



Once-Only Technical System Projectathon, 19-21 April 2023, Brussels

Event report

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DOCUMENT HISTORY

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EXECUTIVE SUMMARY

“The incredible drive and willingness to work together and test was unlike anything I have ever experienced in my nearly 20 years of IT. If I could thank everyone personally for participating right now I would.” (Projectathon satisfaction survey, April 2023)

On 19-21 April 2023, the European Commission organised the first Once-Only Technical System Projectathon. A Projectathon is a marathon of peer-to-peer interoperability and compliance tests in a structured environment. With 25 Member States in attendance, this hands-on, live testing and connecting event contributed greatly to the timely realisation of the Once-Only Technical System. It also offered a unique occasion to build a true community out of the teams implementing related systems at national level.

Participants learned about the great value of Projectathons as an effective accelerator for the realisation of projects at national level to support the implementation the Once-Only Technical System. Group tests in the Gazelle testbed enabled Member States teams to test with each other in “real” exchanges and not only in isolation via European Commission test services. Member States’ active participation in these technical tests and activities in this event allowed them to save time and resources considering the December 2023 deadline.

Neutral experts, acting as Monitors, supervised and verified the tests over the three days. The first instances of the Once-Only Technical System Projectathons are not pass/fail type examinations. Rather, they are a collaborative exercise in understanding technical and operational issues and working together to solve them.

The event closed with an 92% rate of success in tests between the Member States. Participating countries achieved a total of 59 peer-to-peer tests over the three days (tests shared between two Member States). Those teams that performed more preparatory test cases and connectivity tests in general were able to perform tests more efficiently during the actual event.

Ahead of the December 2023 legal deadline to implement the Once-Only Technical System, the European Commission is organising two more Projectathons in June and October, allowing the participating teams to build on their experiences.

The enduring conclusion of the April event is that an objective should be for implementers to participate in as many Projectathons as possible as each one is an opportunity to gain experience and progress further.

The focus now rests on the next Projectathon on 14-16 June 2023.

* Notice: Please note that the April and June Projectathons are testing scenarios on a limited scale. While these Projectathons aim to support participants with their respective Once-Only implementations, the results, analysis, and figures contained within this report are not a benchmark or measure of the readiness of any given Once-Only implementation or its development status.

1. INTRODUCTION



Figure 1: April Once-Only Technical System Projectathon

On 19-21 April 2023, the European Commission organised the first [Once-Only Technical System \(OOTS\) Projectathon](#). A Projectathon is a marathon of peer-to-peer interoperability and compliance tests in a structured environment.

This [event](#) marked an important milestone to ensure the deployment of the Once-Only Technical System by December 2023. It provided a unique opportunity for Participants to test their implementation of the Once-Only Technical System components that underpin a national Once-Only implementation ⁽¹⁾.

With 25 Member States in attendance, the April 2023 Projectathon served as an effective accelerator for the realisation of projects at national level to support the implementation of the Once-Only Technical System. It also offered a unique occasion to build a true community out of the teams implementing related systems at national level. Two further Projectathons, in June and October 2023, will provide additional opportunities for Member States to progress with their respective implementations.

⁽¹⁾ Please consult the Projectathon event page for a detailed overview of the event agenda, speakers and logistics: <https://ec.europa.eu/digital-building-blocks/wikis/display/OOTS/Projectathon1>

“At first, I was a little sceptical as to whether having a “Projectathon” would be a good idea. But now I see the result and I am proud that I had the opportunity to be part of it”. (Projectathon satisfaction survey, April 2023)

This report summarises key results from the testing that took place from 19-21 April 2023. It also provides a useful overview of lessons learned and serves as inspiration for other projects aiming to utilize the concepts and methodologies used in the preparation and execution of this hands-on event.

This report contains some technical terminology, which is mostly explained in footnotes. Please consult the [SDGOO Glossary](#) and the [Technical Design Documents glossary](#) for additional information about key concepts used in the context of this report.

1.1. CONTEXT

The Single Digital Gateway (SDG) is a critical contribution to the well-functioning of the Single Market and the long-term competitiveness of the EU as it increases transparency and cuts red tape for citizens and businesses. As mandated by Article 14 of the SDG Regulation ([EU 2018/1724](#)), the next key objective is to make administrative procedures fully online by the end of 2023 and connected to the Once-Only Technical System for the automated cross-border exchange of official documents.

The Once-Only Technical System will greatly facilitate life for everyone who is travelling, living, or learning abroad. It will enable citizens to transfer evidence automatically without the need to search, retrieve and re-submit documents across borders while keeping the user in control of their data. The Once-Only Technical System also supports more transparency and less red tape for companies to improve business environment in the EU.

The Once-Only Technical System is a technical framework for data sharing between competent authorities in the Member States to complete cross-border administrative procedures for studying, working, moving, and doing business in the EU. It intends to connect the authentic sources of EU public authorities – population registers, business registers, etc. – so they can exchange official documents and evidence, for example, registering an address or vehicle when moving abroad. This eliminates complicated manual search and fetching of evidence to complete administrative procedures in other EU countries.

In 2022, the Commission adopted [Implementing Regulation \(EU\) 2022/1463](#), which provides a comprehensive framework to implement the Once-Only Technical System. It drives Member States to reuse existing EU digital solutions, based on Open Standards and aligned to EU regulations (eIDAS, GDPR, procurement, etc.) to entrench EU values of trust, good governance, and smart investment.

The Once-Only Technical System Projectathon series matches the 30th anniversary of the Single Market, highlighting Europe’s commitment to the Digital Decade and a go-live date for the Once-Only Technical System of December 2023.

1.2. OBJECTIVE & BENEFITS

The objective of the [Once-Only Technical System Projectathon](#) series is to facilitate the implementation of the Once-Only Technical System by the EU Member States (the implementers) by the legal deadline of 16 December 2023.

“Events like this are crucial to setup the OOTS and to share best practices”. (Projectathon satisfaction survey, April 2023)

Participation in this first Projectathon had numerous benefits for Member States in accelerating their national implementation of the Once-Only Technical System:

- The Projectathon provided access to a dedicated test platform, tooling and test cases that were configured and defined by the experts who developed the Once-Only Technical System’s specifications. Thus, it was an excellent opportunity for participants to verify that their systems or solutions effectively comply with the appropriate specifications.
- This Projectathon clearly helped improve and assess the proper functioning of the Technical Design Documents (TDDs) of the One-Only Technical System, a set of non-binding technical documentation prepared by experts in the European Commission to support the Once-Only implementers.
- Participants performed peer-to-peer testing with real systems (or their acceptance/staging instances) using real-world scenarios. They could easily identify, correct, and re-test issues or errors during the Projectathon or shortly thereafter.
- The Projectathon was a unique opportunity to meet relevant experts in the field to share and exchange views, experience, and best practices in their national implementations of the Once-Only Technical System. It greatly helped promote and increase the visibility of the implementation status and readiness of each participating Member State ahead of the December go-live date.
- Member States experts were able to participate in the Projectathon as observers, allowing them to gain first-hand experience and insights in their preparation for the June and October Projectathons.

1.3. SCOPE

The April 2023 Projectathon was based on the Once-Only Technical System Technical Design Documents (TDDs) version 2023 Q1 as specified in [this announcement](#). Based on this version, the organising team has prepared a mix of Test cases (TC), which are explained in detail below.

