D2.3: Validated Toolbox

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Executive Summary

The FRISCO project received funding from the European Commission – Internal Security Fund under Grant agreement No 101080100 – and will be implemented by 8 partners from 6 different European countries between 2022 and 2024. FRISCO aims to support Hosting Service Providers (HSPs) to comply with the TCO Regulation. The Regulation (EU) 2021/784, addressing the dissemination of terrorist content online (TCO Regulation), entered into force in this context on the 7th of June 2021 and is applicable as of the 7th of June 2022. It sets out several specific measures that HSPs must implement to address the misuse of their services.

Under Work Package 2 (WP2) a comprehensive set of tools were developed to assist small and medium Hosting Service Providers (HSPs) in complying with the Terrorist Content Online (TCO) Regulation (EU) 2021/784. This deliverable, D2.3, outlines the validation of these tools through extensive testing and refinement processes.

The three key tools developed and refined are the following:

Self-Assessment Questionnaire: This tool helps HSPs evaluate their compliance with the TCO Regulation by providing a detailed compliance score. It comprises 34 questions that cover all regulatory obligations, enabling users to identify compliance gaps and receive a summary report of their status.

In this tool modifications made in areas of content clarification (e.g. adding infoboxes and more detailed explanations), logical flow and content structure (e.g. introducing options like "none of the above', question flow changes and introductory questions to determine TCO applicability), and technical changes (e.g. enhanced .csv report, improved navigation).

Process Map: This tool offers a structured and comprehensive overview of the compliance journey. By using interactive and animated transitions, it guides HSPs through the TCO Regulation's requirements in a chronological manner, allowing for the creation of customized workflows. Updates on this tool focused on content clarity. Examples of transparency reports with expired links were updated, and specific guidance was provided to clarify actions. Resources were added to help users understand TCO regulations and contact competent authorities.

Content Moderation Tool: Designed to assist in the practical aspects of content moderation, this tool supports HSPs in identifying and removing terrorist content effectively.

Enhancements of this tool included more flexible policy configurations, additional functionalities for user configuration, and minor user interface adjustments.

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List of Terms & Abbreviations

Acronym	Definition/Meaning
EU	European Union
HSPs	Hosting Service Providers
TCO	Terrorist Content Online
FRISCO project	Fighting Terrorist Content Online project
WPs	Work Packages
API	Application Programming Interfaces
URL	Uniform Resource Locator
LEA	Law Enforcement Agency
PoC	Point of Contact
RO	Removal Order

1   Introduction

Terrorist and other illegal content online is an increasing issue both from a security and public policy perspective. As a response, the Terrorist Content Online ("TCO") Regulation (EU) 2021/784 is addressing violent extremism and the dissemination of such content, setting out specific measures that Hosting Service Providers ("HSPs") exposed to TCO must implement. Online platforms will be obliged to remove terrorist content from their platform within one hour upon receiving a removal order from the competent authority. It sets out several specific measures that HSPs must implement to address the misuse of their services.

The EU-funded FRISCO project (Fighting Terrorist Content Online) aims to raise awareness and encourage exchange of experience among Hosting Service Providers (HSPs) to support their compliance. The project has received funding from the European Commission – Internal Security Fund under Grant agreement No 101080100 and will be realised between November 2022 and November 2024. The consortium realising the project is composed of 8 beneficiaries from 6 different European countries, involving NCSR-D (Greece), the French Ministry of Interior (France), Tremau (France), Civipol (France), Violence Prevention Network (Germany), IVSZ (Hungary), D-Learn (Italy) and INACH (Netherlands).

FRISCO seeks to raise awareness among HSPs regarding their obligations under the TCO Regulation and provide them with tools and frameworks for compliance. The project's objectives include informing HSPs about the regulation, developing tools to aid in its implementation, and sharing best practices and experiences. By effectively addressing terrorist content online, HSPs will contribute to a safer online environment and ensure compliance with the TCO Regulation. Through its various activities, the project strives to equip HSPs with the knowledge, tools, and resources necessary to navigate the challenges posed by terrorist content online.

1.1   Purpose and Scope

The FRISCO project aims to validate the effectiveness and reliability of the developed tools in supporting HSPs' compliance efforts with the TCO Regulation. Thus, the testing of tools and solutions developed in Task 2.3 "Testing and validation of developed tools and solutions" is conducted with small and micro HSPs, trusted flaggers, and law enforcement agencies. By involving HSPs in the testing process, the project ensures that the tools meet practical needs and can effectively address challenges faced by the target audience. Feedback from HSPs is used to identify obstacles and areas for improvement, enabling iterative refinement of the tools to better serve the needs of HSPs. The insights gained from testing will inform refinements and improvements to the tools, ultimately enhancing their value in combating the dissemination of terrorist content online.

1.2   Approach for Work Package and Relation to other Work Packages and Deliverables

The project is structured into five work packages (WPs). WP1 focuses on management and coordination, ensuring alignment with project objectives and effective communication among participants. WP2 involves mapping the needs of small HSPs and developing tools to support their compliance with the TCO Regulation. WP3 focuses on creating training materials to enhance HSPs' understanding of terrorist content and their ability to identify and remove it. WP4 aims to increase

awareness among HSPs and provide them with hands-on support, including best practices and networking opportunities. Finally, WP5 is dedicated to disseminating project results and fostering communication among stakeholders.

