An Open Toolkit for Tracking Open Science Partnership Implementation and Impact
Measurement Toolkit

Foreword

This document sets out the measurement toolkit developed in *An Open Toolkit for Tracking Open Science Partnership Implementation and Impact* in order to build a data resource through which to study and, with that knowledge, build assessment tools for open science (OS) collaborations. We recommend that partnerships complete and share the results of the Annual Report (Part A) on a periodic basis, which we suggest being once per year. A group independent from the collaboration's management – to ensure confidentiality of results – ought to administer the semi-structured interviews (Part B) to a representative sample of stakeholders each period. We suggest that the collaboration ought to administer the survey (Part C) at the beginning of the collaboration and periodically thereafter. Finally, we suggest either the collaboration's administration or an independent group ought to develop the measures in Part D during the same period as for the annual report and after having been given access to the results of the annual report.

We envision that this toolkit be implemented through information technology, rather than through manual data entry, with standard nomenclature (e.g., as to departments and institution names). Two OS organizations, the [Structural Genomics Consortium](#) and the [Montreal Neurological Institute](#) have agreed to draw upon the toolkit to collect and share data.

A. Open Science Collaboration Annual Report

Section One: Name of Collaboration

1. List the principal academic, community, industrial and governmental partners of the collaboration for the reporting period. For each partner, provide the following details:
    1.1. The organizational identifiers; and
    1.2. The sector (academic, government, industrial, philanthropic, community, etc.).

Section Two: Project Outputs

2. List all projects falling within the collaboration for the reporting period. For each project, specify the following:
    2.1. Whether the project is new, ongoing or closed;
    2.2. Whether a project plan exists. If a project plan does exist, include the project plan as an appendix to the annual report or, if it is public, provide its persistent identifier (e.g. DOI);
    2.3. Whether the project was born open, became open during the project's process, became open upon the project's completion, became open after embargo, switched from open to close, or was never open (with open being understood as available to all who desire access with minimal restrictions, e.g. clickwrap agreement); and
3. For each project listed in (2), indicate whether the project includes each of the following:
    3.1. Open governance that is available through online strategic and organizational meetings, open minutes, and transparent governance rules;
    3.2. Design processes to create, revise, and comment on projects that are openly available;
    3.3. Project proposals that are openly available;
    3.4. Project and collaboration budgets that are openly available;
    3.5. Output management plans that are openly available;
    3.6. Materials generated through the project that are openly shared to all that ask, except where there is a limited supply of physical materials;
    3.7. Outputs generated by the project that are openly available without further restriction on use, except in well-defined and publicly justified cases, e.g. to protect the privacy of patient or donor information, or the precise location of nesting sites of rare species;
    3.8. Open infrastructure through which one can access and comment on outputs, etc.
    3.9. Review of projects that is openly available;
    3.10. Clear, open and transparent research processes, such as open lab books, open research meetings, etc. that are openly available;
    3.11. Preregistration of data collection initiatives that is openly available;
    3.12. Ethics reviews and reasoning that are openly available; and
    3.13. (For closed projects or closed aspects of open projects) Provides rationale for why they are closed using a controlled vocabulary in addition to or instead of details.
4. List all publications, including preprints and outreach materials, arising out of the collaboration during the reporting period. For each publication, provide the following details:
    4.1. Persistent identifier if available, such as DOI;
    4.2. Full citation including authors, title, journal, source, etc.;
    4.3. Accessibility;
    4.4. Whether the journal in which the article is published conforms to TOP guidelines;
    4.5. From which project this publication results; and

4.6. The standard for machine readability to which the document conforms (e.g., JATS)
5. List all data sets arising from the collaboration in the reporting period. Provide the following information:
    5.1. Persistent identifier if available;
    5.2. Full citation;
    5.3. Accessibility; and
    5.4. The standard for machine readability to which the document conforms (e.g., JATS)
6. List any project in the reporting period from question (2) which did not yet result in a publication or in a published data set listed in questions (4) or (5).