A high-level overview and summary of test cases was made available and presented to the testing and deployment sub-group⁽²⁾ (restricted on the Once-Only collaborative wiki). The full test cases detailed are visible in the Gazelle platform⁽³⁾ (restricted to Projectathon Participants).

There were five evidence exchange scenarios without preview, five evidence exchange scenarios with preview, and two optional maintenance flow scenarios (Common Service updates).

The Once-Only Technical System Preview Space

Exchanging evidences through Once-Only Technical System will happen at the request of the user. The user should remain free to submit evidence by other means outside the technical system and, crucially, the user should have the possibility to preview the evidence and the right to choose not to proceed with the exchange of evidence in cases where the user, after previewing the evidence to be exchanged, discovers that the information is inaccurate, out-of-date, or goes beyond what is necessary for the procedure in question. The data in the preview should not be stored longer than is technically necessary.

The following test cases were dedicated to testing “without a preview area”:

- TC01: Basic evidence request without preview
- TC02: Basic evidence request without evidence match
- TC03: Evidence request error flow due to Basic Registry error
- TC04: Evidence request error flow due to Access Point error
- TC05: Evidence request, with an additional DSD conversation

The following test cases were dedicated to testing “with preview area”:

- TC06: Basic evidence request with preview and reauthentication
- TC07: Evidence request with preview and reauthentication at two different Evidence Providers
- TC08: Evidence request with preview rejection by user and reauthentication
- TC09: Evidence request with preview error (closure or timeout) and reauthentication

⁽²⁾ The Testing & Deployment sub-group’s (T&D) main objective is to define a testing approach and provide testing services to the Member State teams.

⁽³⁾ The “Gazelle” platform test management tool manages all the elements necessary for peer-to-peer interoperability tests. It offers a series of tools (validators and simulators) to verify the compliance of messages and documents with specifications, or to test the interoperability of an application during a controlled test. This platform originated from the eHealth domain and can be reused in different contexts where peer-to-peer interoperability tests are relevant.

- TC10: Evidence request with preview (including human readable transformation) and reauthentication

Please see chapter 2.3 “Testing results” for detailed information about the list of tests executed by the Member States during the Projectathon testing.

The tests began with static and pre-agreed data. It focused on testing the basic Once-Only Technical System functionalities as explained below. Each active participant was asked to perform mandatory pre-Projectathon testing, already using the Gazelle testing platform. This was a pre-requisite for each participant to be ready for actual peer-to-peer testing during the event. In addition, Member States had to prepare the following to participate in the Projectathon:

- Have an [eDelivery](#) Access Point ⁽⁴⁾ up and running (mandatory).
- Use of the Common Services ⁽⁵⁾ (optional but recommended as a priority compared to the Preview Space ⁽⁶⁾).
- Have a Preview Space available (optional).

The figure below presents an overview of the minimum requirements for participating in the April Once-Only Technical System Projectathon.

⁴⁾ The eDelivery Access Point (AP) implements a standardised message exchange protocol that ensures interoperable, secure, and reliable data exchange.

⁵⁾ The Common Service requests are lookups to determine what to find and where. Evidence requests responses are the actual messages to request and transfer the evidence.

⁶⁾ Preview spaces are the components needed for users that are making the request to preview their data before an actual transfer takes places and to decide whether the transfer can take place. Learn more about key steps in the once only user journey [here](#).

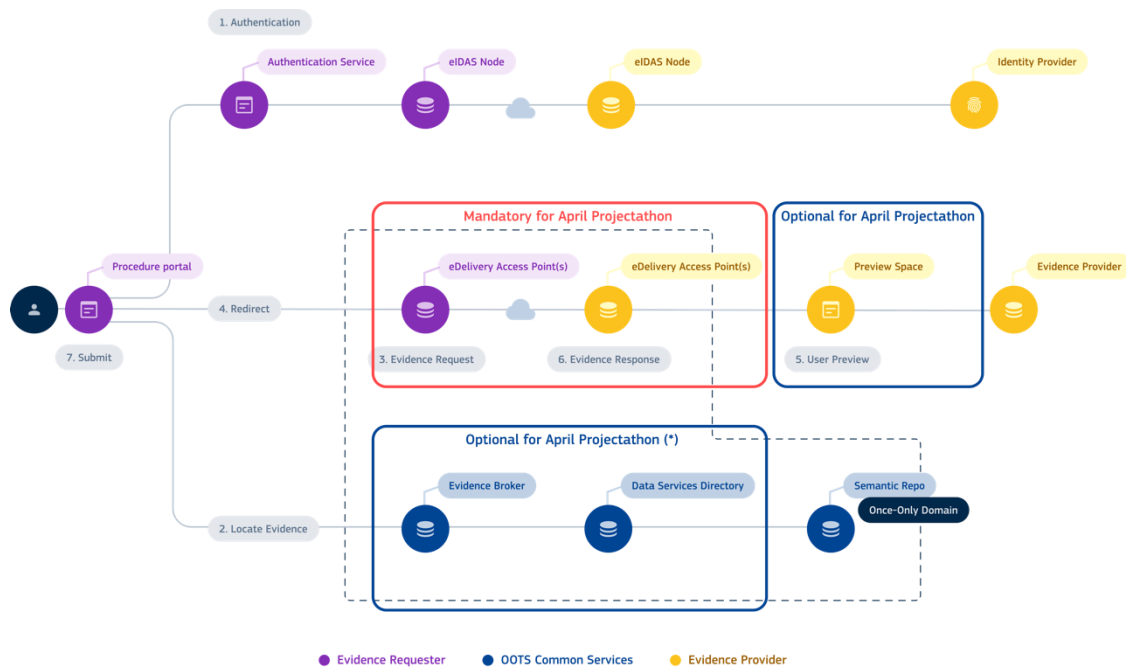


Figure 2: Minimum requirements for participating in the Once-Only Technical System Projectathon

1.4. PREPARATION

This event was a joint effort between Participants and the European Commission (Directorate-General for Informatics (DIGIT), and Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (GROW)).

The Once-Only Technical System Project Management Office (PMO), the OOTS Communications team and contractors supporting the overall work of the OOTS project in the Directorate-General for Informatics of the Commission (DIGIT) supported the preparation and execution of this event.

From Q4 2022, and until the end of the implementation phase by Q4 2023, the Commission is organising a series of online events ([Implementers' Cafés](#)), providing regular updates on the Once-Only Technical System Projectathon series. These events also provide informative “deep-dives” into specific topics, including the Once-Only Technical System preview space, specific building blocks reused in the OOTS architecture ([eDelivery](#) and [eIDAS eID](#)), and the OOTS common services. A dedicated [Kick-off meeting](#) (14 March 2023) and open Q&A session (12 April 2023) provided further opportunity for Participants and Observers to prepare their systems and testing schedule.

During the event, technical specialists from the Commission, consisting of both salutory staff and expert contractors, served as Monitors. Monitors are neutral experts, familiar with the Once-Only Technical System specifications or with building blocks that are reused in the Once-Only Technical System architecture, such as [eDelivery](#) or [eIDAS eID](#). These Monitors participated in the Projectathon to help and validate the peer-to-peer transactions relevant to their areas or expertise.

For detailed information about the preparation and organisation of the Once-Only Technical System Projectathon, incl. definitions, participating teams, pre-Projectathon tests and useful FAQs, please consult the Once-Only Technical System [Projectathon Participant Playbook](#).