Work Package 2 (WP2) in the FRISCO project focuses on the development of tools and mechanisms to support small HSPs in implementing the Terrorist Content Online (TCO) Regulation. Its approach involves several key steps:

Within WP2, Task 2.1 "Mapping of needs and barriers for compliance" aims to provide a clear understanding of the needs of small and micro HSPs regarding the TCO Regulation. The results of this task were compiled into a mapping report, serving as the foundation for subsequent activities across WP2, WP3, and WP4.

In Task 2.2 "Development of tool/ framework/ mechanism", building upon the findings of Task 2.1, technical tools, frameworks, and mechanisms were developed to address the barriers faced by small and micro HSPs in complying with the TCO Regulation. These resources aim to provide practical support in complying with the TCO Regulation.

Task 2.3 "Testing and validation of developed tools and solutions" involves testing the developed tools and mechanisms to ensure their functionality and usability. This iterative process ensures that the resources meet the specific needs of small and micro HSPs. This testing phase is crucial to refining the resources and ensuring they meet the needs of small HSPs.

WP2's activities are closely aligned with the objectives of other work packages (WPs) in the FRISCO project, ensuring synergy and comprehensive support for small and micro HSPs. The tools and frameworks developed in WP2 complement the training materials created in WP3. Together, they provide a holistic approach to educating small and micro HSPs on identifying and removing terrorist content online. Furthermore, the resources developed in WP2 contribute to enhancing the capabilities of small and micro HSPs as part of WP4's efforts to share best practices and raise awareness about the TCO Regulation. WP2's tools and frameworks are disseminated through various channels as part of WP5's efforts to ensure widespread awareness and utilisation of FRISCO's resources.

Through its coordinated approach across multiple work packages and the provision of various resources, FRISCO offers comprehensive assistance to small and micro HSPs, empowering them to navigate the challenges of terrorist content online and comply with regulatory requirements.

1.3 Methodology and Structure of the Deliverable

The deliverable encompasses a comprehensive approach to presenting the tools developed within the FRISCO project, along with their testing and validation and the iterations made based on the feedback from HSPs as a result of the testing phase.

Building upon the foundation laid by the FRISCO D2.2 "Toolbox report", which comprehensively detailed the toolkit, this deliverable takes a deeper dive into the testing phase of these tools. Following a brief introduction to each tool, the focus shifts to the presentation of the methodology employed for testing, including feedback mechanisms utilised. Subsequently, the results of the

testing phase are presented, highlighting the iterations made based on the feedback received. Finally, the deliverable presents the validated toolbox, reflecting the refinement and enhancement achieved through the iterative testing process.

2   Description of the tools

The FRISCO Toolbox comprises three tools designed to support Hosting Service Providers (HSPs) in their compliance: Self-Assessment Questionnaire, Process Map, and Content Moderation Tool. Each of these tools plays a crucial role in assisting HSPs in navigating the complexities of regulatory compliance and combating the dissemination of terrorist content online. This chapter builds upon FRISCO D2.2 "Toolbox report".

2.1   Self-Assessment Questionnaire

The first tool, a Self-Assessment Questionnaire, aims at helping small and micro HSPs understand their compliance with the TCO. This questionnaire is meant as a first step for HSPs to understand how their current internal processes for content moderation regarding terrorist content align with the TCO Regulation. The objective of this tool is to provide HSPs with a compliance score, which helps them situate themselves in the path to full TCO compliance.
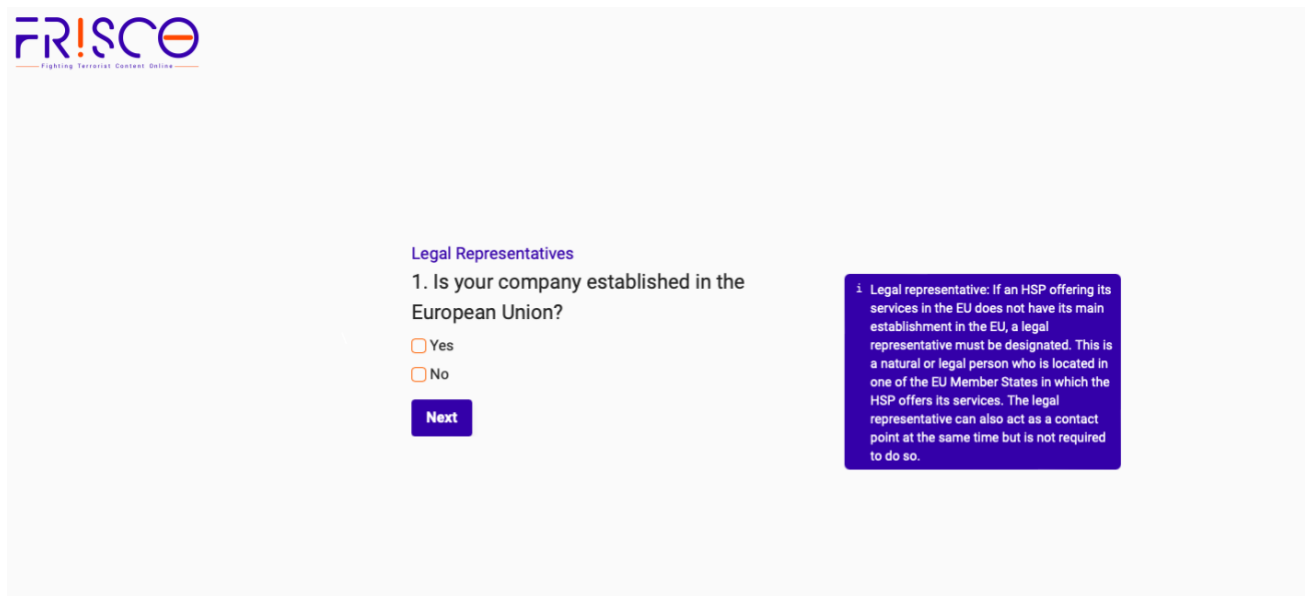

Figure 1 Tool 1: Self-Assessment Questionnaire

The questionnaire comprises 34 questions related to the TCO Regulation, organised into sections that systematically address all obligations outlined within this framework. The online tool follows the questionnaire structure with each question on a corresponding screen. Users answer questions sequentially. For questions where additional information is provided, an information symbol appears on the side; the users are presented with the additional information when hovering the information symbol. After completion, users receive their compliance score, enabling them to readily pinpoint any gaps or requirements concerning TCO Regulation and can download a detailed response file. They also have the option to receive the report via email by providing their email address.