Section Three: Measure of Scale

7. List all external awards, prizes and grants that recognize or directly support OS that were awarded or granted to researchers in the collaboration during the reporting period. For each of these awards, prizes or grants, provide the following details:
    7.1. Persistent identifier if available;
    7.2. Title of award, prize or grant;
    7.3. Nature of award (award, grant, prize, etc.);
    7.4. Name of awardee, with number of years following the awardee's highest degree from the date of convocation of the degree, and name of degree;
    7.5. Organization providing award, prize or grant;
    7.6. Nature of that organization (government agency, industrial, philanthropic, etc.);
    7.7. Period covered by the award, prize or grant; and
    7.8. Value of the award, prize or grant.

Section Four: Quality of Outputs

8. List all retractions arising out of the collaboration during the reporting period. For each type of output (publications, data), provide the following:
    8.1. The total number of outputs;
    8.2. The total number of retractions; and
    8.3. The summary statistics of the reasons for these retractions, using a controlled vocabulary.
9. List of all corrections arising out of the collaboration during the reporting period. For each type of output (publications, data), provide the following:
    9.1. The total number of outputs;
    9.2. The total number of corrections; and
    9.3. The summary statistics of the reasons for these corrections, using a controlled vocabulary.

Section Five: Diversity and Youth Engagement

10. Calculate the number of projects listed in (2) that have at least one non-academic (i.e., not hired to conduct research at a public research organization) stakeholder. Calculate the percentage of projects that include at least one non-academic stakeholder out of all projects.
11. List all early career researchers (ECRs), i.e. PhDs candidates, postdocs, and individuals who have received a PhD within the past 5 years, including postdoctoral fellows, who worked with the collaboration over the preceding five years. For each, provide the following details:
    11.1. Period during which the ECRs worked in the collaboration;

11.2.For each ECR who has left the collaboration, whether the ECR had ever worked or interned outside an academic environment (e.g., in industry, government or civil society) after leaving the collaboration.

Section Six: Efficiency of Outputs

12. List all legal instruments (e.g. contracts and memoranda of understanding) entered into or renewed in respect to the collaboration during the reporting period. For each contract, provide the following information:
    12.1.   Persistent identifier if available;
    12.2.   Type of instrument (Material Transfer Agreements, research, sponsorship, etc.);
    12.3.   Whether the instrument is new or is a renewal;
    12.4.   Number of days from the time that the initial instrument negotiations began (ex: request for contract initiated or request to renew) to the execution of the instrument;
    12.5.   For each Material Transfer Agreement, the number of days from initial contact to actual transfer of materials; and
    12.6.   Whether and to what extent the instrument is open (no claim to intellectual property rights, levels of commitment to open data and open publication, ability to re-share the materials under the same conditions).
13. For each type of contract, calculate the percentage of those contracts that are open.
14. List all new, ongoing or terminated start-ups and spin-outs arising from the collaboration in the reporting period. For each, provide the following details:
    14.1.   Name of firm;
    14.2.   Location (city) of the firm's head office and locations (cities) of the firm's other offices;
    14.3.   Status of the firm (new, ongoing, or terminated);
    14.4.   Relationship between the firm and the partnership (owned by one or more partners, owned by a researcher within the collaboration, etc.)
    14.5.   Number of FTEs employed by the firm at year end;
    14.6.   A description of the field of operation of the firm;
    14.7.   Whether the firm is for profit, not-for-profit, or charitable.
15. For terminated start-ups or spin-outs listed in (14):
    15.1.   For each of them, calculate the number of months from incorporation to termination.
    15.2.   Calculate the average number of months that the terminated firms survived.

Section Seven: Extended Reach

16. For each item listed in (4) publications – or (5) data – that resulted in a first citation within the reporting period:
    16.1.   Calculate the number of months between publication and first citation; and
    16.2.   Calculate the average number of months from earliest publication to the first citation for both open access publications and all other publications.
17. List all current financial or in-kind contributions to the collaboration by industry or philanthropy during the reporting period other than those listed in (7) to the OS collaboration. For each, provide the following details:
    17.1.   Persistent identifier if available;
    17.2.   The grantor of the investment and the nature of the grantor (firm, foundation, etc.);
    17.3.   The value of the investment, specifying cash and in-kind contributions separately; and

17.4.   The period covered by the investment (start and end date).
18. List all for-profit and non-profit firms or organizations that actively partnered with the collaboration during the reporting period. For each, provide the following:
    18.1.   Persistent identifier if available;
    18.2.   Name of Firm;
    18.3.   Whether the firm is for-profit or non-profit;
    18.4.   The address of the firm's head office;
    18.5.   If the firm has an office in the region, indicate its address and how many employees are employed locally;
    18.6.   If available, the firm's annual revenues;
    18.7.   Field of operation; and
    18.8.   The contributions of the firm to the collaboration.

