Once-Only Technical System Projectathon, 14-16 June 2023, Brussels

Event report

European Commission, DIGIT.B3 and GROW.G3
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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 14-16 June 2023, the European Commission organised the second Once-Only Technical System Projectathon. Projectathons are marathons of peer-to-peer interoperability and compliance tests in a structured environment.

Using a specific testing platform, Member States teamed up to test with each other in "real" exchanges using test data. Technical experts, acting as Monitors, supervised and verified the tests over the three days. The Projectathon focussed on five evidence exchange scenarios "without a preview area", five evidence exchange scenarios "with a preview area", and two optional maintenance flow scenarios

Participants executed 149 peer-to-peer tests, compared to 59 tests in April 2023 (tests shared between two Member States). The June Projectathon concluded with a success rate of 86% for tests between participants. Participants executed 149 peer-to-peer tests, compared to 59 tests in April 2023 (tests shared between two Member States). The 2023 June Projectathon concluded with a success rate of 86% for tests between participants. Six tests failed (4%), and four tests were "partially verified" (3%); these tests were close to be "verified" but were missing additional proofs from the Member States (such as evidence request or response messages). At the close of the event, 11 (7%) tests were still "running", meaning that the test was initiated but could not progress to a full test case validation.

Ahead of the December 2023 legal deadline to implement the Once-Only Technical System, the European Commission is organising a final 2023 Projectathon from 18-20 October, allowing the participating teams to build on their experiences with a focus on production-ready outputs.

** Notice: Please note that the April and June 2023 Projectathons were testing events 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: One of the two plenary rooms used during the June Once-Only Technical System Projectathon

On 14-16 June 2023, the Commission organised the second Once-Only Technical System (OOTS) Projectathon. This hands-on event allowed Member States to test their implementation of the technical components that underpin national Once-Only implementations ahead of the December 2023 legal deadline for implementing the system.

The event participants had differing levels of maturity in their implementations. With 27 Member States in attendance, either on site or online, as participants ([1]) or observers ([2]), this event clearly showed the progress being made at national level in terms of implementing the Once-Only Technical System, and the great value of such large-scale testing events.

The April and June 2023 Projectathons were an opportunity for stakeholders to learn, make mistakes, help each other, and assess the status of their respective Once-Only implementations. Building on these events, the 18-20 October 2023 event will focus on assessing the production readiness of the Once-Only Technical System components.

([1]) A "participant" actively performs peer-to-peer testing during the Projectathon, including tests with other participants.

([2]) An "observer" observes and learns what a Projectathon is, how peer-to-peer tests are executed, to prepare for the next Projectathon event(s).

> *"The value of this event is immeasurable. I already saw this value at the last Projectathon [...] I believe that we have opened new national perspectives* (Projectathon satisfaction survey, June 2023)

This report summarises key results from the testing that took place from 14-16 June 2023. It also provides an overview of lessons learnt and serves as inspiration for other projects aiming to utilise 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.

1.2. 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 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 (e.g., a document) 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 to entrench EU values of trust, good governance, and smart investment (eIDAS, GDPR, procurement, etc.).

The Once-Only Technical System project is a collaboration between the Commission's Directorate-General for Informatics (DIGIT) and the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW).

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

"Always a pleasure to meet colleagues and talk to them face to face. This was again a great opportunity to learn and to improve". (Projectathon satisfaction survey, June 2023)

The key objective of the Once-Only Technical System Projectathon series is to facilitate the implementation of the Once-Only Technical System by the Member States by offering a 'safe space' environment for testing between the various participating teams.

The June Projectathon allowed certain teams to perform basic tests relating to their technical implementations. Other teams could consolidate progress made in the April Projectathon ahead of the October 2023 event. The October event will focus more on production-ready Once-Only components.

Monitors validated the peer-to-peer transactions relevant to their areas or expertise[3]. In addition, the Once-Only Support team assisted participants in logging issues and requests, notifying issues related to eDelivery, logging organisational requests and issues, requesting assistance in component level testing and logging questions relating to the Technical Design Documents. Participants could access the Gazelle test bed ([4]), supported by a dedicated team of Commission experts.

In addition, participants learnt about topics related to Once-Only Technical System, such as UX key patterns, Once-Only related systems, the project's operational governance, eIDAS/eID and the Once-Only Common services (chapter 3 "Exploration rooms" provides more details on this topic).

1.3. SCOPE

The June 2023 Projectathon was based on the Once-Only Technical System Technical Design Documents version 2023 Q1 (TDDs), amended with corrections from the errata list. Based on this version, the Organising team prepared a mix of Test cases (TC).

Most test cases in scope of this event were taken over from the April 2023 Projectathon, as these largely reflected the Member States' requirements (as described below). There were five evidence exchange scenarios "without a preview area", five evidence exchange scenarios "with a preview area", and two optional maintenance flow scenarios (Common Service updates). The tests began with static and pre-agreed data. Participants tested basic Once-Only Technical System functionalities.

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[3] Monitors are natural experts who are 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 supported Participants (see chapter 1.4 "Preparation" for more details).

([4]) 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.

A high-level overview and summary of test cases was made available and presented to the testing and deployment sub-group (restricted on the Once-Only collaborative wiki) ([5]). The test cases are visible in the Gazelle platform (restricted to participants).

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

Chapter 2.3 "Testing results" provides detailed information about the tests executed.

Before this event, the Commission asked the participants to perform mandatory pre-Projectathon testing via the Gazelle testing platform. These pre-tests were a pre-requisite for participants to perform peer-to-peer tests during the Projectathon. In addition, participants had to meet the following minimum requirements to participate in the Projectathon:

- Have an eDelivery Access Point ([6]) up and running (mandatory).

([5]) 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.

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

- Use of the Common Services ([7]) (optional but recommended as a priority compared to the Preview Space ([8])).
- Have a Preview Space available (optional, but more recommended than for the April 2023 Projectathon).

The figure below provides an overview of the minimum requirements for participating in the June Projectathon.