The questionnaire is structured into the following key sections:

- **Introduction:** This section provides a brief overview of the questionnaire's context and scope, setting the stage for users.
- **Applicability:** These questions assess whether the TCO Regulation applies to the user. If any answer is negative, the process concludes, informing the user that they are not subject to the regulation.
- **Main Body:** The core of the questionnaire, it contains two parts: Requirements and Additional Requirements. Each part is further divided into specific categories, containing relevant questions aimed at evaluating compliance with the TCO Regulation.
- **Conclusion (optional):** Optionally, the system may display a concluding message, signalling the end of the process. It may also provide a link to download a summary of the questionnaire, including the user's compliance score, if available.

The online Self-Assessment Questionnaire is managed through the tool's administration panel, accessed via a username and password provided by FRISCO partners. The administration panel consists of four sections:

- **Questionnaire Overview:** administrators can define general characteristics of the questionnaire (title, introductory informative text snippet, outro).
- **Form Questions:** administrators can define question categories and individual questions, and already defined questions can be edited.
- **Dashboard:** it offers an overview of collected questionnaires, displaying usage statistics and answer distributions
- **Form Results:** administrators can access and download individual questionnaire responses, filtering by date or status.

2.2 Process Map

The second tool is an interactive process map that structures and describes the entire compliance process with the TCO Regulation and related duties for HSPs in a holistic way. The objective of this tool is to provide HSPs with a detailed and structured overview of the compliance journey, starting from encountering terrorist content to fulfilling obligations such as producing transparency reports.

This tool, focused on HSPs' operational needs, provides a precise breakdown of the TCO Regulation, step by step, and is based on a chronological approach to compliance. The process is displayed gradually, thanks to interactive and/or animated transitions, and the whole map can be downloaded entirely in the end. Users can create their customised workflow by responding to straightforward questions through a simple interface.
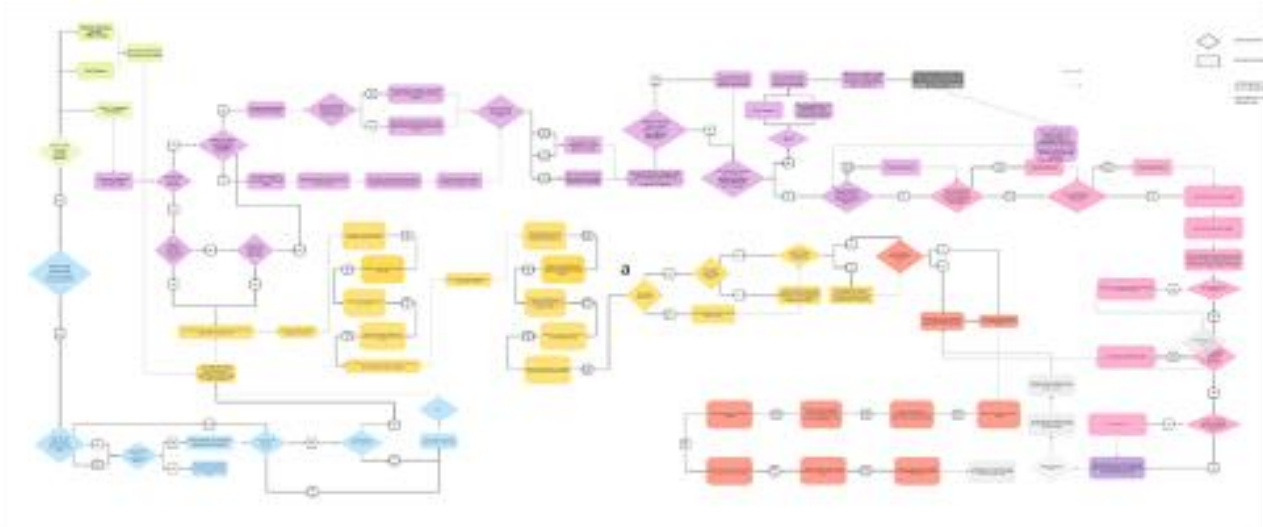
Figure 2 Tool 2: Process Map

The process map incorporates various element types, each serving a specific purpose and guiding users through the compliance process based on their responses. These elements include binary (yes/no) questions, multiple-choice questions, check nodes for confirming completed actions, action nodes providing instructions and checklists, and collections of check nodes forming checklists. These elements were translated into an interactive web application, maintaining the structure of the static map while adapting it to user input and interactions.

