

APPENDIX A - Comparison of taxonomies*

Pontika <i>et al.</i> (2015)	Silveira <i>et al</i> . (2021)	New Proposal
 1 Open access 1.1 Definition of open access 1.2 Open access initiatives 1.3 Open access routes 1.3.1 Golden Route 1.3.2 Green Route 1.4 Open access, use and reuse 	1 Open access 1.1 Open publication 1.1.1 Golden Route 1.1.1.1 Newspaper portals 1.1.2 Data journals 1.1.3 Megajournals 1.1.2 Green Way 1.1.2.1 Institutional repositories 1.1.2.2 Thematic repositories	 1 Open access 1.1 Open access publication 1.1.1 Publication of open access books 1.2 Publication in open access journals 1.2.1 Journal without a publication fees (Diamond Route) 1.2.2 Journals with publication fees (APC) 1.3 Deposit in repositories (see Green Route) 1.3.1 Institutional repositories 1.3.2 Thematic repositories 1.3.3 Consortium repositories 1.3.4 Preprint repositories 1.2 Use and reuse of open publications 1.2.1 Copyright 1.2.2 Open licenses 1.3 Open access initiatives
 2 Open data 1.1 Open big data 1.2 Definition of open data 1.3 Open data journal 1.4 Open data standards 1.5 Use and reuse of open data 1.6 Open public data 	 2 Open data 2.1 Open big data 2.2 Open data standards 2.3 Use and reuse of open data 2.4 Open data requirements 2.5 Visualization of open data 2.6 Open public data 2.7 Open administrative data 2.8 FAIR principles 2.9 Public data 2.9.1 Data protection 2.9.2 Data anonymization 	 2 Open data 2.1 Data protection 2.2 Open research data 2.2.1 FAIR principles for data 2.2.2 Research data policies 2.2.3 Research data management 2.4 Conservation of research data 2.5 Data journal 2.6 Data deposit 2.3 Open administrative data 2.4 Open data initiatives

Pontika <i>et al.</i> (2015)	Silveira <i>et al</i> . (2021)	New Proposal
 3 Open and reproducible research 3.1 Definition of open reproducible research 3.2 Open laboratory notebooks 3.3 Open workflow 3.4 Open source code in open science 3.4 Reproducibility guidelines 3.5 Reproducibility tests 	 3 Open and reproducible research 3.1 Open methodology 3.2 Open laboratory notebooks 3.3 Open workflow 3.4 Open codes 3.5 Reproducibility guidelines 3.6 Reproducibility tests 3.7 Research integrity 	 3 Open and reproducible research 3.1 Research ethics and integrity 3.2 Open and reproducible research 3.2.1 Open laboratory notebooks 3.2.2 Open workflow 3.2.3 Open source code and software 3.2.4 Reproducibility guidelines 3.2.5 Reproducibility tests 3.3 Open and responsible research initiatives
4 Open science definition	Facet not mentioned in this version	Facet not mentioned in this version
5 Open Science Assessment 5.1 Openness and impact metrics 5.1.1 Altmetrics 5.1.2 Bibliometrics 5.1.3 Semantometrics 5.1.4 Webometrics 5.2 Open peer review	 4 Open Science Assessment 4.1 Open peer review 4.1.1 Open identities 4.1.2 Open opinions 4.1.3 Interaction with the community 4.2 Responsible metrics 4.2.1 Altmetrics 4.2.2 Bibliometrics 4.2.2.1 Open citations 4.2.3 Semantometrics 4.2.4 Webometrics 	 4 Open and responsible assessment of science 4.1 Definition of open evaluation 4.2 Open peer review 4.3 Open and accountable metrics 4.3.1 Altmetrics 4.3.2 Cybermetrics 4.3.3 Semantometrics 4.3.4 Informetrics 4.3.5 Webometrics 4.3.6 Open citations 4.4 Transparent qualitative evaluation of the curriculum 4.5 Open tools for research evaluation 4.6 Open and accountable evaluation initiatives
6 Open Science Guidelines	Facet not mentioned in this version	Term associated with Facet 5
 7 Open Science Policies 7.1 Organizational mandates 7.1.1 Funders policies 7.1.2 Government policies 7.1.3 Institutional policies 7.2 Specialized policies 7.2.1 Open access policies 7.2.3 Open data policies 	5 Open Science Policies 5.1 Organizational guidelines 5.1.1 Government policies 5.1.2 Institutional policies 5.1.3 Funders Policies 5.2 Specialized policies 5.2.1 Open access policies 5.2.2 Open data policies	 5 Open Science Policy, Statements, Guidelines and Guidance 5.1 Government policies 5.1.1 Regional policies (countries) 5.1.2 National 5.2 Institutional policies 5.3 Policies of development agencies
8 Open science projects	Facet not mentioned in this version	Facet not mentioned in this version

