REPORT

TRUSTparency

Deliverable 2.1

Strategies and instruments to identify and engage the end-user communities

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ABSTRACT:	TRUSTparency aims to involve broad and diverse communities of researchers and stakeholders to contribute directly to the shaping of policies and documents, via the co-creation of its results and the collection of high-quality and honest feedback. To confer directly with large communities and rapidly update their feedback, TRUSTparency will deploy the platform comCensus, whose technology empowers large groups of individuals to discuss anonymously and constructively and to rapidly integrate their combined opinions into actionable outcomes. Task 2.1 was devoted to setting up a sampling frame and strategies to involve communities via comCensus. Based on results of several tests and feedback sources, the methodology of the platform has been considerably improved, overcoming a number of technical and ethical challenges and streamlining the process of data collection. The sampling frame will include a broad population of research communities and other stakeholders, which will be invited to share and discuss their opinions on relevant questions.
Keyword List:	Reproducibility, Stakeholder engagement, comCensus

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Consortium

	Role	Name	Short Name	Country
1.	COO	Universitetet i Oslo	UIO	NO
2.	BEN	Aarhus Universitet	AU	DK
3.	BEN	Science of Science Limited	SoS	UK
4.	BEN	Stichting Amsterdam UMC	AUMC	NL
5.	BEN	Latvijas Universitāte	UOL	LV
6.	BEN	Ethnicon Metsovion Polytechnion	NTUA	EL
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10.	BEN	National University Incorporated	NU	PH
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12.	BEN	Lviv Polytechnic National University	LPNU	UA
13.	AP	Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek TNO	OSNL	NL

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0.2	12 Jan 2026	Daniele Fanelli	Draft revised based on comments by coordinators
1.0	28 Jan 2026	Daniele Fanelli	Draft revised based on comments by consortium members

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Introduction

TRUSTparency's ultimate objective is to empower institutions and communities to develop their own reproducibility guidelines and policies while carefully monitoring their costs and effects in a maximally inclusive manner. The principal tool to be developed under the project is the Reproducibility Promotion Plan (RPP), a document that indicates a sequence of concrete steps to implement reproducibility interventions and practices best suited to the specific needs of relevant research-related communities. The RPP includes a "toolbox" of reproducibility interventions identified in the literature, which institutions may consider adopting, along with a set of training resources to help communities implement these interventions and the RPP itself.

At the core of TRUSTparency's approach is the belief that no one-size-fits-all intervention or policy works everywhere, and that any policy or intervention is likely to have costs as well as benefits. Given the epistemic, cultural, and demographic diversity of scientific fields and research-related institutions, the cost-benefit trade-off of any given policy is likely to vary substantially in ways that cannot be predicted in advance. It is therefore necessary to involve the relevant communities of researchers, research funders, publishers, and Learned Societies as extensively and directly as possible in co-creating policies and in carefully monitoring interventions.

One of the distinctive features of the TRUSTparency project is its commitment to collecting and incorporating feedback from the community into the interventions, training materials, and RPP that it develops. In part, this feedback is obtained through formal Delphi surveys and qualitative interviews. However, these methods are by nature restricted to highly selected or small samples of experts, which may not fully represent the diverse viewpoints of the research community. To enhance the inclusivity of its products, TRUSTparency employs a novel methodology, implemented on an experimental basis by one of the partners (SoS), via the comCensus.org platform.

How comCensus works: general approach

The overarching mission of comCensus is to empower communities to speak and debate honestly and constructively on questions, policies, and documents of relevance. To meet this objective, comCensus implements an environment in which participants are invited to express their opinions and discuss fully anonymously. Discussions focus on targeted questions, ideally centered on a reference document to be improved, and facilitate the sharing of information that yields actionable outcomes.

Task 2.3, as detailed in this report, aimed at testing and adapting the comCensus methodology. To understand the significance of the improvements outlined in the "Results" section, it is necessary to first describe how comCensus functioned at the time the TRUSTparency grant application was submitted.

comCensus methodology at the time of application

To run a question on the original comCensus platform, the following steps were required:

- A convener designed the question and identified the sample of experts to invite. The convener then prepared a spreadsheet (CSV file) containing the emails, first names, last names, and affiliations of the invitees. This list was uploaded to the website as part of the question setup. The system saved the emails in a ciphered but non-decryptable format, which allowed verification of a user's identity via their email but prevented retrieval of the email even if unauthorized access to

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the comCensus database occurred. The first name, last name, and affiliation were saved separately in a list displayed in association with the question, along with a description of the selection criteria.