2.3 Content Moderation Tool

FRISCO's content moderation tool is a user-friendly trust and safety tool that addresses user-generated content related risks. The tool is based on Tremau's in-house solutions and tailored to hosting service providers' needs in relation to the new regulations such as the TCO, thanks to the project's findings and resources. This tool is crafted to cater to the specific needs of HSPs, with the primary goal of optimising and streamlining content moderation workflows and processes. It is provided to users via a SaaS contract. This tool provides a content moderation platform in which incoming flags from different sources of reports are aggregated for moderators to review and take action, such as keeping or removing content and signalling users, in accordance with platform policies. Its live operation relies on API (Application Programming Interfaces) integration with the hosting service provider's system.
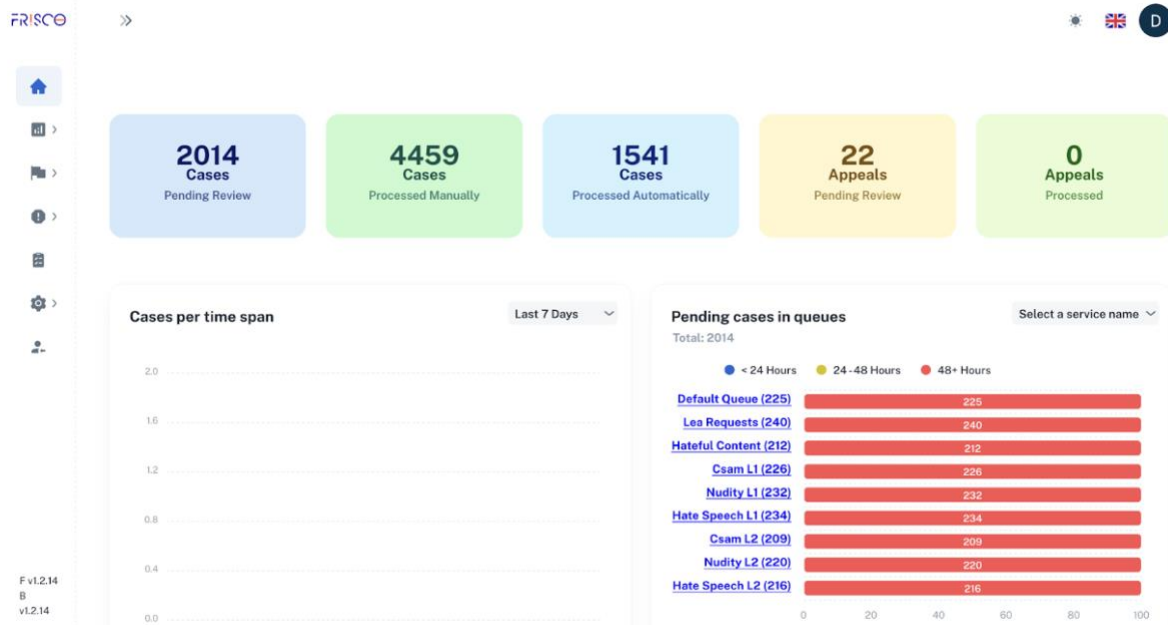
Figure 3 Content Moderation Tool

The content moderation tool encompasses several key functionalities aimed at efficiently managing flagged content and appeals, user management, policy configuration, and more:

Dashboard: Provides an overview of key metrics such as flagged cases, appeals, and data analytics regarding cases per time, labels, etc.

Reports List: Offers insights into pending cases and content moderation queue performance, enabling content moderators to allocate resources effectively.

Appeal List: Provides an internal appeal mechanism, allowing users to request a review of a moderation decision for content which was reported.

User Management: Allows the creation of user accounts, user groups, and assigning specific moderation queues to certain user groups.

Policy Configuration: Enables the setup of Policy Enforcement Strategy, including tiered severity levels and label categorization for efficient case handling.

Statement of Reasons: Allows the setup of statement of reasons notifications to users regarding moderation decisions, providing justifications for decisions taken through an automated workflow.

Queues Configuration: Utilises a Query Based Builder to redirect flagged content to specific moderation queues based on criteria such as channel, label, and content type.

Moderation Actions: Moderation actions allow users to define actions (e.g., content removal) based on internal policies. Users configure actions and endpoints through two tabs: User and Post, specifying an action name and URL for calling API endpoints.

LEA (Law Enforcement Agency) Portal Intake: Integrates law enforcement requests into the system, ensuring proper handling of legal enforcement requests about flagged content directly through the online platform.

TCO Transparency Report: Generates compliant transparency reports, summarising user data management, content removal, government inquiries for user records, and other relevant metrics.

3   Testing and validation of the tools

3.1   Description of the task

Involving Hosting Service Providers (HSPs) in the testing process is crucial to ensuring that the tools developed by the FRISCO project meet the practical needs of the target audience. The aim is to identify any potential obstacles or areas for improvement and iterate the tools according to the feedback of HSPs.

Objectives

Overall, the task aims to gather both quantitative and qualitative feedback to assess the usability, effectiveness, and user satisfaction with the developed tools. By addressing users' feedback and suggestions, the tools are refined to better meet the needs of Hosting Service Providers (HSPs) and improve their capability in achieving TCO compliance.

Specific Objectives (O) of the testing and validation:

- O1: Evaluate usability and user-friendliness
- O2: Assess the effectiveness of the tools
- O3: Gather comprehensive feedback and find room for improvements

O1: Evaluate usability and user-friendliness

- Rate the overall usability and user-effectiveness of the tools.
- Identify any challenges in using the tools.
- Identify specific aspects where clarifications or simplifications are considered necessary.

One of the main objectives of this testing phase is to thoroughly evaluate the usability and user-friendliness of the developed tools. Additionally, the testing aims to identify any challenges users face when using the tools, e.g. any challenges when completing the questionnaire, steps within the compliance process that users find challenging or complex, or difficulties when navigating in the content moderation tool. It is aimed to gather insights into areas that may require improvement in terms of usability, and to identify points where further explanation and clarification is needed.

