to **correct and complete** the missing data to comply with the data requirements of each Member State.
- The **quantity of data** to be input by the user depends on each Member State requirements.
- Facebook has a **penetration rate** of 39.5% in Europe (over 307 million people).

The use of e-Identification for the ECI
Solution 6 – Prefilling user's data with Facebook

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Technical analysis

- Good **scalability**, **maintainability** and **ease of integration.**
- No significant impact on the overall **security.**

The use of e-Identification for the ECI
Assessment of the Solutions

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	Based on electronic signatures		Based on electronic identification		Complementary solutions	
Evaluation Criteria	**S1**	**S2**	**S3**	**S4**	**S5**	**S6**
Legal analysis						
ECI Regulation	●●●●●	●●●●◕	●●●◕○	●●●◕○	n/a	n/a
eIDAS Regulation	●●●●●	●●●●●	n/a	●●●●●	n/a	n/a
Member States' responses	●●●◑○	●●●●◕	●●◕◑○	●●●◑○	n/a	n/a
Data Privacy	n/a	n/a	n/a	n/a	●●●●●	●●○○○
Business analysis						
Ease of use	●●●○○	●●●●◕	●●●●◕	●●●●◕	●●○○○	●●●○○
Quantity of data	●●◑○○	●●●●◕	●●●●○	●●●●○	●○○○○	●●○○○
Penetration	●●○○○	●●◔○○	●●●◔○	●●●◔○	●○○○○	●●●○○
Technical analysis						
Operational aspects	●●◑◔	●●●●◕	●●○○○	●●●●◕	●●●●◔	●●●●◔
Security	●●●●○	●●●◔○	●●●◔○	●●●●○	●●●○○	●●●○○
Integration	●●●●◕	●●●◔○	●●◕○○	●●●●○	●●●●●	●●●●●

Example

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