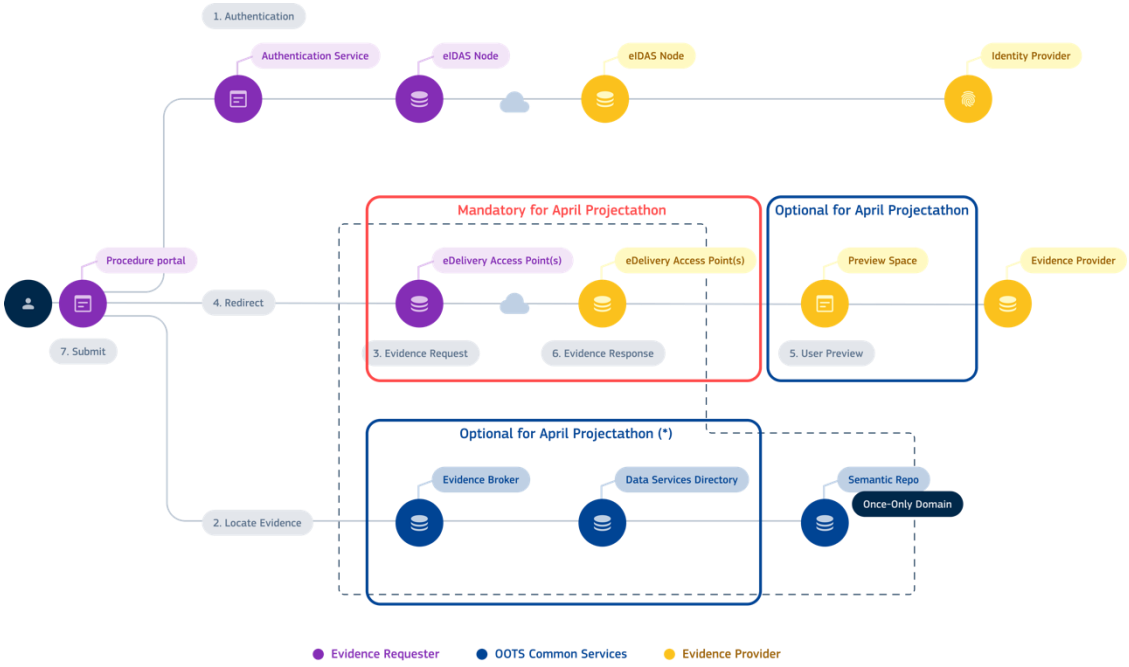


Figure 2: Minimum requirements for participating in the June 2023 Projectathon

1.4. PREPARATION

National coordinators, experts, and integration teams from the Member States have actively contributed to the preparation of this event, supported by different teams from the Commission. This event is a major milestone in the Once-Only Technical System implementation journey, both for the Member States, as implementers, and the Commission in its efforts to help the Member States reach the legal deadline of December 2023.

([7]) 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.

[8]) 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.

Between April and June 2023, Commission experts from DIGIT and DG GROW, the Once-Only Technical System Project Management Office, the Once-Only Technical System Support team, and a Communications team contributed to the preparation this event. This included the following key elements:

- The 24 May 2023 June Projectathon kick-off meeting was an opportunity for participants and observers to learn about preparatory and connectivity tests ahead of the Projectathon, what to expect during the three-day event, and what will come afterwards, such as the publication of test reports and the preparation for the October Projectathon.
- The 2022-2023 Once-Only Technical System Implementers' Café webinar series provided an open forum for discussion between the teams implementing the Once-Only Technical System and other stakeholders.
- The Once-Only Technical System Projectathon Participant Playbook provided detailed information about the Projectathon, including definitions, participating teams, how to undertake testing before and during a Projectathon and useful FAQs.
- The April 2023 Projectathon event report offered key results from the testing that took place from 19-21 April 2023. It also provided a useful overview of lessons learnt and recommendations for the June and October Projectathons.

The graph below provides an overview of the June 2023 Projectathon timeline and the various activities in preparation of this event.

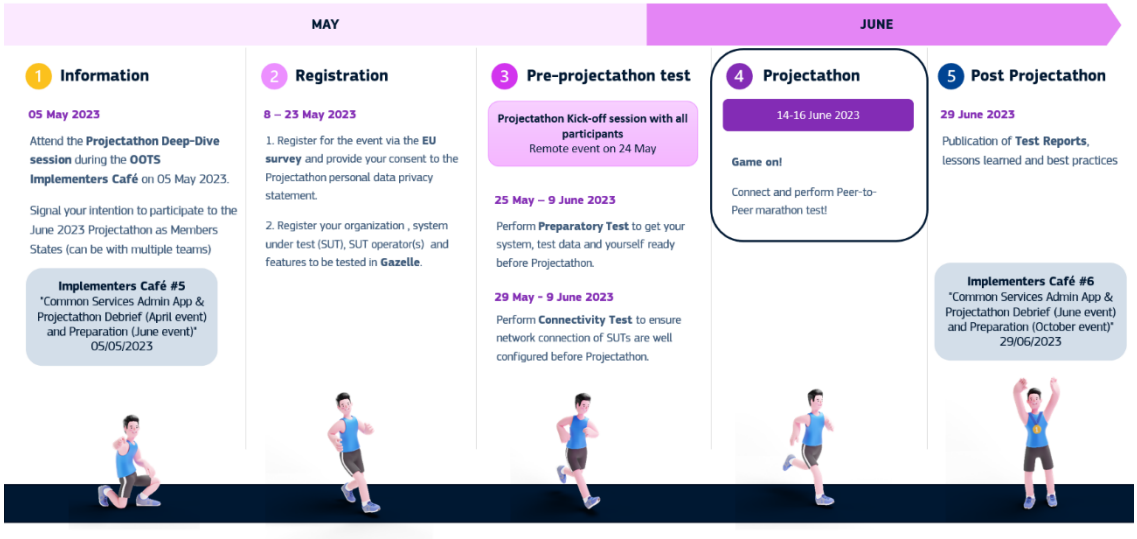


Figure 3: June 2023 Projectathon – timeline

2. PROJECTATHON RESULTS

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

2.1 PARTICIPATING MEMBER STATES

This event brought together 27 Member States for a marathon of peer-to-peer interoperability testing, either as active participants or observers. There were 19 Member States as active participants that tested together in pairs, with a data requester Member State on one side, and a data provider on the other side. In addition, there were 8 Member States joining as observers, who learned what a Projectathon is, how peer-to-peer tests are executed and how to best prepare for the October 2023 Projectathon.

Compared to the April 2023 Projectathon, there were five additional participating Member States present during the June 2023 event (Croatia, Czech Republic, France, Malta, and Spain). Ireland and Latvia, however, changed from participants during the April Projectathon to observers during the June 2023 event.

The table below provides an overview of participants and observers that participated in the June 2023 Projectathon, either on-site or remotely.

Table 1: Participants and observers during the June 2023 Projectathon

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

* Changed status from “observer” in the April 2023 Projectathon to “participant” in the June 2023 Projectathon.