The graph below provides an overview of the April Projectathon timeline, including details on information sessions, Projectathon registration, pre-Projectathon tests, the actual event and post-Projectathon activities.



Figure 3: April Projectathon timeline

2. PROJECTATHON RESULTS

This chapter presents the participating countries, tests performed, and key results observed during the Projectathon testing. Please note that this report summarises the test results and is not exhaustive (i.e., it does not provide details of the testing performed). Member States can access their test results via the Gazelle platform (access is restricted).

2.1 PARTICIPATING MEMBER STATES

Active Participants ⁽⁷⁾ from 16 Member States tested together in pairs, with a data requester Member State on one side, and a data provider on the other side. Observing Member States ⁽⁸⁾ observed these tests to prepare for the June and October Projectathons.

The table below provides an overview of Member States that participated in the April Projectathon, either on-site or remotely.

Table 1: Participants

	Participants	Observers
On-site	Belgium*, Finland, Germany, Italy, Ireland, Latvia*, the Netherlands, Poland*, Portugal, Romania*, Slovakia*, Slovenia, and Sweden	Croatia, Estonia, Denmark, Luxembourg, and Norway
Remotely	Austria, Greece, and Hungary	Czech Republic, Lithuania, Spain, Malta, and Cyprus

* Changed status to “Participant” during the event

The graph below presents an overview of Member States’ participation to the April Projectathon.

(7) A “Participant” actively performs peer-to-peer testing during the Projectathon event, including tests with other Participants.

(8) An “Observer” observes and learns what a Projectathon is, how peer-to-peer tests are executed, to prepare themselves for the next Projectathon event(s).

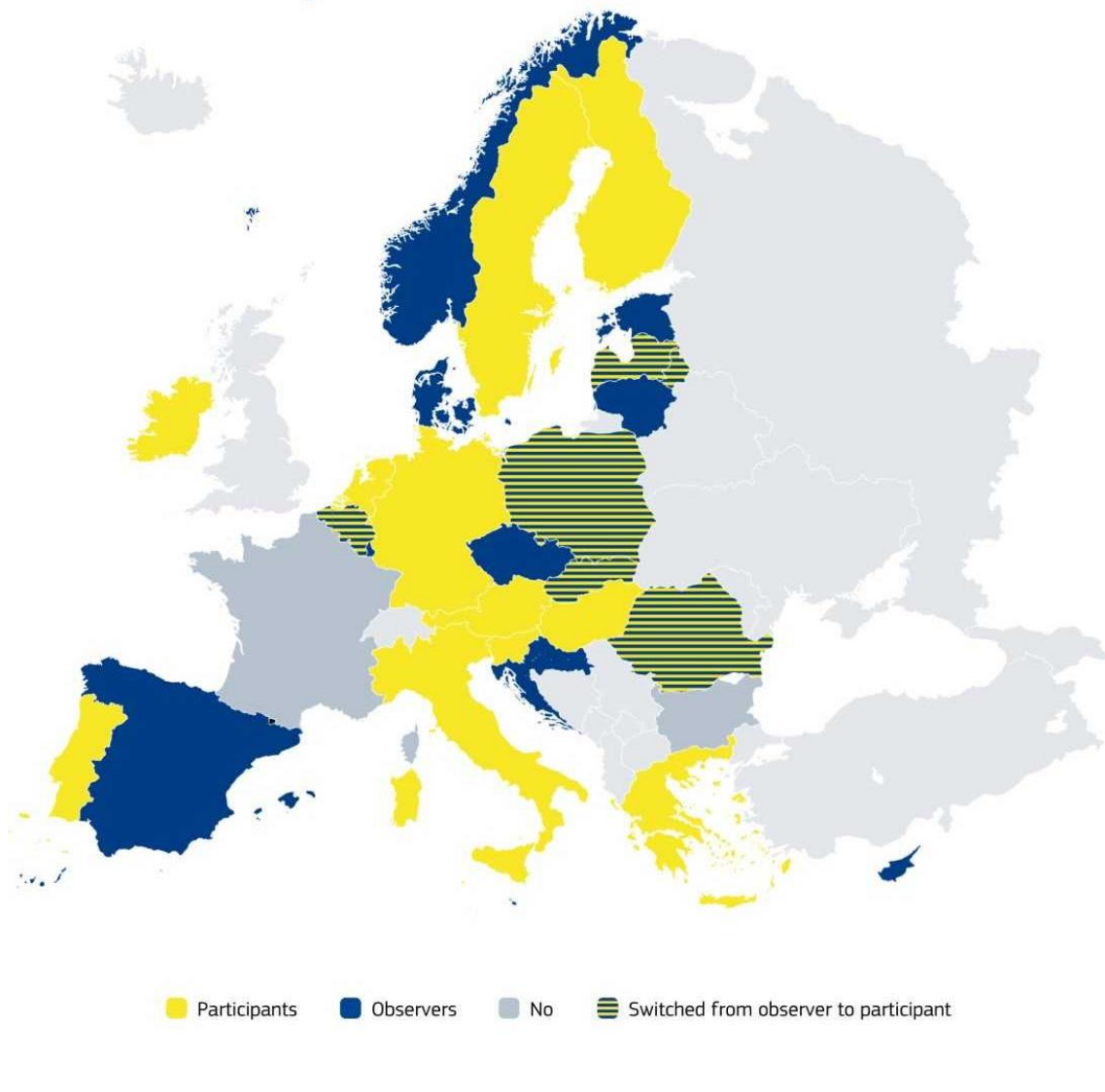


Figure 4: Member States' participation to the April OOTS Projectathon

2.2 TESTING PROCESS



Figure 5: Projectathon testing

Participants began by connecting their systems, in pairs, to ensure optimal system performance before launching their test cases. Participants decided bilaterally who they would test with and when. This could be based on longstanding cooperation between specific Member States; or it could reflect that some participants decided to start testing with a partner until the test concerned was successful, while others chose to try a given test with several other Member States at the same time.

Where issues were found, the implementers jointly troubleshooted the issues – often in collaboration with other Participants who had faced similar potential issues – and relaunched the tests. Experts from the European Commission were present throughout the event to provide technical support. This process lies at the heart of the Projectathon concept.

The Member States then recorded their test results in the Gazelle testbed along with records of the tests for verification by the Monitors.

All tests were logged in the Gazelle platform. Monitors were informed about all tests with a “To be verified” status. They marked approved tests as “Verified”. If more evidence was needed, the test was marked as “Partially verified” until final verification could take place. The respective Member State and Monitor(s) then added more relevant detail to the test case before concluding the test in question. In parallel, Monitors and other experts from the Commission helped the participants organise the tests and debug their systems.

2.3 TESTING RESULTS

The April Projectathon concluded with a success rate of 92% for tests between Participants and a total of 59 executed peer-to-peer tests (tests shared between two Member States).

During testing, Member States were able to execute five dedicated tests without preview, and five tests with preview (see chapter 1.3 “Scope” for a description of “with and without preview”).

Out of the total number of tests, five tests (8%) were still “running” and were not ready to be verified. So-called “running” tests are tests that were initiated but due to a mix of reasons could not progress to the stage where a full test case validation could take place.

The graph below shows the status of the Projectathon test results.