Section Eight: Open Science Engagement

19. List whether the project that results from collaboration during the reporting period has a policy in respect of the following:
    19.1.   Sharing the research prioritization process (prioritizing certain research questions or methodologies over others);
    19.2.   Sharing proposals;
    19.3.   Sharing how funding is allocated;
    19.4.   Transparency, openness, or inclusion on governance;
    19.5.   Sharing budgets;
    19.6.   Transparency, openness, or inclusion on research design;
    19.7.   Transparency, openness, or inclusion on execution of the research;
    19.8.   TOP Guidelines 2 (Data transparency), 3 (Analytic methods (code) transparency), 4 (Research materials transparency, and 5 (Design and analysis transparency);
    19.9.   Open access;
    1.1. Openness of peer review;
    1.1. Openness of how ethics are applied in research decision-making; and/or
    1.2. Openness of rationale for exceptions to open behaviors.
2. Indicate whether the collaboration has a policy of non-open and non-standard, non-open and standard, open and non-standard, or open and standard licensing.
3. Indicate whether the collaboration:
    3.1. Has no data preservation, some preservation or a preservation policy;
    3.2. Dedicates resources for long-term preservation of data; and
    3.3. Has its data stored in certified repositories.
4. Select all that describes the collaboration's level of participation:
    4.1. Closed to observation;
    4.2. Observable by invitation (please note whether the invitations issued were public or private);
    4.3. Observable by anyone;
    4.4. Closed to contribution;
    4.5. Contribution by invitation;
    4.6. Contribution by anyone (please note whether the contributions are or can be anonymous or identified);
    4.7. Allows for passive engagement; and/or

4.8. Allows for active engagement.
5. Indicate whether the collaboration provides training on OS to the following:
    5.1. Undergraduate students
    5.2. Graduate students
    5.3. Postdoctoral fellows
    5.4. Continuing professional development for faculty and staff, e.g. clinicians, full-time researchers, research administrators, librarians, legal counsels.
    5.5.

B. Semi-Structured Interview Guides

Description

This is a semi-structured interview guide that is meant to be administered annually by open science (OS) collaborations. The purpose of the interview guide is to gather substantive qualitative measures of the benefits and costs of OS. The guide is designed to include a wide set of OS stakeholders, including full-time academic staff, early career researchers, individuals from the private sector, research participants, and ethics review board members and/or administrators. The interview results will be used for a variety of purposes including, at an aggregated level, to assess the OS partnership, to study OS partnerships in general, to assess quantitative measures of OS impact and so on.

General Instructions about Consent and Meeting Research Ethics Requirements

Please ensure that, in addition to obtaining consent for use of the raw data by those administering the survey and sharing anonymized or aggregated data generally, that the raw data can be shared with other groups who are operating under a similar protocol and who have obtained ethics approval, even if these other groups are in a different jurisdiction. Also ensure that the nature of the ethics approval and the process that led to it is as openly documented as possible.

General Questions for All Stakeholders

1. Definition
    1.1 What does Open Science (OS) mean to you?
    1.2 What is the minimal level of openness (e.g., open data, open access publications, avoidance of restrictive intellectual property rights, open grants and reviews, etc.)

2. Transparency of Research Output
    2.1. Does the OS partnership provide you with information that is useful to your organization and members in a timely and accessible manner? Please give examples, if any, of successful information sharing.
    2.2. What can the OS partnership do to improve knowledge sharing internally and externally?
    2.3. Is the OS partnership structured so that you and your organization can provide input on your information needs, information research questions, priorities, etc.? If not, why not? If yes, how does the OS partnership achieve this?

3. Public Appreciation and Understanding of Research
    3.1. Do the collaboration's partners have a plan to enable public understanding of the research being conducted and of the results?
    3.2. If so, what do you believe to be the effectiveness of this plan?
    3.3. How would you improve this plan?

4. Institutional Attitude to Transparency
    4.1. Please describe your perspective on retractions or scientific publications or data sets. Are retractions a sign that the system is working or not working? Should we aim to eliminate or at least reduce retractions?
    4.2. Has the uptake of OS and greater openness in the research process had an effect on the way you think about or handle research errors or retractions? If so, in what ways?
    4.3. Has OS contributed to greater transparency in the research and innovation process? If so, please describe how so. If not, also please describe why not.