** Changed status from “not participating” in the April 2023 Projectathon to “participant” in the June 2023 Projectathon.

*** Changed status from “participant” in the April 2023 Projectathon to “observer” in the June 2023 Projectathon.

The graph below presents an overview of participants and observers that participated in the June 2023 Projectathon.

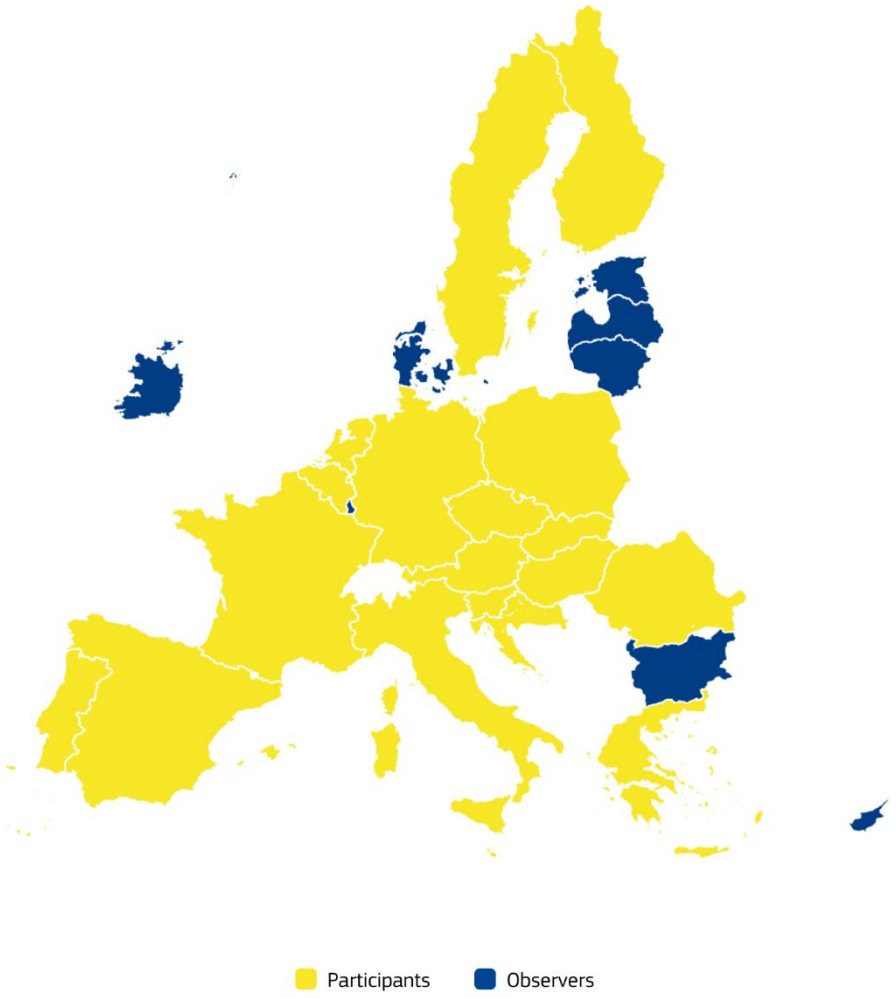


Figure 4: Participants and observers in the June 2023 Projectathon

2.2 TESTING PROCESS

Figure 5: Projectathon testing (June 2023 Projectathon)

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.

Participants started their testing in pairs by connecting their systems to ensure optimal system performance before launching their test cases. They decided bilaterally who they would test with and when. This decision was based, for example, on longstanding cooperation between some Member States. Some participants decided to test until the test was successful, while others chose to test with several Member States at the same time.

The implementers jointly troubleshooted any issues, often in collaboration with other participants who were facing similar problems. Commission experts and Monitors provided technical support. The participants recorded their test results in the Gazelle testbed for verification by the Monitors.

The participants informed the Monitors about tests with a “to be verified” status. The Monitors marked these tests either as “verified” or “failed”. If more evidence was needed, the Monitors marked the test as “partially verified” until a final verification could be done. The respective participant and Monitors then added proofs of success to the test case before concluding the test (e.g., an XML response).

2.3 TESTING RESULTS

The June 2023 Projectathon concluded with a success rate of 86% for tests between participants, compared to a success rate of 92% in April 2023. The slight decrease in the success rate between the two events is largely due to the execution of a broader variety of test cases by the Member States, including more complex ones.

In total, the participants executed 149 peer-to-peer tests, compared to 59 tests in April 2023 (tests shared between two Member States). The major increase in the number of test cases executed between the two events is largely due to a higher number of active participants. In addition, the participants were more experienced in testing and their systems were more mature.

During testing, the participants could execute five dedicated tests "without a preview area", and five tests "with a preview area" (see chapter 1.3 "Scope" for a description of "without a preview area" and "With a without preview area").

Out of the total number of tests, 11 tests were still "running" (7%), where Monitors could not verify them. So-called "running" tests are tests that are initiated but cannot progress to the stage where a full test case validation is possible. Six tests failed (4%), and four tests were "partially verified" (3%); these tests were close to be "verified" but were missing additional proofs from the Member States (such as evidence request or response messages).

The graph below presents an overview of the June 2023 Once-Only Technical System Projectathon test results by category.

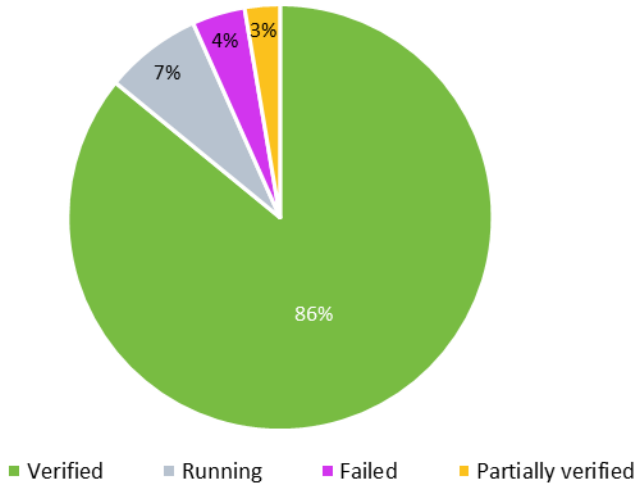


Figure 6: June 2023 Projectathon test results

Most tests focused on test cases "without preview area" (test cases TC01 to TC05). This is partly because participants who did not attend the April 203 Projectathon started their test executions with the initial set of test cases. In addition, not all Member States are at the stage where they have a preview area available for testing.