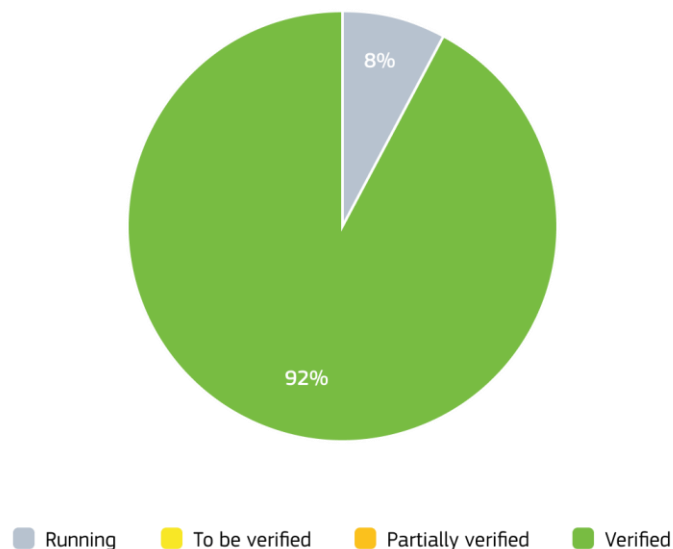


Figure 6: Projectathon test results

Most tests Member States executed during testing focused on test cases “without preview area” (test cases TC01 to TC05):

- TC01: Basic evidence request without preview. This test case was executed for 49% of the tests between the Participants.
- TC02: Basic evidence request without evidence match, executed in 17% of the tests.
- TC03: Evidence request error flow due to Basic Registry error, executed in 12% of the tests.
- TC04: Evidence request error flow due to Access Point error, executed in 17% of the tests.
- TC05: Evidence request, with an additional DSD conversation, without preview, executed in 3% of the tests.

The figure below presents an overview of the test cases performed “without preview”.

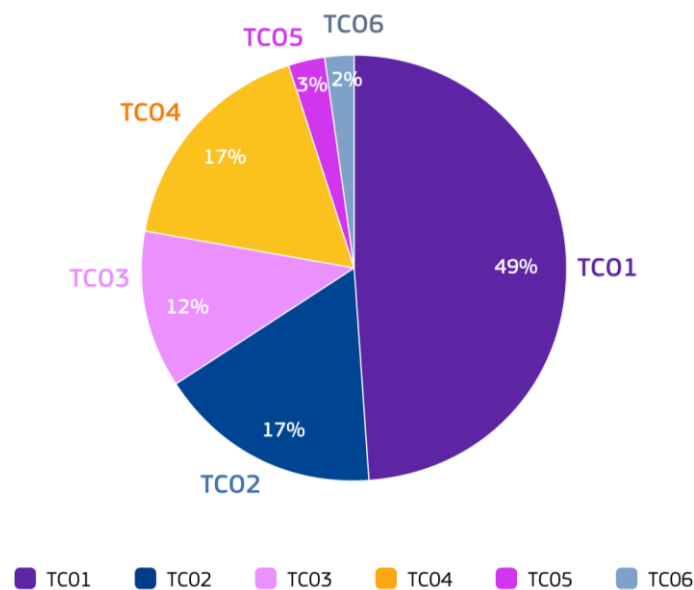


Figure 7: Test cases "without preview"

This three-day testing event provided a unique opportunity for Participants to set-up their testing in the beginning of the event, thus allowing them to carry out gradually ever more tests in a structured manner throughout the duration of this event.

On the first day, the Participants focused on TC01, as requested by the Organising team. Initial testing took place often bilaterally between the teams. These teams logged progressively more tests and test results in the Gazelle testbed. This accounts for the significant difference in the number of tests and in the number of successful tests between the first and second days.

On the third day, Participants performed some additional tests and focused on correcting eventual bugs and provided additional evidence to validate successful tests.

TC02 was executed twice on the first day, without success. On the second day, the Participants focussed increasingly on successfully executing TC02, TC03 and TC04, as well as some limited executions of TC05. On the third day, Participants performed TC02-4 successfully.

The figure below provides details of the test cases status grouped both per test case, and per day, clearly showing the progression of the tests during the three days of the Projectathon.

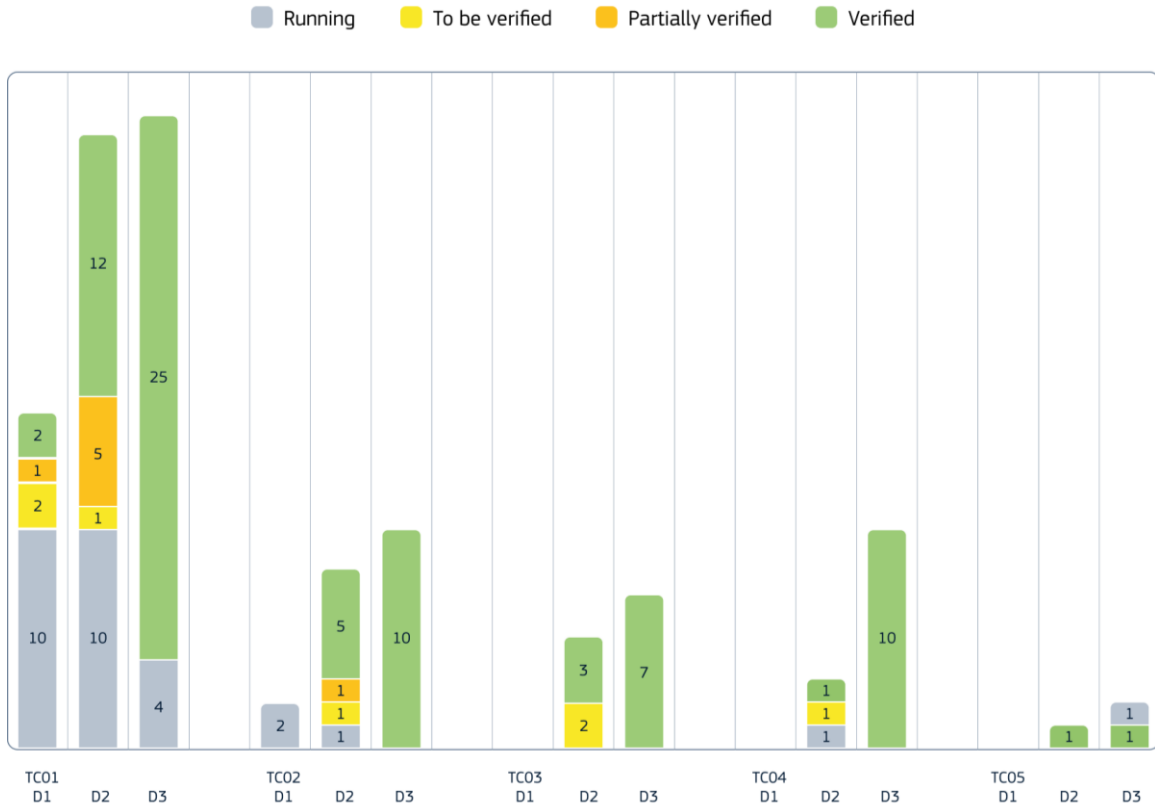


Figure 8: Test cases status "without preview" - days 1, 2 and 3

In the test cases “with preview,” only TC06 about “basic evidence request with preview” was executed only once. This demonstrates that the Participants focused on testing the test cases “without preview” during this event.

