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Open Science Checklist Urban Vitality

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A. Developing the research objective and proposal ('pre-award' phase)

1. Which practice problem, theory or (lack of) evidence justifies your research?

A thorough look at the literature relevant to your problem is always recommended. Finding all that material can be an arduous task. A scoping search (with help of trained librarians/information specialists) is a natural starting point.

Open Science Research Manual Chapter: Justification

Based on: RP 2; NCCRI 3.2.4

2. How will you involve various end-users/professional practice?

Involving the end-users of your research products may cover a range of activities across the research process. For example, framing the questions, assessing feasibility, feedback on complexity of instructions and reports for lay audiences, etc.

Open Science Research Manual Chapter: Involvement

Based on: RP 1; NCCRI 3.2.1, 3.2.2

3. Which reporting guidelines will you be using?

From the very start, it is useful to orientate yourself on what constitutes optimal reporting once you are ready to communicate results.

Open Science Research Manual Chapter: Reporting guidelines

Based on: RP 4; NCCRI 3.3.23, 3.4.34-39

B. Overall

4. Do you(r team members all) have an ORCID?

What an ISBN is for books and a DOI for articles, an ORCID is for researchers: a unique and persistent identifier that helps to distinguish you from others. Get an ORCID to increase the visibility of your research.

Open Science Research Manual Chapter: ORCID

Based on: not applicable

5. How do you ensure participants' privacy (rights)?

Ensuring privacy of research participants and being transparent about how you handle personal information is of utmost importance in all research phases. It also is a complicated issue involving technical, organizational and legal measures. You will usually need professional assistance with it.

Open Science Research Manual Chapter: Privacy

Based on: NCCRI 3.2.13, 3.3.26

C. Start / planning

6. Will you turn your proposal into a (series of) research protocol(s)?

Research proposals usually lack sufficient detail to carry out your research. What you need are operating procedures (what, when, how) that will enable colleagues to take over if you should fall ill or accept another job. Replication, verification or reuse of your work is also enhanced by detailed research protocols.

Open Science Research Manual Chapter: Research proposal

Based on: NCCRI 3.2.6, 3.4.35

7. Will you write a (Statistical) Analysis Plan ((S)AP)?

If you are collecting quantitative or qualitative data, think ahead on what you will do with them to help you summarize them to be able to communicate your findings. Write it down. You may add it as a supplement to your protocol.

Open Science Research Manual Chapter: SAP

Based on: NCCRI 3.4.35

8. Will you write a Data Management Plan (DMP)?

A DMP is a digital document in which you describe what data you will collect, how you are going to store and manage the data during the project, and what will happen to the data after the project is finished. HvA uses DMPonline.

Open Science Research Manual Chapter: DMP

Based on: NCCRI 3.2.10, 3.3.23, 3.3.24

9. Will you preregister your protocol(s) and (S)AP?

Preregistration of research helps to avoid selective revealing or suppression of results and helps peers in setting up their study. We advise using UvA/HvA figshare, but you

Open Science Research Manual Chapter: Preregistration

may prefer publishing separate papers on your plans or SAP. Tools such as UvA/HvA figshare allow you to modify (and time-stamp) your plans any time they change.	**Based on:** RP 3, 4

10. Where will you obtain ethics approval?

Decide whether you will ask ethics approval from an external medical ethics committee or from the (non-medical) HvA ethics committee.	**Open Science Research Manual Chapter**: Ethics **Based on:** NCCRI 3.2.13, 3.3.26

D. During

11. How will arrange your workflow such that all (major) decisions and research steps taken are documented and accessible for others?

Being transparent about your own work can be challenging, but very important for later reuse, verification or replication. Examples include documenting deviations from planned procedures (log book), decisions to change procedures, annotating (in English) analytical syntaxes or other computer code.	**Open Science Research Manual Chapter**: Workflow **Based on:** NCCRI 3.4.35

E. End / output

12. How will you ensure reporting on all outcomes specified in your protocol?

Misunderstanding statistics, dubious signals from reviewers and editors lead many of us to focus on 'significant' findings. This practice jeopardizes the scientific literature. We have decided to pledge ourselves to avoid these practices. Preregistration of protocols and SAPs (item 9) ensures that end users can verify this pledge.	**Open Science Research Manual Chapter**: Outcomes **Based on:** RP 3, 4; NCCRI 3.3.20, 3.4.36

13. Which open access route for publishing your results do you anticipate?

Results of publicly financed research should be open for education, other researchers and professional practice. HvA policy is 100% Open Access. Will you take the golden or green route or will you self-release a publication with license and persistent identifier?	**Open Science Research Manual Chapter**: Open access **Based on:** not applicable

14. How FAIR are you?

To what extent do you apply the FAIR data principles and how do you make your work available to others (e.g. syntax, codebooks, software code, artefacts)?	**Open Science Research Manual Chapter**: FAIR **Based on:** NCCRI 3.3.23, 3.3.25, 3.4.45

Glossary

- DMP = Data Management Plan
- FAIR = Findable, Accessible, Interoperable, Reusable
- NCCRI = Netherlands Code of Conduct for Research Integrity (2018)
- ORCID = Open Researcher and Contributor ID
- RP = REWARD Pillar; 1=question/objective; 2=methods and statistics; 3=full publication of all outcomes; 4=clear reporting and contextualization
- SAP = Statistical Analysis Plan

More information / references

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