In the June 2023 event, participants executed twice as many tests “without a preview area” compared to the April 2023 event (122 tests and 58 tests, respectively). In June 2023, 82% of the tests executed focused on test cases “without preview area”, compared to 98% in April 2023. This slight increase is largely due to a higher number of participants and the fact that they were more prepared and ready for testing than they were in April.

The table below presents an overview of the test cases “without a preview area”.

Table 2: Test cases "without a preview area” (June 2023 Projectathon)

TC01: Basic evidence request without preview. This test case was executed for 36% of the tests between the participants.
TC02: Basic evidence request without evidence match, executed in 21% 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 9% of the tests.
TC05: Evidence request, with an additional DSD conversation, without preview, executed in 3% of the tests.

The participates performed 27 tests “with a preview area” in June 2023, compared to only one test “with preview” in April 2023. There was an increase of 16% of tests executed “with preview” between the April and June 2023 event (2% and 18%, respectively). This means that the Member State’s respective implementations were more mature than in April 2023, since more Member States had a preview area available.

The table below presents an overview of tests “with a preview area”.

Table 3: Test cases "with a preview area" (June 2023 Projectathon)

TC06: Basic evidence request with preview and reauthentication. This test case was executed in 11% of the tests between the participants.
TC07: Evidence request with preview and reauthentication at two different Evidence Providers, executed in 1% of the tests.
TC08: Evidence request with preview rejection by user and reauthentication, executed in 4% of the tests.
TC09: Evidence request with preview error (closure or timeout) and reauthentication, executed in 3% of the tests.

The figure below presents an overview of all test cases performed during the June 2023 Projectathon.

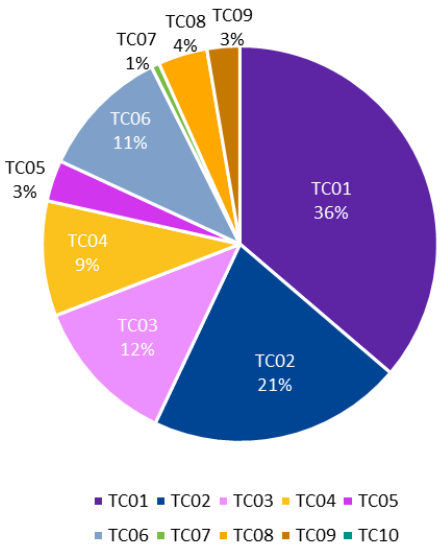


Figure 7: Test cases "with preview" and "without preview" (June 2023 Projectathon)

The figure below presents and overview of test cases "without a preview area" (82% of all tests).

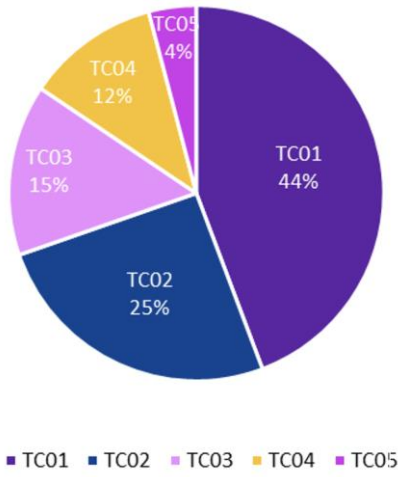


Figure 8: Tests cases "without a preview area" (June 2023 Projectathon)

The figure below presents an overview of test cases "with a preview area" (18% of all tests).

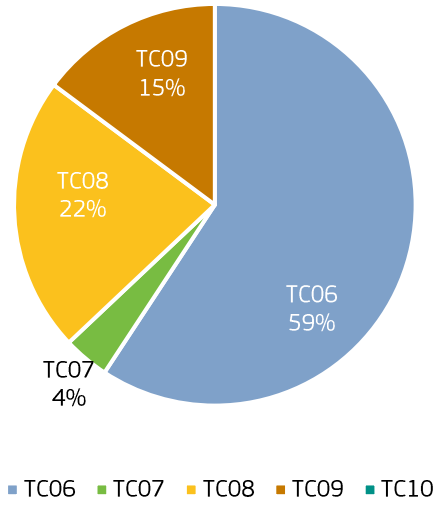


Figure 9: Tests cases "with a preview area" (June 2023 Projectathon)

The participants executed all the test cases at least once (except TC10), including tests "with a preview area". TC10 could not be executed as there was no participant that supported the functionality of performing a human readable transformation inside the preview area.

On the first day of the Projectathon, the participants primarily tested test case TC01, totalling 82% of the tests executed on the first day, compared to 88% in April. They also logged their tests quicker in the Gazelle platform on the first day, with 54% tests logged in June and 29% tests logged in April.

On the second day, participants continued testing mainly "without a preview area" (TC01 to TC05), while several teams covered additional tests "with a preview area" (TC06 and TC08).

On the third day, participants performed some additional tests correcting bugs and providing additional evidence to validate successful tests.

1. The following two tests "with a preview area" were executed during the June 2023event and not at all in the April event: TC07 was executed successfully on the third day
2. TC08 was executed successfully five times over six tests that were performed during the three -days testing.

In addition, participants executed TC09 successfully four times on the third day. There was a larger variety of test cases "with a preview area" and "without a preview area" during the second and third day of the June event.

The figure below provides an overview of the test cases status ("without a preview area") grouped both per test case, and per day, clearly showing the progress of the tests during the three days of the June 2023 Projectathon, as well as the very good progress compared to the April 2023 Projectathon (shown in darker green and grey colours).