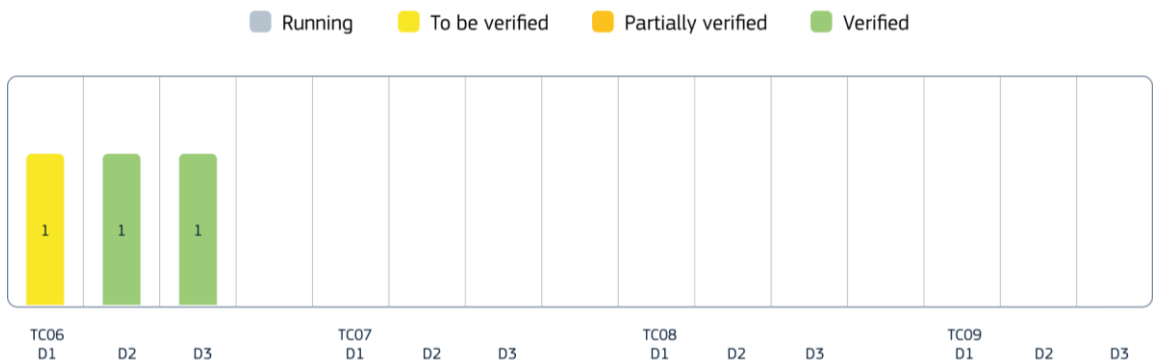


Figure 9: Test cases status "with preview" - days 1, 2 and 3

3. EXPLORATION ROOMS

In parallel to interoperability testing, this event offered so-called “Exploration rooms” for event participants to learn about topics relevant for the Once-Only Technical System. This chapter summarises key results from these sessions.

"Learn by doing rather than observing - great to collaborate with other EU countries". (Projectathon satisfaction survey, April 2023)

Overall, event Participants found the exploratory sessions very valuable to discuss specific topics with relevant experts and other teams in a dedicated format. We recommend the Member States teams to plan their Projectathon attendance to be able to benefit both from testing and attending exploratory sessions (e.g., by having more people on site or taking turns in tracking the test cases

3.1 USABILITY TESTING - COMMON SERVICES ADMINISTRATION TOOL

A Usability Lab offered users usability testing of the Once-Only Technical System Common Services Admin Platform. The OOTS Admin Platform UX team tested the platform with 12 volunteer Member States (14 usability tests). The following section summarises key components of this testing and offers insights into lessons learned and next steps.

There were four Usability test scenarios:

- Task 1: Create an evidence provider
- Task 2: Create an evidence type
- Task 3: Link an evidence provider to an evidence type
- Task 4: Link a requirement to evidence type(s)

The testing team asked the following test questions:

- How satisfied or dissatisfied are you with this process?
- What worked well for you? and what didn't?
- What will be the workflow to gather the information needed to add in the platform?
- Now we have covered the main tasks to carry on in the platform, what would you expect to find in the dashboard? which type of information or statistics?
- Do you consider you would need to see what other Member States are doing?
- How many people will work using this platform?
- How your team will be organized to work on this platform? How will your team work on the different steps/tasks?

Key learnings from the usability testing included:

- Users read in detail the content to ensure they understand everything. For that reason, platform texts are particularly valuable for them.
- There will be Members States that: (1.) Will need to update data in bulk. (2.) Will input the data one by one.

- Users said that the platform could be complex at first, but once they have explored it, they were able to navigate easily.
- There could be two roles: (1.) Starter users that would need to be guided. (2.) Experienced users that would like to be flexible to complete the processes.

What users liked about usability testing:

Technical improvements

- Ensure filters work properly
- Make table rows interactive when they have checkboxes or radio buttons
- Save users' actions when they want to go to the previous page in the browser
- Review column dimensions
- Update buttons and table states

UX improvements

- Improve the flow process to give more consent to the user
- Update the visual style of the home page
- Redesign the actions banner inside the flows
- Work on defining metrics and statistics to prepare the dashboard page

Content improvements

- Improve descriptions across the platform to help users understand core terms better
- Add information tooltips in the fields, which may be confusing for first-time users
- Create documentation that would guide users to create evidence types descriptions and identifiers.

Key areas for improvement included:

- Analyse the findings explored through usability testing.
- Develop priorities based on the users' feedback to fix the most global and serious pain point first.
- Work on solutions to improve the platform functionalities and content and align better with users' needs.
- Prepare for the next usability test study for the June Projectathon, test the updates with users and keep improving.

3.2 ONCE-ONLY TECHNICAL SYSTEM SUPPORT SERVICES

This session presented the scope of the Once-Only Technical System support service. This included how to log Once-Only Technical System-related issues and requests, how to notify issues relating to the eDelivery building block, log organisational requests and issues, how to request assistance in component level testing and how to log questions relating to the Technical Design Documents. This session also explained how best to contact the service desk.

3.3 EDELIVERY "OPEN DOOR"

This session allowed participants and observers to ask questions to the eDelivery team. Members of the eDelivery team supported the Participants throughout the three days of the event by helping Member States with their systems in case of bugs, or improvements needed.

3.4 SEMANTIC SERVICES

This session offered a presentation on the development of proofs of concept (PoC) in the education and transport domains, which enables the cross-border registration of vehicles and educational diplomas in and between different EU Member States. This session provided an update on the progress of the semantic repository as well as the inclusion of useful controlled vocabularies.

4. NETWORKING

“Overall, it was a great event that allows not only to test our solution with other partners but was really important for networking.” (Projectathon satisfaction survey, April 2023)

Community building was a central objective for this event. It was the first occasion for Once-Only Technical System implementers to meet and exchange personal and professional experience relating to the Once-Only Technical System project (beyond the National Coordinators).

Once-Only is among the finest examples of EU-level projects where teams representing specific Member States take the time and energy to support teams from other Participants to the benefit of all. In this spirit, the Organising team organised several social events outside of the formal agenda allowing for informal exchanges in a convivial atmosphere.

5. COMMUNICATION

The [Once-Only Hub](#), a single environment providing reliable information, services, and support on the Once-Only Technical System, provides detailed information on the [2023 Projectathon series](#). It also hosts [post-event articles](#), exploring specific aspects of the Projectathon series.

The Once-Only Hub also features insightful [interviews](#) from EU Member States about the Once-Only Technical Infrastructure implementation. These interviews are a unique chance to look beyond the technical cross-border interconnection of digital services in Europe and get to know the architects of our digital Europe and what motivates them.

Furthermore, the Commission promotes the Projectathon series via the [DIGIT newsroom](#) and via an internal newsletter. In addition, there were dedicated articles published related to various aspects related to the Projectathon. For example, about the [Interoperability Test Bed](#) that has been selected to support the Projectathon.

“This was a really nice event, and it was really fruitful.” (Projectathon satisfaction survey, April 2023)

The Commission arranged coordinated social media coverage of this event between several social media accounts (in this case, Twitter). Accounts serving entire Commission Directorates General (such as @EU_GROWTH and @EU_DIGIT) supported programme-specific accounts (such as @EU_OnceOnly, @YourEuropeEU, @InteroperableEU and @eDeliveryBB) to share live coverage from the three days to specific stakeholder groups. The use of the informal #OnceOnly allowed Projectathon participants to share their own thoughts and experiences. A dedicated MS Teams channel provided access to event participants to photos of the event, allowing them to access high-quality photos.



6. LESSONS LEARNED

Based on Participants' feedback ⁽⁹⁾, the Projectathon demonstrated the value of coming together and working in union to progress on the implementation of the Once-Only Technical System. Group tests enabled Member States to test with each other in “real” exchanges and not only in isolation via Commission test services.