The questionnaire allows users to rate the user-friendliness of the tools and through focus group discussions, participants can provide qualitative insights into their experiences with the tools, offering nuanced perspectives on their user-friendliness.

O2: Assess the effectiveness of the tools

- Determine the helpfulness of the questionnaire in identifying gaps in users' content moderation processes.
- Evaluate the usefulness of the process map in structuring and describing the compliance process with the TCO Regulation for organizations.
- Assess the effectiveness of the content moderation tool in helping HSPs to address user-generated content related risks.

This objective focuses on evaluating the effectiveness of the questionnaire in aiding users' understanding of compliance with the Terrorist Content Online (TCO) Regulation, such as the helpfulness in identifying gaps in users' content moderation processes. Furthermore, the usefulness of the process map in structuring and describing the compliance process with the TCO Regulation for

organisations is assessed. Through quantitative ratings and qualitative feedback, insights are gathered into how effectively the tools assist users in understanding TCO compliance.

Users can rate the effectiveness of the tools in aiding their understanding of TCO compliance, providing insights into the tools' effectiveness. Participants can share their experiences with the tools and discuss how well they met their needs.

O3: Gather comprehensive feedback and find room for improvements

- Solicit suggestions for enhancing the tools to better assist Hosting Service Providers (HSPs) in achieving TCO compliance.
- Assess users' expectations regarding features or information not included in the tools.
- Provide suggestions for technical, structural improvements, or improvements regarding the tools' user friendliness and usability or need for further explanation and clarity.

This objective aims to collect detailed user feedback to enhance the tools for better TCO compliance support. It involves soliciting suggestions for tool enhancements, assessing gaps between user expectations and existing features, and identifying technical, structural, and usability improvements. Participants can discuss any challenges or limitations they encountered while using the tools, helping to identify specific areas for improvement or refinement. Participants are asked to provide feedback on features or information not included in the tools to identify any gaps between the users' needs and the current features or information provided by the tools. This involves understanding what additional features or information users expected but did not find. By addressing user feedback on areas needing clarification or additional information, the goal is to refine the tools' functionality, user-friendliness, and overall effectiveness, ensuring they better meet the practical needs of HSPs.

Special focus is on the following aspects:

- **Technical Refinements:** Gathering feedback on any technical issues or limitations experienced by users. Soliciting suggestions for technical enhancements that could improve the tools' performance, reliability, or functionality.
- **Structural Improvements:** Evaluating the overall structure and flow of the tools. Collecting user input on how the structure could be improved to enhance the logical progression and coherence of the tools.
- **Usability and User Friendliness:** Assessing the tools' usability and user-friendliness. Collecting user suggestions on how to make the tools more intuitive, easy to navigate, and user centric.
- **Explanation and Clarity:** Identifying areas where users found the information provided by the tools to be unclear or insufficient. Soliciting suggestions for improving the clarity and comprehensiveness of the explanations, instructions, and guidance provided by the tools.

By focusing on these specific aspects, this objective aims to gather a holistic view of user experiences and expectations, providing valuable insights that can drive enhancements to the tools.

3.2 Testing Process

The testing process involved the following key steps to ensure validation and improvement of the developed tools:

1) **Setting the methodology:** Before initiating the testing process, a methodology was established. This involved defining objectives, selecting the testing methods, and outlining procedures for participant recruitment, data gathering, and feedback analysis.

2) **Development and validation of feedback form:** A structured feedback mechanism, such as a survey form, was developed to collect specific insights on the usability, effectiveness, and areas for improvement of each tool. This form was used to gather feedback from participants during the testing phase.

3) **Participant recruitment:** This task involved creating a database of HSPs who can be invited to participate in testing the tools. This database served as the foundation for recruiting participants.

4) **Sending out the process map and questionnaire:** The tools were sent out to the HSP database along with the feedback survey form.

5) **Testing the content moderation tool:** A demo version of the content moderation tool was tested with a small number of participants to gather feedback on its functionality and usability.

6) **Focus group discussion:** An interactive workshop was organised with relevant stakeholders to facilitate discussions on the specific tools, share feedback, and discuss best practices.

7) **Gathering and analyzing feedback:** All feedback received from the questionnaire, the focus group, and content moderation tool testing is consolidated and analysed. The focus on the analysis was on finding areas for improvement.

8) **Iteration of tools:** The feedback received from HSPs and other relevant stakeholders is incorporated into the tools, and continuous improvements are made throughout the testing phase.

3.3 Methodology

The methodology for testing and validating developed tools and solutions involves a dual approach to gathering feedback. This combination of quantitative and qualitative methods ensures a holistic evaluation process, enabling iterative improvements to the tools-based insights gathered directly from stakeholders.

Quantitative feedback

Quantitative feedback is obtained through structured feedback forms, ensuring comprehensive insights into the usability and effectiveness of the tools. The goal is to create a structured feedback mechanism that collects insights on the usability, effectiveness, and areas for improvement of each tool and to objectively measure the success of the developed tools against predefined criteria.