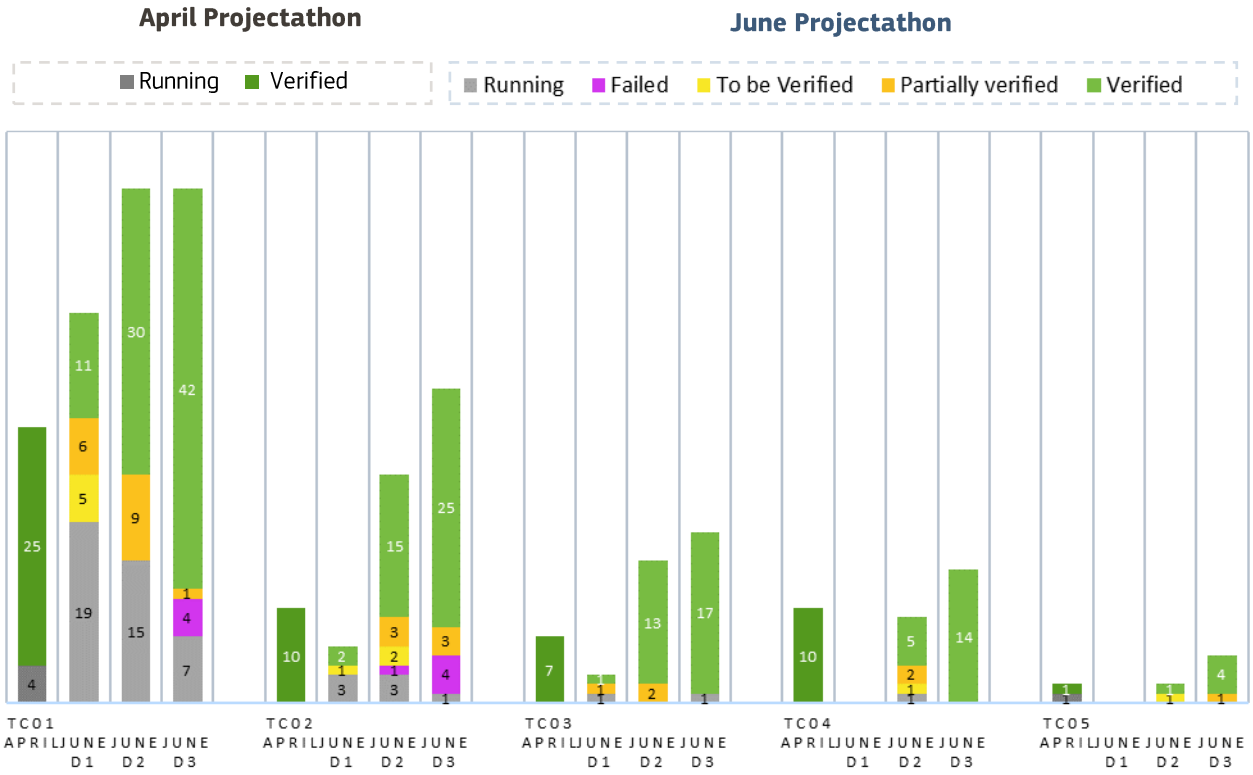


Figure 9: Test cases status "without a preview area" - days 1, 2 and 3 of the June Projectathon compared to April Projectathon results

The graph below presents and overview of tests “with a preview area”. It clearly shows good progress between the April and June 2023 Projectathons.

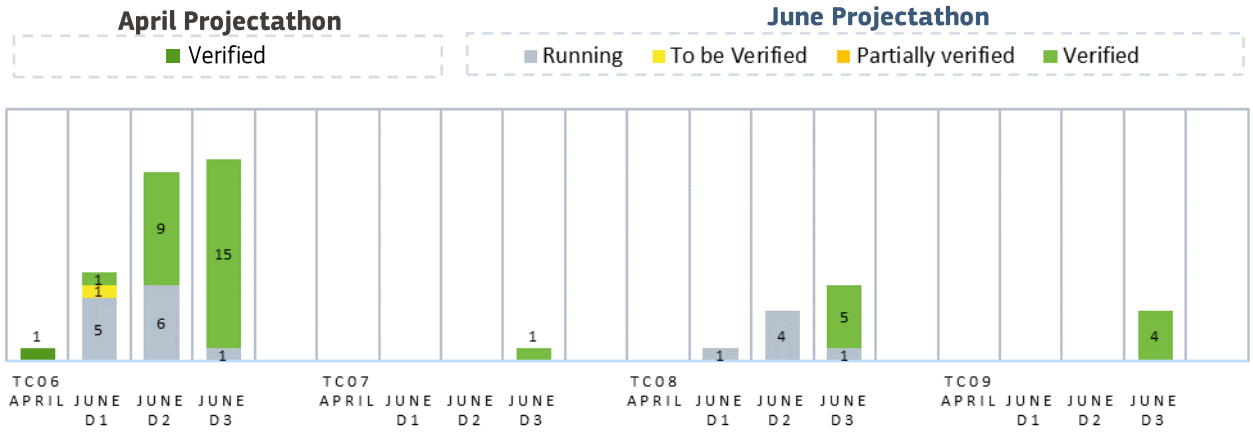
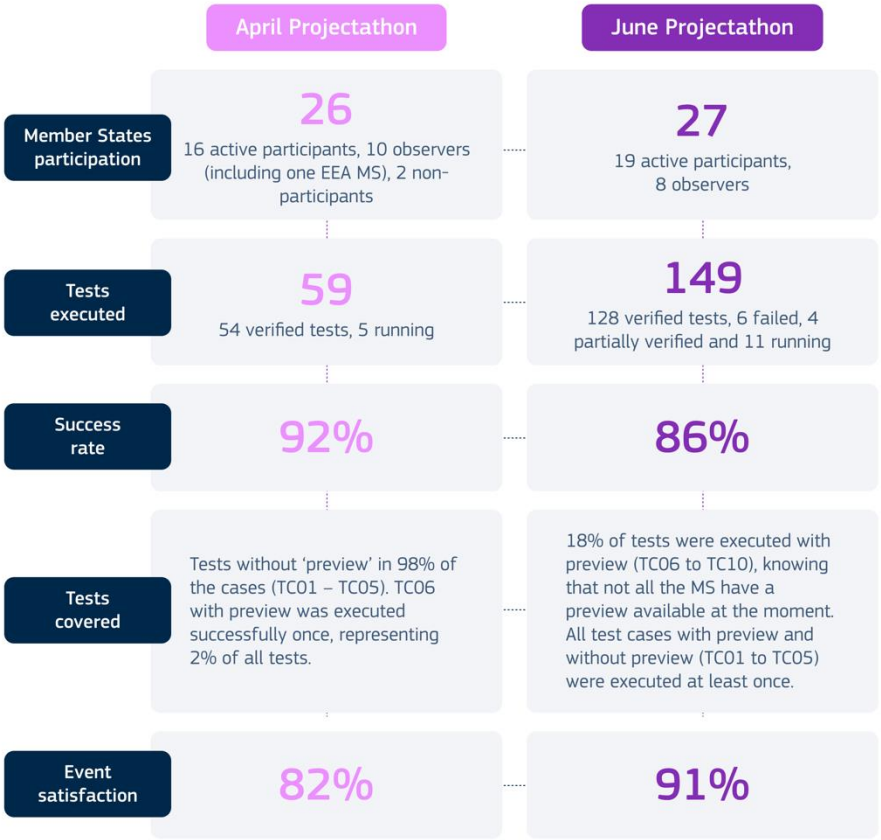


Figure 10: Test cases status "with a preview are” – days 1, 2 and 3 of the June Projectathon event compared to April 2023 event results

The graph below compares key results between the April and June 2023 Projectathons.