4.4. Do you have any examples?

4.5. Do you find any changes in the way your peers view retractions and errors? What do you believe is the influence of OS on these views?

4.6. Do you believe that research transparency has a positive or negative effect on public trust in the scientific-research endeavor? Please explain.

5. Institutional Support for Staff Engaged in OS

5.1. Do you engage in OS practice?

5.2. If so, do you feel that your institution encourages and supports your efforts to engage in OS practice? In which ways do you feel supported?

5.3. What could the institution do better to support your engagement in OS practice? Specifically, does your institution's tenure and promotion policies encourage this engagement?

6. Validation of Quantitative Measures

The following question would be posed to interviewees after providing the results of the collaboration's annual quantitative audit.

6.1. Do the annual results of the quantitative data collected by the collaboration (such as institutional H-index, publication counts, number of open datasets, patent counts) accurately reflect the research impact of the collaboration's work? If so, in which ways? If not, what is missing or inaccurate?

7. Awareness of OS within your Institution.

7.1. Have you heard of OS? If so, what does it mean to you?

7.2. As for as you know, does your institution practice OS? If so, in which ways?

7.3. How did you hear about OS at your institution?

Questions for Early Career Researchers
(PhDs Candidates, Postdocs, and Individuals Who Have Received a PhD within the Past 5 Years)

8. Attitudes of Early Career Researchers to OS

8.1. Do you practice OS? If so, in which ways do you practice it (consider open grants, open peer review, open budgets, open access publications, open data sets, open laboratory books, open materials exchange, open reagents, etc.)?

8.2. If you practice OS, what motivated you to do so? How motivated are you: slightly, moderately, or significantly? What demotivates you from practicing OS?

8.3. Which factors are most important to you when assessing potential employers? How important is the employer's adherence to OS principles in assessing these factors?

9. New Pathways for Young Investigators

9.1. Do you feel supported in your career by the institution you work for/ are affiliated with? If so, please describe reasons for this. If not, also please describe why not.

9.2. Has your institution developed novel pathways to help you succeed in an OS environment? If so, in what ways?

9.3. What additional ways could your institution help you succeed?

9.4. Has the growing adoption of OS practice had a positive or negative effect on your attitude towards your research? Why?

10. Skill Diversity of ECRs Working in OS
    10.1. Over the course of your graduate studies, to what extent did you practice OS in your research? Do you have any examples of your engagement with OS from that period?
    10.2. To what extent do you feel that your experience in practicing OS gave you any of the following skills: increased empathy, more varied data analysis skills, greater understanding of other's perspectives, greater ability to be a lateral thinker, better data curation skills, more transparent research processes, and collaboration skills? How so?

Questions for Individuals from the Private Sector

11. Growth of Business Models that Use and Support OS
    11.1. Does your business draw on any OS outputs? If so, which ones? Please describe the process by which you accessed these outputs.
    11.2. What proportion of your activities are based on OS? How important are these activities to your firm's success?
    11.3. What challenges and opportunities does OS present for your business? These may include reliance on open access publications, open data sets, product development, identification of markets, identification of partners, quality control, etc.
    11.4. Please describe your business model in respect of your OS activities.
    11.5. How "open" is your business model? How, if at all, do you protect intellectual property?
    11.6. Have you invested (time/money/in-kind/know-how) in an OS initiative?

Questions for Research Participants

12. Conditions that Contribute to Trust
    OS collaborations are partnerships between different institutions, whether between institutions in the public sector or between institutions in each the public and private sectors, aiming at sharing knowledge and ideas without restrictive rights.

    12.1. Have you heard about OS?
    12.2. What do you know of OS? How would you define OS?
    12.3. How did you hear about this? Do you feel that you are sufficiently informed about OS?
    12.4. How are you involved in OS?
    12.5. Do you feel that you derive benefit from your participation in the OS collaboration? If so, in which ways? These may include greater understanding of your contribution, greater knowledge to guide your own activities, financial or other tangible reward, greater networking opportunities, etc.