Content and Structure of the Feedback questionnaire:

The questionnaire is structured to gather both quantitative and qualitative feedback. For the Self-Assessment Questionnaire, users are asked to rate its user-friendliness, effectiveness in understanding TCO compliance, perceived accuracy of the compliance score, and helpfulness in identifying content moderation gaps. Users are also encouraged to provide detailed feedback, suggestions for improvement, and insights into any challenges faced or expected features in the form of open-ended questions. Similarly, for the Interactive Process Map, users rate its usability,

usefulness in structuring compliance processes and visual appeal. They are then asked to offer feedback, suggestions, and insights into any missing features, complex steps, gaps in information, or enhancement opportunities in the form of open-ended questions. The feedback questionnaire focused on the Self-Assessment Questionnaire and the Process Map, as these two tools can be explored, used and tested independently, while the testing of the Content Moderation Tool requires some guidance. Thus, the Content Moderation Tool was tested in a focus group discussion.

Concurrently, qualitative data is gathered through focused group interviews, allowing for in-depth discussions, sharing of experiences among HSPs and other relevant stakeholders.

Qualitative feedback

Qualitative data is gathered through focus group interviews, where a small number of stakeholders engage in discussions, share experiences, and provide detailed insights into their perspectives, preferences, and challenges encountered while using the tools. These interviews allow for open-ended exploration of user experiences and perceptions.

By conducting focus group interviews, the FRISCO project can gain a deeper understanding of the users' perceptions and experience with the tools. This qualitative data enriches the overall evaluation process, offering nuanced insights. Additionally, focus group discussions foster stakeholder engagement and collaboration, enabling participants to contribute to the co-creation of solutions and the identification of actionable recommendations for tool improvement.

Focus group

The testing focus group methodology was structured to ensure comprehensive evaluation and discussion of each tool. It comprised three main parts:

Part 1: Presentation of the tools
WP2 lead partner, Tremau, presented the objectives and functionalities of each tool, providing participants with an overview of their purpose and features. Following this introduction, demonstrations of each tool were conducted to showcase their usability and functionality. This session aimed to familiarise participants with the tools and establish a common understanding of their capabilities.

Part 2: Facilitated group work
Participants were divided into three groups, with each group assigned to test and discuss a specific tool. Group 1 focused on testing the Content Moderation Tool, Group 2 tested the Process Map and Group 3 tested the Self-Assessment Questionnaire. Each group engaged in individual, in-depth exploration of their assigned tool for 10 minutes, followed by a 30-minute guided group discussion to provide suggestions for improvement.

Part 3: Presentation of findings
In the final part, each group had the opportunity to present their findings from the testing and discussion phase and share their observations, insights, and recommendations regarding the tool they had tested. The presentations ensured that feedback from all participants was systematically captured and shared, providing a comprehensive overview of the strengths and areas for improvement for each tool.

3.3.1 Limitations

One notable limitation encountered during the testing process was the challenge of HSP outreach. Despite concerted efforts to engage HSPs in the testing phase, we faced difficulties in recruiting a sufficient number of participants from this key stakeholder group. As a result, the sample size of HSPs involved in the testing remained limited. This limitation posed constraints on the representativeness of the target group during the evaluation of the tools. Despite these challenges, we aimed to maximise engagement with HSPs through various outreach channels and communication efforts.

However, the qualitative aspect of the research proved fruitful as we successfully gathered insights and feedback from a diverse range of stakeholders. This qualitative component allowed us to capture perspectives not only from HSPs but also from other relevant stakeholders involved in the compliance process. By engaging with a broader spectrum of actors, including regulatory authorities, industry experts, and advocacy groups, we were able to obtain valuable qualitative data that enriched our understanding of the usability and effectiveness of the tools. This diverse feedback provided nuanced insights into the practical challenges and opportunities associated with TCO compliance, contributing to a more comprehensive assessment of the tools' impact and potential improvements.

Due to the limited sample size resulting from challenges in recruiting HSPs for the feedback survey, we will analyse the feedback and suggestions consolidated with the results obtained from the workshops. By combining feedback from both sources, we aim to provide a comprehensive assessment of the usability and effectiveness of the tools, despite the limitations posed by the sample size.

4   Results of the testing and validation

Participants of the focus group included 5 HSPs, 8 representatives of governmental organisations and public authorities, 4 solution providers, 8 industry associations and 6 civil society actors with 14 project partners contributing. Furthermore, there was an additional focus group interview focusing only on the content moderation tool with 2 HSPs. The feedback questionnaire gathered 4 responses all together.

The ratings gathered in the form of a feedback questionnaire complement the qualitative data gathered during the testing process. Although based on a limited number of responses (4), these quantitative ratings provide a snapshot of user satisfaction and overall perception of the tools. However, the primary focus remains on the rich, detailed feedback obtained through qualitative methods.

Average rating for the Self-Assessment Questionnaire (on a 1-5 scale)	
On a scale of 1-5, how user-friendly did you find the Self-Assessment Questionnaire?	5
Rate the effectiveness of the questionnaire in helping you understand your TCO compliance.	4,75
According to your opinion, how accurate was the compliance score provided by the tool in reflecting your current TCO alignment?	4,75
Did you find the questionnaire helpful in identifying gaps in your content moderation processes?	4,5

Table 1 Ratings for the Self-Assessment Questionnaire

Feedback highlights the positive reception of the Self-Assessment Questionnaire. It scored 5/5 for user-friendliness, 4.75/5 for effectiveness in understanding TCO compliance, 4.75/5 for accuracy of the compliance score, and 4.5/5 for identifying gaps in content moderation processes.