3. EXPLORATION ROOMS

In parallel to interoperability testing, this event offered "exploration rooms" for event participants to learn about topics relevant for the Once-Only Technical System. This chapter summarises key results from these exploratory sessions. According to the June Projectathon satisfaction survey results, the participants found the exploratory sessions very valuable to discuss specific topics with relevant experts and other teams.

3.1 UX KEY PATTERNS

The "UX Key Patterns" session provided in-depth information on the user-centricity of the Once-Only Technical System, a vital aspect for a system that will bring together authorities, systems and users from across the EU.

During this session, the participants built a map of the different Once-Only user flows between the various websites and portals involved in the system, reviewed Member State prototypes and discussed potential UX issues.

The Once-Only Technical System UX Lab will continue meeting bi-weekly to process the ideas identified during the Projectathon; it will progressively add new recommendations to the list of Once-Only Technical System UX recommendations.

3.2 LIFE-CYCLE MANAGEMENT (LCM) UPDATES TO THE COMMON SERVICES

The "LCM updates to the Common Services" session provided practical insights on how the Member States will use the lifecycle management interface to update the national data of the Evidence Broker and the Digital Service Directory. The participants took part in a guided hands-on session to better understand the functional aspects of the LCM interface. They could experiment further in a dedicated sandbox environment.

In the coming weeks, the organising team will collect feedback from this session to prepare for the October 2023 Projectathon session on LCM updates to the common services.

3.3 ID EXPLORATION AND INTEGRATION

The "eID exploration and integration" session provided insightful information about the reuse of the eIDAS eID by the Once-Only Technical System. eID allows European citizens to use their national eIDs when accessing online services from other European countries.

Domain experts explained the use of and support for the eIDAS nodes in the Once-Only Technical System. In addition, Commission experts provided insights on how data obtained from an eIDAS-node is used in the Once-Only Technical System to provide access to electronic procedures and to find evidences for a user.

3.4 ONCE-ONLY TECHNICAL SYSTEM AND RELATED SYSTEMS

The "Once-Only Technical System and related systems" session explored how the Once-Only Technical System will exploit synergies with existing European systems exchanging evidence or information (among authorities relevant for the procedures referred to in the Single Digital Gateway regulation).

Commission experts presented the work done with the EUCARIS system and how the use of a "bridge" component facilitates the implementation and use of the Once-Only Technical System for vehicle-related evidence exchange. They also highlighted similar work currently being undertaken by the EMREX community in the education domain.

3.5 OPERATIONAL GOVERNANCE

The "Operational Governance" exploration session was divided into three presentations: 1) SDG OOTS operational governance breakout session (by NL), 2) Harmonisation of SLAs when it comes to the National domain (by DE) and 3) Presentation on the Intermediary Platforms in Finland (FI). Each presentation was followed by a discussion and exchange of views between the developers and Operational Governance sub-group experts.

Most attendees agreed that the discussions on SLAs harmonisation (service availability, service maintenance notification, issue resolution) and SLAs for Intermediary Platforms should be kept to a

minimum. The standardised reporting templates should be one of the priority topics of the Operational Governance sub-group. As a result, it was decided to continue the discussion on the National domain priorities during the upcoming meeting of the sub-group in late June.

4. NETWORKING

The June 2023 Projectathon built further on the work undertaken in April to develop and foster a real community that works together to build the Once-Only Technical System. Event participants were able to discuss their implementations in a relaxed setting during an informal dinner. Some teams printed matching sweaters, contributing to building a genuine community of technical implementers.

"Amazing event, amazing place". (Projectathon satisfaction survey, June 2023)

Figure 11: Team Belgium - June 2023 Projectathon

5. COMMUNICATION

"Thank you for organising such a wonderful event! We were very happy to participate again and learned a lot. Heading home with lots of homework...". (Finland, LinkedIn).

"Paving the road for the European Interoperability! Another successful projectathon of the technical system for the cross-border data exchange. The Once Only Technical System (OOTS) will connect public authorities across the EU, so they can exchange official documents and data at the citizen's request. Great team Portugal!!!". (Portugal, LinkedIn).

The Commission promoted this event on social media. In addition, national teams shared their thoughts and ideas on how the event had unfolded online. The Once-Only Hub provided reliable information, services, and support for the Projectathon (articles, for example, explored specific aspects of the Projectathon series).

In addition, interviews with Member States' experts offered readers a unique opportunity 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.

6. LESSONS LEARNT

Based on the 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 participants to test with each other in "real" exchanges and not only in isolation via Commission test services.

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

Figure 12: Participants' motivation to participate in the Projectathon (Projectathon satisfaction survey, June 2023)

(9) Based on the June 2023 Projectathon satisfaction survey, carried out by the European Commission in June 2023.

The figure below presents participants' satisfaction with the organisation of this event. Overall, the participants were satisfied with the registration process and the pre-Projectathon preparation.

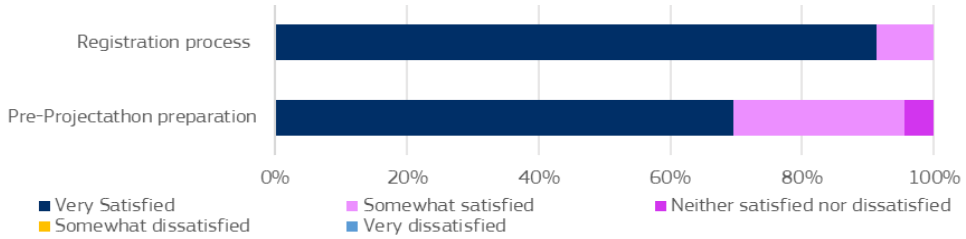


Figure 13: Satisfaction survey - registration process and preparation (Projectathon satisfaction survey, June 2023)

The figure below presents participants' overall satisfaction with the June 2023 Projectathon.