Questions for Ethics Review Board Members and/or Administrators

13. Ethics Committee Preparedness
    13.1. Have you encountered OS in the context of your ethics committee work? If so, how did OS come up?
    13.2. What issues, challenges or opportunities has the ethics committee encountered in handling applications that involve OS?
    13.3. To what degree, if any, has OS had an impact on the way you approach project evaluation? In which ways? Do you see this impact as constructive and beneficial or otherwise? Please explain why.

13.4. Do you believe that your participation in evaluating research ethics applications arising from OS collaborations has altered the way you evaluate ethical concerns? If so, in which ways?

13.5. In your view, does the increase in OS practices necessitate any changes in the way you conduct ethics reviews? If so, how?

13.6. Do members of ethics committees need greater training on OS? If so, on what topics and in which ways?

C. Survey for Measurement of Open Science Engagement

Description

Open science (OS) collaborations aim to reduce transactions costs, increase sharing, and build better connections with communities. This survey is designed to identify best practices for these collaborations and to assess the ways in which the collaboration is open.

General Instructions for Selecting Survey Participants

Administer to a representative sample of individuals at stakeholder organizations within the collaboration.

Beneficial Elements

1. Do you believe these things are beneficial? Click all that apply.

	Always	Partly	Never
Open Research Grant Application			
1.1. Open research proposals	☐	☐	☐
1.2. Open reviews of research proposals	☐	☐	☐
1.3. Open funding decisions and funding allocations	☐	☐	☐
Open Methodology			
1.4. Open governance of projects through online meetings, open minutes, and transparent governance rules	☐	☐	☐
1.5. Project and collaboration budgets available online	☐	☐	☐
1.6. Open design processes to create, revise, and comment on projects	☐	☐	☐
1.7. Clear, open and transparent research processes, such as open lab books, open research meetings, etc.	☐	☐	☐
1.8. Preregistration of data collection initiatives	☐	☐	☐
1.9. Open output management plans	☐	☐	☐
1.10. Availability and use of open infrastructure through which to access and comment on outputs, etc.	☐	☐	☐
Open Outcomes			
1.11. Materials generated by the collaboration are openly shared to all that ask, except where there is a limited supply of materials	☐	☐	☐

1.12. Where materials are in limited supply, the existence of a clear set of criteria and open governance structure to decide to whom to send materials	☐	☐	☐
1.13. Outputs generated by the collaboration are openly available without further restriction on use, except to protect the privacy of patient or donor information	☐	☐	☐
1.14. Outputs, including materials, are subject to open annotations	☐	☐	☐
1.15. Publications are open access, with open license, open citations and machine actionable full text	☐	☐	☐
1.16. The outcomes of the collaboration are not subject to intellectual property rights that restrict free and open use and reuse	☐	☐	☐
1.17. All tools and software are openly accessible and reusable	☐	☐	☐
1.18. Reporting standards are openly shared	☐	☐	☐
1.19. Review of projects and of the collaboration are openly available	☐	☐	☐
1.20. Ethics reviews and reasoning are openly available	☐	☐	☐
1.21. Any exceptions to openness are transparently and openly shared	☐	☐	☐

Your Own Activities

2. Do you intend to engage in the following activities because they are relevant to you or your role? Click all that apply.

	Always	Partly	Never
Open Application			
2.1. Open research proposals	☐	☐	☐
2.2. Open reviews of research proposals	☐	☐	☐
2.3. Open funding decisions and funding allocation	☐	☐	☐
Open Methodology			
2.4. Open governance of projects through online meetings, open minutes, transparent governance rules	☐	☐	☐
2.5. Project and collaboration budgets available online	☐	☐	☐
2.6. Open design processes to create, revise, and comment on projects	☐	☐	☐
2.7. Clear open, and transparent research processes, such as open lab books, open research meetings, etc.	☐	☐	☐
2.8. Preregistration of data collection initiatives	☐	☐	☐
2.9. Open output management plan	☐	☐	☐
2.10. Availability and use of open infrastructure through which to access and comment on outputs, etc.	☐	☐	☐