The qualitative feedback was also generally positive, with participants expressing that they didn't need longer than 15 minutes to fill out the questionnaire and found it helpful. However, there were several technical comments provided for improvement. Suggestions included adding transitions between questions, providing additional answer options such as "none of the above," and allowing users to skip questions if needed. Participants also noted the need for better explanation of terms and concepts, such as what constitutes an HSP affected by the regulation, and suggested improvements for clarity and specificity in certain questions. Suggestions were made to clarify terminology, improve the flow of questions, and provide more detailed explanations where necessary. Finally, participants suggested categorising questions by sections and allowing for better customization of the questionnaire.
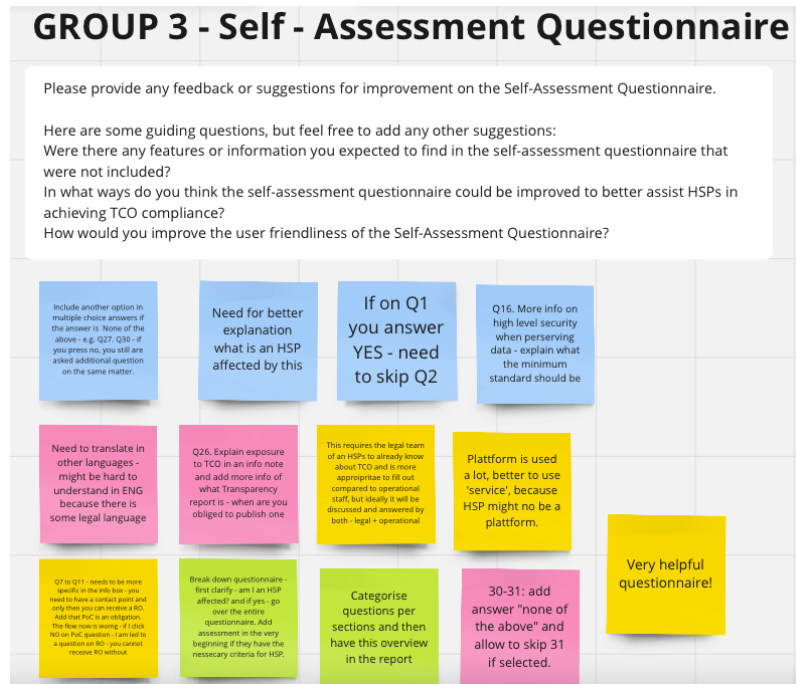
Figure 4 Feedback on the Self-Assessment Questionnaire (Miro Board)

The feedback on the process map was largely positive, with participants appreciating its flowchart logic, which enabled them to understand and navigate the compliance process effectively. The user-friendliness of the map was also commended. However, some minor issues were identified, such as typos and expired links in transparency reports. Additional information on technicalities, such as a list of competent authorities, was requested to enhance clarity. Clarification was also sought on the definition of terrorist organisations in the context of online transparency reports. Similarly, to the Self-Assessment Questionnaire, the primary focus remains on the detailed qualitative feedback given the limited number of responses to the feedback questionnaire (4).

Average rating for the Process Map (on a 1-5 scale)	
Rate the overall usability of the Interactive Process Map.	5
How useful was the interactive process map in structuring and describing the compliance process with the TCO Regulation for your organization?	4,75
Rate the overall visual appeal and design of the Interactive Process Map.	4,75
Did you find the interactive and animated transitions engaging, and did they contribute to a better comprehension of the compliance process?	4,5

Table 2 Ratings for the Process Map

These ratings highlight the overall usability (5), the usefulness in structuring and describing the compliance process (4.75), the visual appeal and design (4.75), and the engagement and comprehension benefits from interactive and animated transitions (4.5).

Feedback on the content moderation tool highlighted the need for some additional flexibility of the tool. Firstly, users suggested a more flexible policy configuration, allowing for customization of categories. Furthermore, there's a request for features to aid content moderators in identifying problematic content within videos, such as tools or guidance on locating the problematic part.

5 Description of the validated tools

5.1 Refinements and iteration based on the testing

The feedback received from the participants involved in the various testing sessions is utilised to refine the tools with suggestions and comments that stem from expertise and knowledge from the particular domain of TCO regulation or similar regulations. Thus, the feedback is very critical towards the successful engagement of the target stakeholders (e.g., HSPs) with the FRISCO toolbox.

5.1.1 Self-Assessment Questionnaire

The provided feedback for the Self-Assessment Questionnaire tool can be categorised into three distinct groups with each representing a different modification category. Specifically, modifications towards: (i) content clarification, (ii) logical flow - content structure, (iii) technical aspects of the tool.

They involve straightforward modifications such as adding answer options, skipping questions based on previous responses, providing clarification on terminology and regulatory requirements, adjusting terminology for better alignment, improving question precision and clarity, rearranging interface elements for better navigation, and incorporating additional functionalities like categorization of questions and inclusion of "none of the above" options.

In regard to content clarification the following changes was made in the refined version of the questionnaire:

Refined content version - better clarification of TCO definitions or other relevant terms
We addressed several requests for additional clarification of the content depicted within the Self-Assessment Questionnaire. One of the requests revolved around a need for better clarification regarding the preservation of data with high-security, the participants requested a minimum standard when referring to high-security levels. To this end, an infobox in the appropriate question was added to guide the user, as shown in the following figure. The following figure aims to increase reading comprehension in regard to what an infobox is and how it is depicted to the user, when hovering the pointer over the infobox. This level of visual detail will be retracted in mentions of future additions.

Figure 5 Refined Q19 - Infobox depicting some actions to address security of preserved content

Furthermore, additional explanation in the form of an infobox was added to the appropriate question asking the user whether its service was exposed to TCO, which explains the conditions under which a service is classified as such.

Another request dictated by the participants was the use of the term platform across the tool, which suggested that use of term service is more appropriate as the platform has additional requirements. In contrast, the term service is more generally applicable and does not restrict the generalisability of the questionnaire.