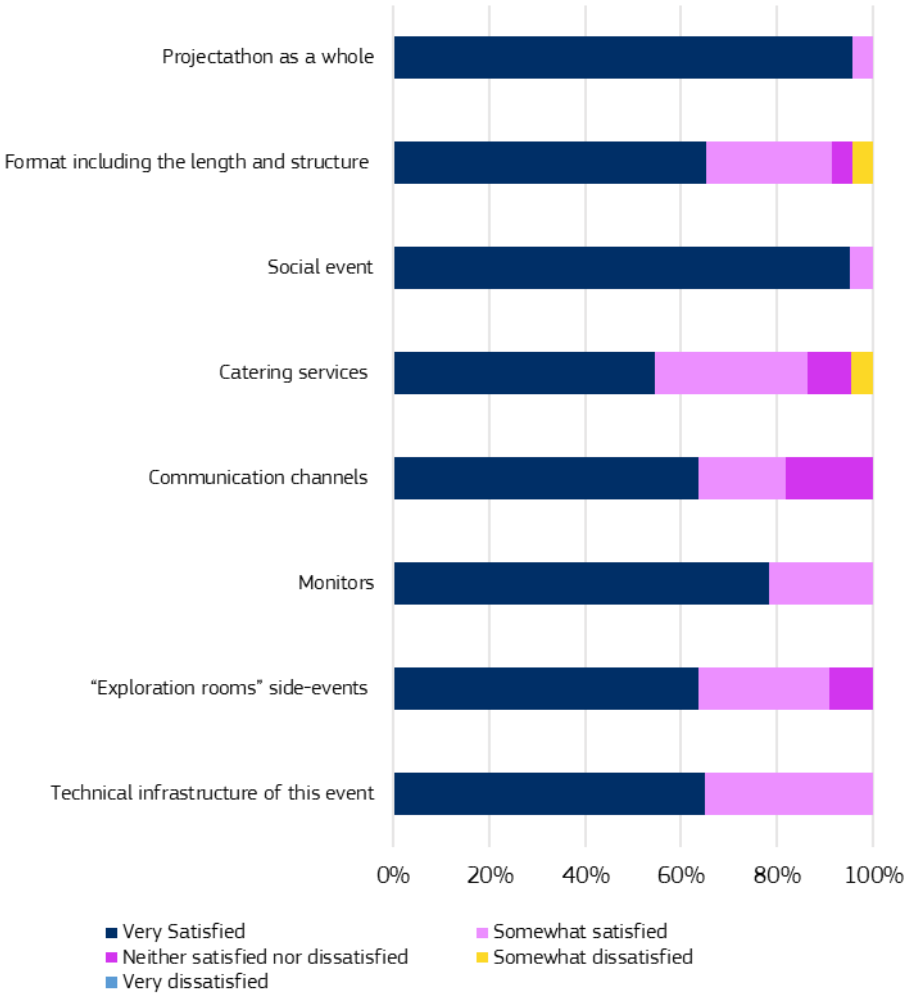


Figure 14: Satisfaction survey - overall satisfaction (Projectathon satisfaction survey, June 2023)

The table below summarises general lessons-learned from this event.

Table 1 4: General - lessons learnt

General lessons learnt include:
The June 2023 Projectathon has demonstrated its value in boosting the development progress across all participants. All teams made great advancements, both daily during the preparation stages and during the actual event. Furthermore, all teams can continue to make improvements and fixes after the Projectathon with the knowledge gained during the event.
The positive results of the Projectathon go beyond the technical side, as the participants report that this event is a great experience, gives great energy, builds better communication paths during the event and serves as a basis for post-event communication and follow-up with and between the Member States' teams.
At the same time as applauding the great advancements, the Projectathon also showed that there is still a long way to go before all teams are production ready. Although the number of preview space related test cases increased since the April 2023 Projectathon, even more tests are needed during the October 2023 event. Furthermore, the integration of actual base registers and eID nodes for more dynamic data testing deserves more attention and test efforts.
Some teams signaled that not all implementations have uniformly progressed. Some have been facing certain regressions between the April and June 2023 Projectathons. The reason could be further developments or refactoring that have some unintentional impacts. This acknowledges the fact that retesting regularly is a good practice and that sometimes evolution is an incremental process.
Some participants suggested extending the duration of the Projectathon on-site period from three days to four days (or even five). However, others indicated that a three-day event is most efficient, considering resources and budgets available for getting teams to travel and work from Brussels. There are some alternatives to consider such as an extra optional on-site preparation day, the day before the event, or one or more off-site/virtual preparation days before the event. If national teams feel that this is relevant, they are invited to express their preference to the organising team.
Although the June 2023 Projectathon followed the April event closely , realistic planning around public holidays meant there was no alternative.
On-site presence offers more benefits than remote participation. Member States who had at least one person on-site could more easily reach out to Monitors and the Support team, could get assistance from other Member State teams on-site and were more efficient in finding test partners.
Member States that cannot bring a full team on-site can alternatively choose for a hybrid team with on-site representation. Participating teams that experienced this hybrid mode of working, with a representative on-site and a team remotely that can execute tests and bug-fixing indicated that this set-up could be efficient as well.
The concept of remote observers or remote managers doesn't work well (as opposed to remote technical support or remote bug-fix teams where it works well) as remote observers shared that they felt a great distance from the rest of the team that was based on-site.
The "exploration rooms" are very useful as they facilitate exploring relevant OOTS-related topics into detail, providing useful insights and practical advice or exploring different options to a solution.
Exploration rooms are smaller than the main room and vary in size , so the organising team should find a way to match the number of attendees per session to the exploration room size.
A social element in the form of an informal dinner provided an opportunity for attendees to connect and discuss even more efficient ways of testing and collaborating in the future.
The support team primarily received general questions from first-time participants and more complex inquiries from more experienced participants.

General lessons learnt include:
The Projectathon playbook and its annexes were a comprehensive guide for participants to prepare their teams for the Projectathon, including guidelines on how to register their systems under test in Gazelle and how to perform testing using Gazelle.
The April 2023 and June 2023 Projectathons were vital opportunities for all parties to make mistakes, learn, help each other, and assess their current state of play regarding their Once-Only Technical System developments. For the October 2023 Projectathon, the focus will shift more towards assessing production readiness. Therefore, the testing and deployment sub-group will facilitate discussions and ask Member State teams input to determine whether: • Test cases need to be added • Existing test cases need to be updated or assessed in a stricter way • Requirements about the automation level of systems need to be set
There were also some notable findings from the Once-Only Technical System 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 learnt and areas for improvements, which the TDD sub-group has started to address immediately after the event in the TDD meeting M16 on 23/06/23. The slides and notes covering all details are available on the meeting page (restricted to relevant users). This includes requirements from all evidence providing or requesting parties in the case of country-specific Common Service instances; guidance on the relevant details to include in log files; a discussion on the return URL of the preview space; information about eDelivery message details and refinement of exceptional case handling. In addition, there were some key take-aways from connectivity testing, summarised in the table below.