- Participants were then invited by the convener, typically via an email that contained a brief introduction to the question, explanations about the methodology, and a web link to the comCensus page where they could respond. Participants responded by expressing their level of agreement (or an equivalent type of vote) on a five-point scale, or by selecting "don't know." In all cases, they had to write at least 10 words to explain their position and add a title.
- Respondents would write their response and submitted their email with it, for validation. The system checked this email against its non-decryptable list, and if a match was found, it sent a secret code to the respondent's email. The respondent was asked to indicate whether they wished to receive updates on the question via that email and then optionally responded to demographic questions.
- Upon receiving the code in their email, the respondent inputted it to validate the response. The response and demographic data were then saved in the database, and the participant received another email explaining how to log in at any time using the secret code to continue the discussion.
- Once the response was submitted, the participant was shown another user's post, selected by an algorithm as one that most directly challenged their viewpoint. The participant could optionally respond by rating the post with one or more options ("ban it" if the content was inappropriate or violated rules, "controversial," "interesting," or "enlightening") and then by indicating agreement, disagreement, or other comments about the post.
- After three responses, the user could view the current results on the "main discussion" page, which contained the entire discussion (all posts and reactions) as well as interactive graphics representing the votes and various patterns among responses.
- Participants could continue the discussion by logging in anonymously until the discussion closed, typically a few weeks after its start. Those who opted in for notifications received updates on results or comments on their posts.
- Moderation was conducted by comCensus administrators, who checked posts against a set of rules of engagement. These rules referred to UK legislation, including the 1988 Malicious Communications Act and the 2003 Communications Act, as well as general guidelines for civil conduct. Moderators assessed compliance and either reinstated the post or removed it if found to be in breach. In the latter case, the author was contacted anonymously via an internal messaging system to explain the removal and how to avoid future censorship. A post disappeared from view and was sent to moderation if flagged by the convener, who had access to special buttons for this purpose. Posts were also sent to moderation upon first being rated as "ban it" by users and could be resubmitted if repeatedly flagged despite reinstatement.

Goals of Task 2.3

The overall objective of Task 2.3 is to develop and test strategies and instruments to map and engage, via the comCensus platform, the end-user communities identified in Work Package 1, specifically in Tasks 1.3 and 1.4 and reported in Deliverables 1.2 and 1.3. This lays out the methodology to collect feedback for Work Packages 3 and 4, which develop the RPP and training materials. In particular, this task includes the following subtasks:

a. develop strategies to invite end-users (a1) and sampling frame (a2);
b. set up and pilot test the comCensus discussion pages to fine-tune the methodology to TRUSTparency's needs;
c. train stakeholders to act as discussion leaders and end-users. One online workshop to be organized to onboard stakeholders.

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Contents of Deliverable 2.1

Based on consultations with other consortium members and experience gained from pilot-testing the platform, numerous improvements have been made to the comCensus methodology. These changes remove several technical and ethical challenges and considerably simplify its applications within TRUSTparency. The simplifications allow streamline some of the originally planned subtasks, particularly subtask 2.3c on training stakeholders to lead comCensus pages. The Results section below details these improvements and explains how they meet the relevant subtasks and project objectives.

Results

Subtask a1: Strategies to Invite End-Users

Several challenges emerged during the development process. First, comCensus initially used servers based in the United States, which may have different safeguards and standards compared to those in the EU regarding data safety.

Second, the requirement to obtain a list of emails and names of participants in advance created direct ethical challenges related to the treatment of personal data and the need for data handlers to comply with GDPR EU legislation. This posed significant technical and ethical challenges, as each institutional representative convening a comCensus question would act as a data handler, subjecting either a single institution (e.g., the University of Oslo) or multiple institutions to these requirements.

Third, apart from the list of invitee names and emails, the University of Oslo's data policies indicated that comCensus would still technically be processing personal data if opinions shared could in principle be de-anonymized. An examination of the system suggested that, in principle, one could connect responses and demographic data to emails via secondary information, such as timestamps associated with events like responding to the question and validating the email. Although a remote possibility, this meant comCensus technically collected personal data, potentially raising GDPR concerns.