National coordinators, experts, and integration teams from Member States have actively contributed to the preparation of this event with different teams from the European Commission to make this event fruitful. This event major milestone in the implementation journey, both for the Member States, as implementers, and the Commission in its efforts to help the Member States reach the legal deadline.

The figure below presents participants motivation to participate in the Projectathon.

⁽⁹⁾ Based on April OOTS Projectathon satisfaction survey, carried out by the European Commission in April/May 2023

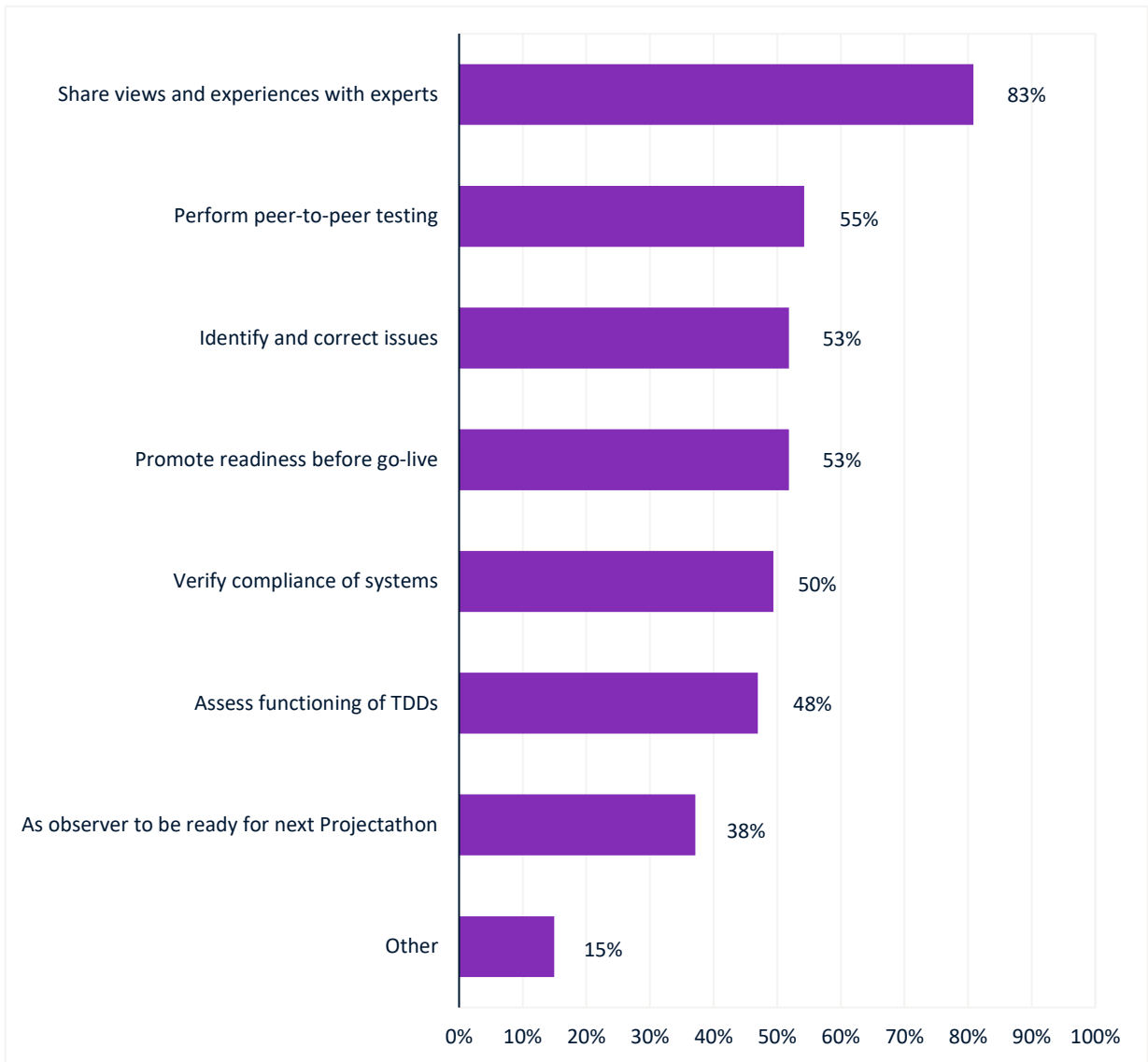


Figure 10: Satisfaction survey - Participants motivation to participate in the Projectathon

Overall, the participants were satisfied with the registration process and the pre-Projectathon preparation.

The figures below presents participants' satisfaction with the overall organisation of this event.