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In addition, there were some key take-aways from connectivity testing, summarised in the table below.

Table 25: Connectivity - lessons-learned

Connectivity related lessons learnt include:
Those Member States that updated their configuration or connectivity details last-minute struggled in finding suitable test partners. The support team provided sample AS4 PMode files and truststores and could regenerate them quickly, but still, test partners had to update their configuration to be able to test with these Member States. Therefore, it is crucial to highlight the importance to finalise the system under test configuration on Gazelle before the connectivity testing period starts and to properly perform the connectivity tests before the Projectathon to reduce the chance of losing testing time due to connectivity issues during the event.

Connectivity related lessons learnt include:
Security settings inside Member State organisations are sometimes blocking the testing and they are difficult to solve in a short time as it requires some (heavy) organisational procedures to be followed (e.g., the return URL topic).
In preparation of the June Projectathon, the Once-Only Technical System support team facilitated distribution of eDelivery AS4 P-Mode files and trust stores for the sample AS4 implementation (Domibus). This is also useful for Harmony users as the configurations are similar or at least close. Therefore, this distribution benefited most participants.

The table below presents lessons learned related to testing.

Table 36: Testing: lessons learnt

Testing related lessons learnt
While the focus of test executions was mostly on the positive flows, error flows and error handling need to be explored as well. As it is not the main purpose of a Projectathon to exhaustively test all error variations, some flows should be tested in the regular day-to-day testing by Member State teams. Alternatively, the TDDs or UX guidance could provide some elaboration, descriptions and best practices of alternative or exceptional cases.
Integrating business rules validations earlier in the development and testing process will require some effort and reveal some issues but will provide more benefits in the long term.
Observers during the April event who became active participants during the June event started a bit slower but got quickly up to speed with executing the test cases.
Participants were testing more efficiently during the June event compared to the April event as they were familiar with the testing process in general and test case details specifically.
Compared to the April event, participants covered more test cases in general during the June Projectathon. However, not all teams covered them to the same extent. Some teams preferred to focus on executing fewer test cases against more test partners while others focused on covering more test cases.
Stable specifications are key for good preparation and test execution. In addition to the specifications themselves, the samples, test data and tooling that are shared prior to the Projectathon work well during the preparation and execution stages. As an improvement for the upcoming Projectathon, Member States could take these sample test data sets to further customise them and share them with other testing partners in preparation of the event.
The DSD conversation mechanism is a feature not on the radar of most teams. It does not only require support from Evidence Provider Member States that need this feature in case the Member State has different Access Points from which to select the right one based on additional input. It also requires support from all Evidence Requester Member States that need to interact with a Member State in this situation.
The integration of XML and its human readable transformation in the preview space is a feature not yet implemented or tested during a Projectathon.
To support Member State teams in discovering the optimal test partners and in reaching out to them, the organising team is exploring the provision of an overview matrix of participating countries, capabilities, technical contact persons, specific test data sets, etc. For example, if this matrix were available in a Teams space, Member States could update the information in the preparatory stage and use the information during the actual Projectathon.

Testing related lessons learnt
It could be an option to randomly impose test partners or to let the organising team set a fixed testing schedule in advance of the event. However, the preference for the moment stays in keeping the executing of test cases and selection of test partners rather flexible. Nonetheless, the organising team is exploring the option to evaluate the testing progress per Member State in the afternoon of each day, draw some conclusions and then provide advice to steer them for the next day of testing. This could include advice on the preferred test partners, the capabilities to focus on, the test cases to execute, etc.
During the execution of tests between test partners, Member State teams go further than just the technical side as they are really helping each other by sharing experiences or implementation and configuration tips. This results in a great collaborative experience.
Even if test cases were already improved between the April and June Projectathon, the Monitor and support team will do a new review of the test cases to take into account new feedback received on aspects such as evidences or log guidance, requirement details and step descriptions.Even if test cases were already improved between the April and June Projectathon, the Monitors and support team will do a new review of the test cases to take into account new feedback received on aspects such as evidences or log guidance, requirement details and step descriptions.
Across the Member States there was a good progress on the implementation level of automated or semi-automated systems, with less manual or tooling steps. For the October Projectathon the aim is to be fully automated during the Projectathon itself and only use the manual or tooling steps to get up to speed before the event or during the setup stage.

7. RECOMMENDATIONS

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

Table 47: 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.
Provide feedback or recommendations to improve future Projectathons on all aspects such as test cases, test data, test components to cover or any relevant improvement to the preparation or execution of the Projectathon.
Even if you think you are not completely ready, join as an active participant and be prepared to increase your capabilities during the event.
Keep on improving and retesting your systems and if you have a temporary setback, remember that not all evolutions go up in a straight line.
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.

Recommendations for the next Projectathon(s) include:
Before the Projectathon, prepare a planning across your team and a target division of work, related to both test case execution and exploration room participation to fully benefit from all the opportunities that a Projectathon event offers.
Register to the MS Teams collaborative space to receive information (messages and files) from the organising team and to exchange information with other participants.
Respect the timelines: • Register all your team members in time • Register your SUT in time, including the test and connection details
Perform as many preparatory tests as possible.
Perform the connectivity test to not lose valuable testing time during the event (and keep you 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 one additional Once-Only Technical System Projectathon in 2023. The third and last OOTS Projectathon takes place on 18-20 October, just two months before the legal deadline 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:

- have all Member State teams as “active participants” with an on-site team or onsite representation. have all Member State teams as “active participants” with an on-site team or onsite representation.
- allow participants to build and advance on the testing they have thus far undertaken, including updating the common services and completing outstanding testing rounds.
- shift the focus more on assessing production readiness.
- allow for testing to include actual base registers and eID nodes for more dynamic data testing and to involve other related systems.

Progress in these areas means development can 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 October Once-Only Technical System Projectathon.

Figure 15: October Projectathon - timeline (tentative)

The June Projectathon has, on balance, greatly advanced the position of the Member States as regards their respective Once-Only implementations. Looking to the future, the results from this event should demonstrably help the Member States prepare for the October event, itself a critical point in Europe's Once-Only journey.