Open Outcomes

2.11.	Materials generated by the collaboration are openly shared to all that ask, except where there is a limited supply of materials	☐ ☐ ☐	
2.12.	Where materials are in limited supply, the existence of a clear set of criteria and open governance structure to decide to whom to send materials	☐ ☐ ☐	
2.13.	Outputs generated by the collaboration are openly available without further restriction on use, except to protect the privacy of patient or donor information	☐ ☐ ☐	
2.14.	Outputs, including materials, are subject to open annotations	☐ ☐ ☐	
2.15.	Publications are open access, with open license, open citations and machine actionable full text	☐ ☐ ☐	
2.16.	The outcomes of the collaboration are not subject to intellectual property rights that restrict free and open use and reuse	☐ ☐ ☐	
2.17.	All tools and software are openly accessible and reusable	☐ ☐ ☐	
2.18.	Reporting standards are openly shared	☐ ☐ ☐	
2.19.	Review of projects and of the collaboration are openly available	☐ ☐ ☐	
2.20.	Ethics reviews and reasoning are openly available	☐ ☐ ☐	
2.21.	Any exceptions to openness are transparently and openly shared	☐ ☐ ☐	

Open Practice

3. Do you believe that the OS collaboration to which this questionnaire refers carries through on the following elements? Click all that apply.

		Always	Partly	Never
Open Application				
3.1.	Open research proposals	☐	☐	☐
3.2.	Open reviews of research proposals	☐	☐	☐
3.3.	Open funding decisions and funding allocation	☐	☐	☐
Open Methodology				
3.4.	Open governance of projects through online meetings, open minutes, and transparent governance rules	☐	☐	☐
3.5.	Project and collaboration budgets available online	☐	☐	☐
3.6.	Open design processes to create, revise, and comment on projects	☐	☐	☐
3.7.	Clear, open and transparent research processes, such as open lab books, open research meetings, etc.	☐	☐	☐

3.8. Preregistration of data collection initiatives	☐	☐	☐
3.9. Open output management plan	☐	☐	☐
3.10. Availability and use of open infrastructure through which to access and comment on outputs, etc.	☐	☐	☐

Open Outcomes

3.11. Materials generated by the collaboration are openly shared to all that ask except where there is a limited supply of materials	☐	☐	☐
3.12. Where materials are in limited supply, the existence of a clear set of criteria and open governance structure to decide to whom to send materials	☐	☐	☐
3.13. Output generated by the collaboration are openly available without further restriction on use, except to protect the privacy of patient or donor information	☐	☐	☐
3.14. Outputs, including materials, are subject to open annotations	☐	☐	☐
3.15. Publications are open access, with open license, open citations and machine actionable full text	☐	☐	☐
3.16. The outcomes of the collaboration are not subject to intellectual property rights that restricts free and open use and reuse	☐	☐	☐
3.17. All tools and software are openly accessible and reusable	☐	☐	☐
3.18. Reporting standards are openly shared	☐	☐	☐
3.19. Review of projects and of the Collaboration are openly available	☐	☐	☐
3.20. Ethics reviews and reasoning are openly available	☐	☐	☐
3.21. Any exceptions to openness are transparently and openly shared	☐	☐	☐

D. Additional Measures of Open Science

We list here measures that require some analysis, such as identifying the citations (including in patents) to outputs. The list that follows requires, as explained below, expansion.

Patent Citation

1. Citation intensity: Citation intensity weighted by patent family and normalised by research discipline, or technology sector. Citation intensity means the number of third party patents citing artifacts (academic publications, other publications, blogs, grant applications, laboratory books, data sets, materials, policies) derived from the OS collaboration. Citation intensity is a granular measure and can be assessed at the individual researcher level, department or institutional levels and at a different time periods. The Lens.org provides the In4M tool to calculate this number.

2. Patent Citations to Literature: The number of open access publications and data sets referenced within patents in the reporting period. This can be calculated as the percentage of all artifacts to date arising from the OS collaboration which are cited in patent literature. An alternative measure is the ratio between the average number of citations in patent documents during the reporting period in patents to the collaboration's artifacts.

Note: While only including measures on patents, it would be useful to develop indicators similar to the ones above for policy documents.

Community and Diversity

3. Equity of Knowledge Production: The percentage of funds and in-kind support made available within the OS collaboration to researchers, firms or communities in non-high-income countries with respect to overall funds. An alternative measure could include comparing how OS and non-OS projects involve marginalized groups within the research process.

4. Community Engagement: Analysis of project documentations to track the collaboration's community engagement and extent of communication and benefit-sharing with communities. Code 0 if there is no community engagement plan; code 1 if the project plan describes a community engagement plan; and code 2 if the project reports indicate the plan is being followed.