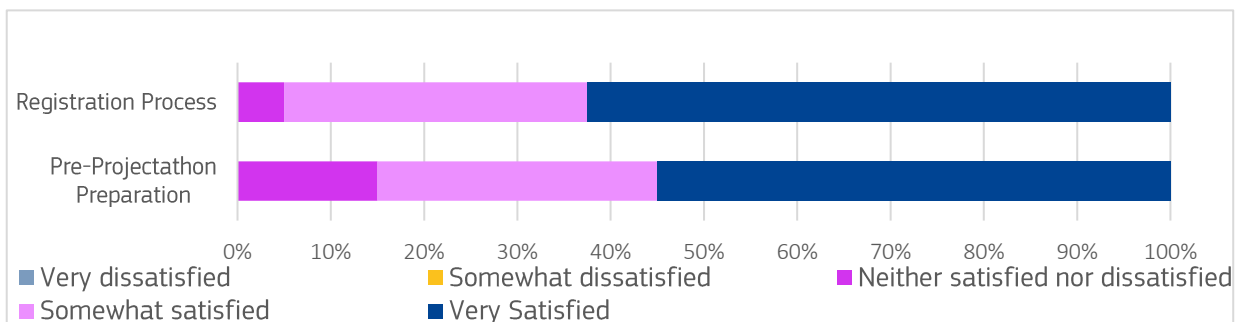


Figure 10: Satisfaction survey - registration process

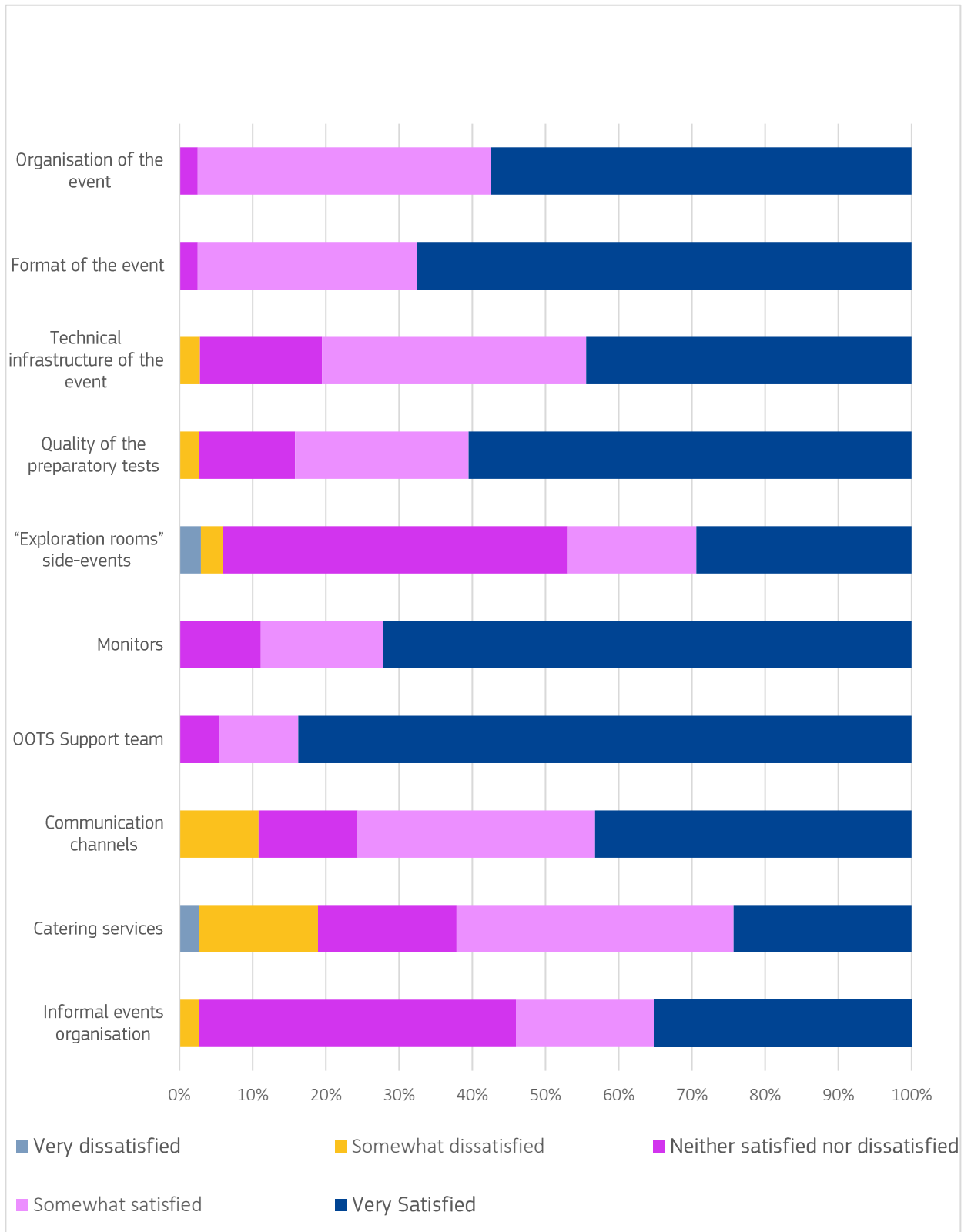


Figure 12: Satisfaction survey - overall satisfaction

The table below summarises general key take-aways from this event.

Table 2: General - lessons learned

General lessons learned include:
In terms of registration for this event, the hardware and infrastructure provided, as well as catering services, participant feedback was overwhelmingly positive, and the organising team commit to reflecting on the feedback provided by those in attendance and working to improve on the overall experience, from ventilation to catering and coffee, wherever possible in the June and October sessions.
The organisers ensured remote participation to this Projectathon, although both participants and the organising team have concluded that on-site participation is always preferential for such an event, even if it is just a single person on-site.
There is a need for all parties involved to respect timings as that is important for the organising team and other participants.
The concept of being a remote observer does not work as well as an onsite observer as there is a considerable risk of issues on technical, connectivity and cooperation levels.
Active participants should have at least one or two representatives/coordinators on site to ensure an efficient and effective testing throughout the event.
General information about the Projectathon shall be shared via the Projectathon Participant Playbook. Additional information shall be consolidated via MS Teams.
Even though MS Teams may not be the ideal solution for all participants as a means for communication and information sharing, it worked out well and is the best compromise currently available for IDPR / GRPR reasons.
There were some issues with the Webex connection, which will be addressed for the June event. It further demonstrates that on-site present is highly recommended to ensure optimal results for the participants.
Although some teams commented that more testing time would be useful, the 3-day testing format is quite efficient for resource/planning purposes.
Overall, the event structure ensured a high degree of freedom/flexibility for test case executions and test partners. However, it could be discussed to structure the execution of specific tests during specific times and to mandate/propose testing partners in a more structured way for future events.
Teams liked the lanyards concepts, whereby the event participants wore colored lanyards matching their "status" (Participant, Observer, Monitor, etc.). Event participants stated that they were proud that some teams were able to earn the "Participant" lanyard during the event when they switched from "Observer to Participant."

There were also some notable findings from the OOTS technical design documents (TDDs). The Projectathon test cases covered key features of the TDDs. Many participants could successfully implement the overall functionality as specified in the TDDs. The Projectathon provided valuable lessons learned and areas for improvements, which the TDD sub-group has started to address right after the event.

First, the [specification chapters](#) of the TDDs are supplemented by so-called XML schema definitions and Schematron rule sets that can be used to automatically validate OOTS messages. In some cases, these validation artifacts did not fully or correctly enforce the constraints defined in the TDD chapters.

Second, in some exceptional error situations some constraints on the error reporting need to be relaxed in both the specifications and in the validation artifacts. The current set of validation artifacts usefully covers many of the message structures but does not yet provide fine-grained validation of the eDelivery headers and does not yet express constraints across related messages. For example,

sometimes a value used in a field in message had to be copied into another field in a subsequent message. These situations needed to be validated manually, which complicated the work of the Monitors.

The TDD team, together with the TDD sub-group are addressing these findings and providing updates to the OOTS public GIT repository for the future Q2 release.

In parallel to testing, several participants made suggestions for additional functionality to test during future Projectathons. These suggestions will be discussed in further TDD sub-group meetings and with the Organising team.

In addition, there were some key take-aways from connectivity testing. The table below summarises key take-aways from connectivity testing.

Table 3: Connectivity - lessons-learned

Connectivity-related lessons learned include:
Teams should check that all their systems are accessible on standard ports (or non-standard ports for testing purposes).
Teams should check all their systems can make outgoing connections and access other systems on standard ports (or non-standard ports for testing purposes).
Teams that need to perform Whitelisting of IP addresses or ports should do this well in advance as these internal processes might take some time.

The table below presents lessons-learned related to testing.

Table 4: Testing: lessons learned

Testing related lessons learned
Specifications should be stabilised and/or frozen such that it is clear for all participants, which details should be used, both during the preparatory testing phase and the actual Projectathon event.
The preparatory test cases and connectivity tests are valuable for understanding the context and checking/troubleshooting issues in advance of the actual event.
Those teams that performed more preparatory test cases and connectivity tests in general were able to perform tests more efficiently during the actual event.
Predefined and preconfigured data sets are valuable for testing. The earlier they are available, the better. The same applies to Member State comments or additions to the test data sets.
The Support team and Monitor team are immensely helpful and effective in providing support and advice.
Having specialised Support team members (e.g., eDelivery Building Block team members) in addition to generic OOTS Support team members is highly valuable.

Testing related lessons learned

Providing logs and evidences in Gazelle took the teams quite some time. It was not always clear, which party needed to provide specific evidence when multiple parties engaged in a transaction. This can be improved by elaborating the test case objectives/steps and detailing further what logs should be provided and by whom (e.g., in cases where there is a sender and a receiver, it should be the receiver that provides the evidence if possible). Moreover, some commonly provided logs (like Common Service responses) could be omitted during some test cases or transactions.

Gazelle could be improved by creating a "start testing approval" from the passive entity.

The test platform and OOTS validator are useful in checking OOTS data/messages, both in preparation and during the event.

Preparing for the Projectathon test cases could be improved by enhancing the component level OOTS testing services and adding more features such as end-to-end flows with matching/correlating data and/or integrating preview space functionality.