Pontika <i>et al.</i> (2015)	Silveira <i>et al</i> . (2021)	New Proposal
 9 Open Science Tools 9.1 Open repository 9.2 Open services 9.3 Open workflow tools 	 6 Open Science Tools 6.1 Open repository 6.2 Open services 6.3 Open workflow tools 6.4 Persistent identifiers 6.5 Data life cycle models 6.6 Interoperability protocols 6.7 Metadata standards 6.8 Open collaborative platforms 6.9 Data management plan 	 6 Open scientific tools and infrastructures** 6.1 Open source repositories 6.2 Open service providers 6.3 Collectors/compilers/harvesters 6.4 Open collaborative platforms 6.5 Open teams 6.6 Open scientific platforms 6.7 Open laboratories 6.8 Federated infrastructure 6.9 Open workflow tools 6.10 Digital preservation in open science 6.10.1 Data integrity 6.10.2 Digital preservation systems and tools 6.11 Interoperability protocols and guidelines
Facet not mentioned in this version	7 Open education 7.1 Open pedagogy 7.2 Open educational resources 7.3 Collaborative production	6 Open education** 6.1 Open educational resources 6.2 E-learning platforms 6.3 Open education initiatives
Facet not mentioned in this version	 8 Open licenses 8.1 Intellectual property 8.1.1 Copyright 8.1.1.1 Property rights 8.1.2 Moral rights 8.1.2 Sui generis protection 8.1.3 Industrial property 8.2 Open licenses 8.3 Collaborative authoring 8.4 Protection of personal and sensitive data 	Terms associated with other components
Facet not mentioned in this version	 9 Citizen Science 9.1 Citizen laboratory 9.2 Scientific dissemination 9.3 Public relations in science 9.4 Distributed computing 9.4 Collaboration networks 9.5 Crowdsourcing 	 7 Citizen science, open and participatory science** 7.1 Citizen laboratory 7.2 Scientific dissemination 7.3 Collaboration networks 7.4 Distributed computing 7.5 Citizen science initiatives
Facet not mentioned in this version	10 Digital preservation	Term associated with Facet 6 (6.10.2)

Pontika <i>et al.</i> (2015)	Silveira <i>et al</i> . (2021)	New Proposal
Facet not mentioned in this version	11 Open innovation	8 Open innovation** 8.1 Forms of open innovation 8.1.1 Maker 8.1.2 Co-creation 8.1.3 Crowdsourcing 8.1.4 Laboratories 8.1.5 Other forms and spaces 8.2 Open innovation initiatives
Facet not mentioned in this version	Facet not mentioned in this version	 9 Open dialogue with other knowledge systems 9.1 CARE Principle (Collective benefit, Authority to control, Responsibility, Ethics) 9.2 Cultural diversity 9.3 Own funds

Source: Research data (2022). Available in: https://zenodo.org/record/7837274.

*This analysis did not include the proposal by Baumgartner (2019), since the author does not present a branching structure of the components, as shown in Figure 2.

**Components that had their order altered in the Table to facilitate comparison with the versions of Pontika et al. (2015) and Silveira et al. (2021).