Finally, disclaimer and introductory sentences were added to guide the user into finding appropriate definitions involved in the TCO, as well as a straightforward definition of what HSPs classifies as. These changes were made in the wrapper of the tool that can be found in the FRISCO toolbox page[1] in the FRISCO site[2]. In addition, after participants request a sentence to clarify whether the legal team of the HSP is required to participate in the questionnaire. In reaction we inform future participants that the legal team of the HSP is not necessary, but rather the operational staff of the respective organisation. However, in cases where clarifications are required internal contact with their legal representative is advised but not required.

Logical flow - content structure revisions

We addressed several requests to adjust the logical flow of the questionnaire. As logical flow we refer to changes regarding the guidance of the user through different questions when taking part in it (e.g., skipping several questions depending on some answer).

To this end, we included the option to answer "none of the above" to multiple choice questions, selecting the above option does not have any impact on the final score of the user. However, for the purposes of ensuring a seamless flow without interruptions the addition of that option is necessary in cases where the proposed options do not apply.

Changed questionnaire flow to skip questions regarding which specific measures the user has taken against dissemination of public terrorist content when answering no in a previous question asking whether the user took any specific measures.

Furthermore, three questions were added to the introduction of the questionnaire to evaluate whether the TCO regulation applies to the user, if the user answers no to any of these questions they are taken to the end page of the questionnaire, which informs the user that TCO regulation does not apply to them. The questions are the following:

- Are your online services available to users in the European Union?
- Do you store user-generated content on your service?
- Is this user-generated content available to the public?

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[1] https://friscoproject.eu/frisco-questionnaire/

[2] https://friscoproject.eu/

Lastly, we rephrased the previous introductory questions to adjust to the new questions and changed the ordering of Removal Order and Point of Contact category of questions as the previous ordering was required the other, i.e., to receive a removal order you need to establish your point of contact.

Technical changes

The following development changes were performed in the questionnaire tool. The overview .csv file that is produced after the completion of the questionnaire now includes the category of each question. Furthermore, the access to download the .csv report when a score of 0% has been achieved is no disabled. Lastly, next and back buttons are logically rearranged for improved navigation.

5.1.2 Process Map

The changes mentioned by the participants of the process map tool revolve mostly around clarification of content. To this end, we updated some examples of transparency reports with expired links. In addition, additional clarification was provided for some parts of the path such as providing specific guidance on what should be done, for example:

- Previously: Have you established a contact point? -> You should have!
- Now: Have you established a contact point? -> You should establish a contact point in order to receive removal orders.

Furthermore, a path that indicates that the removal order was received without having a point of contact established was reformed to not indicate that as removal orders are only received through points of contact. Lastly, resources which the user can utilise understand definition of the TCO Regulation, as well as to contact its respective competent authorities has been added to the wrapper of the tool in FRISCO toolbox page[3] in the FRISCO site[4].

5.1.3 Content Moderation Tool

The changes mentioned by the participants involved during the testing phase revolve mostly around clarification adding some new functionalities adding to the flexibility of the tool. The following elements have been modified as a result of the testing feedback:

- Enhance policy configuration: Introduce more flexible policy configurations, including categories like misinformation and disinformation, and refine existing categories.
- Added functionality to be able to better configure the different users
- Some adjustments concerning the user interface.

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[3] https://friscoproject.eu/frisco-toolbox/

[4] https://friscoproject.eu/

6   Conclusion

The FRISCO Toolbox comprises three tools designed to support Hosting Service Providers (HSPs) in their compliance: Self-Assessment Questionnaire, Process Map, and Content Moderation Tool. Each of these tools plays a crucial role in assisting HSPs in navigating the complexities of regulatory compliance and combating the dissemination of terrorist content online.

Task 2.3 "Testing and validation of developed tools and solutions" involves testing the developed tools and mechanisms to ensure their functionality and usability. This iterative process ensured that the resources meet the specific needs of small and micro HSPs. This testing phase was crucial to refining the tools and ensuring they meet the needs of small HSPs.

Testing of these tools was conducted with a diverse group of small and micro HSPs, trusted flaggers, and law enforcement agencies. Feedback was collected to identify areas for improvement and ensure the tools meet practical needs. The results demonstrated high usability and effectiveness, with average ratings indicating strong overall satisfaction. The qualitative feedback highlighted specific areas for improvement, such as the need for additional answer options, more detailed explanations of certain regulatory terms, and enhanced guidance for new users. These suggestions were carefully considered and implemented, resulting in a more refined and user-centric set of tools. The iterative process of refinement has enhanced the tools' functionality, usability, and relevance.

In the Self-Assessment Questionnaire modifications were made in three key areas:

- **Content Clarification**: Added infoboxes to clarify terminology and regulatory requirements, refined definitions, and provided detailed explanations.
- **Logical Flow and Content Structure**: Introduced options like "none of the above," added introductory questions to determine TCO applicability, and restructured the question flow for better navigation.
- **Technical Changes**: Enhanced the .csv report, disabled report downloads for 0% scores, and improved navigation with rearranged buttons.

Process Map: Updates focused on content clarity. Examples of transparency reports with expired links were updated, and specific guidance was provided to clarify actions. Resources were added to help users understand TCO regulations and contact competent authorities.

Content Moderation Tool: Enhancements included even more flexible policy configurations, additional functionalities for user configuration, and user interface adjustments.

Overall, the feedback-driven improvements have enhanced the FRISCO Toolbox, making it a more effective and user-friendly resource for HSPs in their compliance efforts.