Some participants preferred that preparatory tests are validated. However, due to short timelines and flexibility on Member States side to execute these tests, the testing/monitor/support teams are not planning to do a full validation of the results but will perform spot checks instead. Participants that have doubts on the execution or results of some test cases are always invited to contact the support team for a direct follow up.

The provision of test tools and test data allow the teams to get quickly up to speed and an insight into the proper execution of test cases. Therefore, teams can start with these, but should move to a real and automated system under test as soon as possible.

Teams that are quite advanced can decide to execute tests in parallel with several other teams at the same time. Others are encouraged to focus on completing one test case at a time.

7. RECOMMENDATIONS

Based on the participants' feedback, observation and lessons-learned, there are several recommendations considering the June and October Projectathons. The table below summarises key recommendations.

Table 5: Recommendations for participating in the next Projectathon events

Recommendations for the next Projectathon(s) include:

Participate to as many Projectathons as possible as each one is an opportunity to gain experience and boost your progress.

Even if you think you are not completely ready, join as an observer and be prepared to become an active participant during the event.

On site participation is key for ensuring a good testing and networking experience.

If the whole team cannot be on site, having 1 or 2 coordinators on site clearly increases your level of effective involvement.

Read the Projectathon Participant Playbook and its Annexes to get the necessary background information and guidelines.

Register to the MS Teams collaborative space.

Respect the timelines:

- Register all your team members in time
- Register your SUT in time, including the test and connection details

Recommendations for the next Projectathon(s) include:

Perform as many preparatory tests as possible.

Perform the connectivity test to not lose valuable testing time during the event (and keep your own connection details stable).

Reach out to the support team before, during or after the event as they are highly effective in sorting out questions and problems.

Reach out to the monitors during the event for any question related to testing or documenting/logging test cases.

Check out the exploratory sessions details in advance so you can plan to participate to them while still having other team members covering the test case executions.

Come with a mindset to learn and help each other.

Connection links should be shared in advance, as early as possible before the start of the event.

8. CONCLUSIONS AND NEXT STEPS

The Commission is organising two further Once-Only Technical System Projectathons in 2023. The second OOTS Projectathon takes place on 14-16 June, providing a valuable moment when national implementation teams can perform interoperability tests prior to the summer recess. This event is designed to cater for all teams, irrespective of their progress in their Once-Only journey, with a range of tests to match different progress levels. It specifically aims to:

- enable “observer” Member States to upgrade to “participants”.
- Currently allow Participants to build and advance on the testing they have thus far undertaken, including updating the common services and completing outstanding testing rounds.
- allow for testing to include eIDAS nodes and other related systems.

Progress in these areas means we can then look to the integration of competent authorities, business registers and achieving bug-free connections.

The graph below summarises the activities, actors, and dates in the preparation of the June Once-Only Technical System Projectathon.

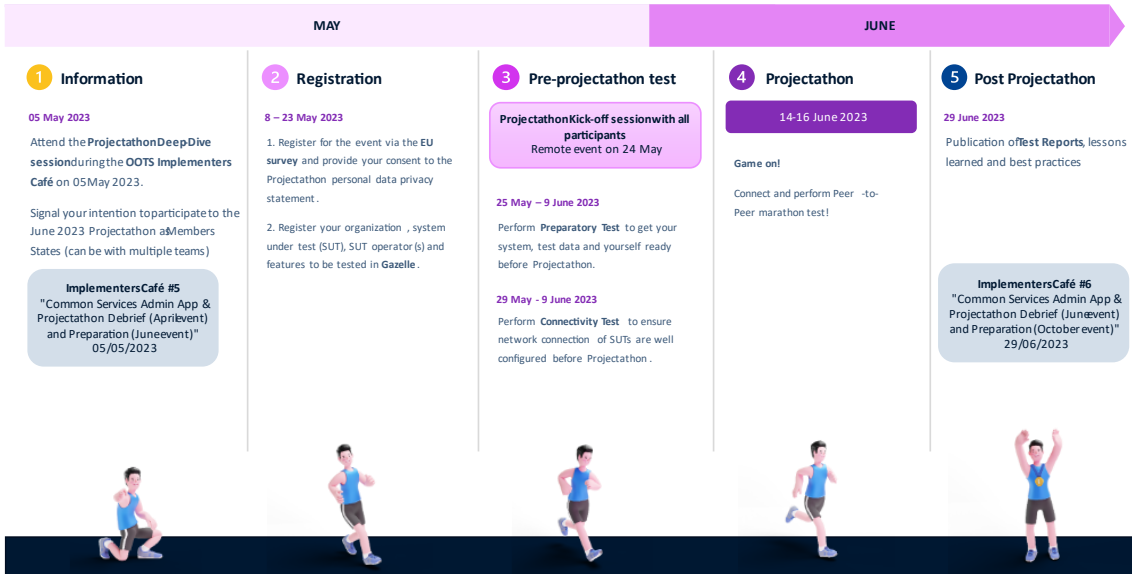


Figure 13: June Projectathon - timeline

The third OOTS Projectathon takes place on 18-20 October, just two months before the legal deadline comes at a critical point in Europe's Once-Only journey.

The graph below summarises the activities, actors, and tentative dates in the preparation of the October Once-Only Technical System Projectathon.

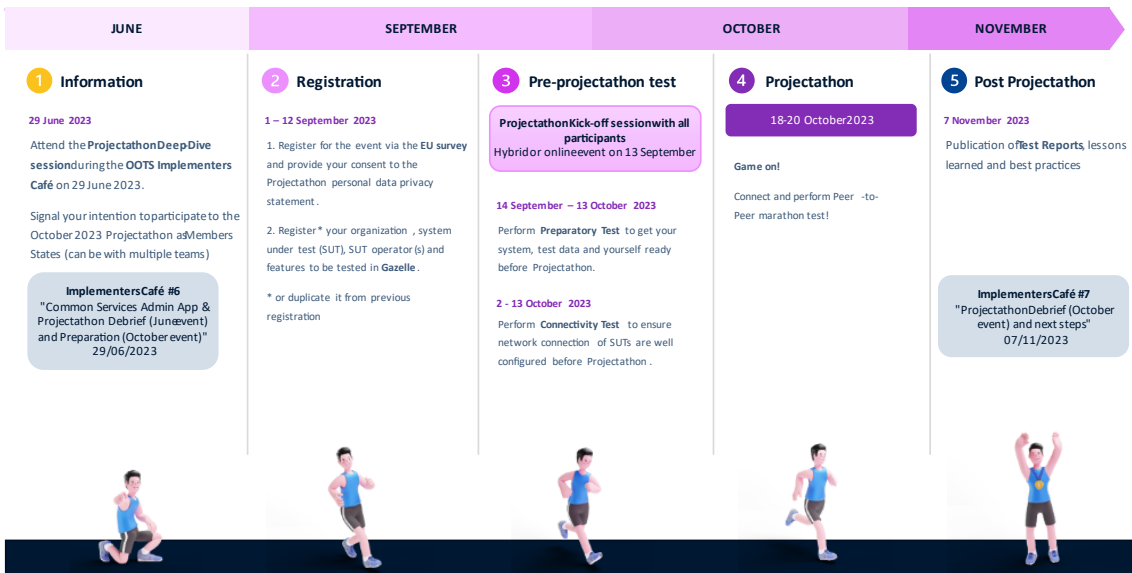


Figure 14: October Projectathon - timeline (tentative)