To address these issues, the entire comCensus website and database were moved from US to EU servers located in the Netherlands. In addition to the original "listed" format, where invited participants needed to be listed in advance, the platform now implements an "open" format, allowing anyone to respond and validate with their email address, and a "limited" format, restricting validation to emails from pre-specified domains. This eliminates the need for a data handler to collect and hold emails and names, avoiding associated technical, legal and ethical challenges.

Users can still optionally share their email temporarily for notifications and their names to be credited as contributors. By doing so, they agree to share personal information and acknowledge potential de-anonymization. This sharing is voluntary and opt-in, requiring active input of emails and acknowledgment.

The comCensus database has been restructured to remove or scramble any information that could, even in principle, connect responses to ciphered emails. Emails optionally shared for alerts are destroyed 30 days after the question closes, ensuring long-term confidentiality and anonymity. The system's cryptographic measures have been strengthened with external passwords and the most updated encryption systems. This minimizes the risk of unauthorised access to data and it ensures that, even in the very unlikely event of unauthorised access to the database, minimal personal data would be obtainable (which reduces to no personal data 30 days after closing the question).

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These improvements enable a simple and broad strategy for inviting participants. The previous system required creating long lists of names and emails, which raised legal and ethical issues around data handling, technical challenges in accessing such information, and concerns about emailing large numbers of participants for tasks that may not interest them (e.g., spam). It may have necessitated asking stakeholders and institutional leaders to provide email lists or to set up comCensus questions individually in house, potentially introducing heterogeneity in data collection.

All these issues are avoided in the new system. A single question can be created and the invitation circulated to any community, across multiple institutions, without compiling email lists in advance. Therefore, we have revised the strategy to involve end-users as follows. Questions are set up directly by SoS and, for each question, relevant stakeholder communities (e.g., reproducibility networks or members of pilot institutions) are identified. Contacts within those communities are invited to respond and to circulate an invitation message containing a response link. Where necessary and appropriate, the invitation is also shared with multiple stakeholder communities via the LinkedIn Reproducibility Community and other communication channels created by TRUSTparency, like the project's LinkedIn and Bluesky accounts.

Subtask a2: Sampling Frame

Based on the revised invitation strategy described above, we collected the list of stakeholder communities connected to TRUSTparency and reviewed their websites to record the number of members that could be contacted directly to elicit feedback or to ask to circulate an invitation to comCensus. Table 1 lists the communities identified as most suitable and likely to respond, and the minimum estimated number of members that can be contacted directly via them, to provide feedback directly and to share the comCensus invitation to other relevant communities they may be in contact with. The largest population comes from national reproducibility networks, which are directly committed to collaborating with TRUSTparency via an informal agreement with the Global Federation of National Reproducibility Networks (GFNRN). The GFNRNs has agreed to liaise with its members all requests from TRUSTparency. Other communities include learned societies and research integrity organisations. These are expert communities mostly with an interest in TRUSTparency's results and constitute a valid population to meet the project's objectives.

Furthermore, we identified organisations that might connect us to Publishers, Research Funding Organisations, Research Performing Organisations and communities of Research Support Staff. We may consider contacting these additional organisations to explore their interest in participating, by extending comCensus invitations to their members.

Another population that may integrate the feedback from expert communities is that of the Prolific platform. Prolific provides access to paid research participants, who can be filtered by disciplinary expertise and can be required to have experience in actual research. Since it lacks a specific interest or expertise in reproducibility, the Prolific population represents a resource for eliciting independent viewpoints that are mostly or entirely naive to TRUSTparency's topics. Small samples sourced from Prolific may, if deemed necessary, integrate the opinions collected amongst expert communities, especially for questions of general interest (e.g., reproducibility interventions), or serve as a contingency resource to mitigate low response rates.

Subtask b: Pilot Testing of comCensus and Methodology Improvements

From the start of the project, several pilot tests were conducted, including both technical tests and field tests (that is, tests on real world applications).

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Technical testing involved Amazon Mechanical Turk participants via the userBob.com platform, which allows websites to be tested with paid participants who perform tasks and provide feedback. A total of 15 tests were carried out, involving 29 participants to assess site functionality and response experience.

Further testing occurred within TRUSTparency itself. In particular, comCensus was used to shape the TRUSTparency vision statement. Consortium members and advisory board participants were invited to provide feedback on a first draft of the statement in February 2025 (response rate: 53%, N=34) and subsequently on the revised version in March 2025 (response rate: 24%, N=34).

Insights from these tests led to important improvements in the platform's methodology, particularly regarding safety and engagement. For safety, experiences showed that the moderation system was insufficient to ensure a safe and constructive user experience. Improvements include an AI conducting initial screening upon post submission to send potentially inappropriate posts to moderation; enabling users to flag any post directly for moderation; and empowering the question convener, in addition to comCensus administrators, to moderate content.

For engagement, the previous system (where participants submitted a main post articulating reasons freely, rated others' posts as "ban," "controversial," "interesting," or "enlightening," and responded in dedicated boxes for agreement, disagreement, or comments) was found to be counterintuitive and too constraining. It also fell short of helping participants understand each other's positions better.

Improvements include: a) participants now react to posts by rating agreement on a five-level Likert scale; b) when submitting a main post, an AI analyzes the text to extract central points along dimensions such as reasons, feelings, proposals, and questions, ensuring accessibility to diverse academic and cultural backgrounds; c) participants check, edit, or approve the AI's interpretation; d) reactions to posts now address the AI-interpreted dimensions (for example, responding to expressed feelings or answering raised questions) or allow general comments. Participants view the AI interpretation by default, with the option to see the original post.

Additionally, the discussion page displays an automated AI summary responding to the question with a consensus answer reflecting principal positions. This summary is interactive, including links to cited resources and posts upon which it is based, allowing direct engagement with influential contributions. These engagement improvements are experimental, and their effectiveness will be assessed and refined further through the TRUSTparency project.

Subtask c: Stakeholder Onboarding

Since the role of institutional leaders has been considerably simplified (they no longer need to run comCensus directly) the need for the stakeholders onboarding and training planned for subtask (c) is largely reduced. In place of a training workshop, a presentation of comCensus to stakeholders is now planned in conjunction with meetings organized for other TRUSTparency tasks.

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Sampling Frame

List of stakeholder communities identified as relevant sources of feedback from TRUSTparency's results. The minimum community size number is calculated from the number of individuals explicitly listed on the website of the corresponding organisation. These individuals may provide feedback directly and share the invitation with other members of their communities.

Stakeholder category	Community	Country	Minimum community size
Researcher	UK Reproducibility Network	UK	244
Researcher	African Reproducibility Network	Africa	40
Researcher	Australian Reproducibility Network	Australia	9
Researcher	Belgium Reproducibility Network	Belgium	5
Researcher	Brazilian Reproducibility Network	Brazil	92
Researcher	Canadian Reproducibility Network	Canada	9
Researcher	Croatian Reproducibility Network	Croatia	17
Researcher	Danish Reproducibility Network	Denmark	6
Researcher	Finnish Reproducibility Network	Finland	17
Researcher	French Reproducibility Network	France	10
Researcher	Georgian Reproducibility Network	Georgia	1
Researcher	German Reproducibility Network	Germany	80
Researcher	Italian Reproducibility Network	Italy	44
Researcher	Luxembourg Reproducibility Network	Luxembourg	16
Researcher	Netherlands Reproducibility Network	Netherlands	28
Researcher	Norwegian Reproducibility Network	Norway	16
Researcher	Portuguese Reproducibility Network	Portugal	10
Researcher	Slovakian Reproducibility Network	Slovakia	15
Researcher	Spanish Reproducibility Network	Spain	9
Researcher	Swedish Reproducibility Network	Sweden	1
Researcher	Swiss Reproducibility Network	Switzerland	20
Researcher	Ukrainian Reproducibility Network	Ukraine	1
Learned Society	European Council of Doctoral Candidates and Junior Researchers	EU	26
Learned Society	Young Academy of Europe	EU	232
Learned Society	ALLEA	EU	70
Learned Society	League of European Research Universities	EU	24

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Research Integrity Officers	ENRIO	EU	38
Research Integrity Officers	African Research Integrity Network	Africa	1
Research Integrity Officers	Asia Pasific Research Integrity Network	Asia	39
Publisher	Committee On Publication Ethics	Global	TBD
Research Performing/Funding Organisations	Science Europe	EU	TBD
Research Support Staff	EARMA	EU	TBD

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