

## VUB Quality Criteria for Citizen Science

<p><b>Design of a citizen science research project</b></p>	<ul style="list-style-type: none"> <li>• The research (project) is centered on a <b>clearly defined scientific research question</b>.</li> <li>• The researcher or project coordinator can demonstrate that the <b>citizen science methodology</b> fits the defined scientific research question.</li> <li>• The intent, goals and results/outcomes are clear, and are being <b>communicated</b> in an <b>accessible</b> and <b>understandable</b> way.</li> <li>• The research (project) cannot have only educational or societal goals. Having a <b>scientific goal</b> is a <b>must</b>.</li> <li>• The objectives of the research (project) are impossible - or very difficult - to achieve without <b>the contribution of citizens</b>.</li> </ul>
<p><b>Participation and engagement</b></p>	<ul style="list-style-type: none"> <li>• The project involves citizens in <b>one or more phases</b> of the <b>scientific research process</b> (formulating the research question(s), method design, data collection, data analysis and the publication/communication of results).</li> <li>• The research (project) <b>actively involves</b> citizens in <b>the scientific research process</b>. Involving citizens just to question them or to collect data on them is not citizen science.</li> </ul>
<p><b>Values</b></p>	<ul style="list-style-type: none"> <li>• The research (project) is in line with <a href="#">the values of the VUB</a>. <b>Collaboration</b> and <b>multi-disciplinarity</b> are a starting point.</li> <li>• The topic and objective of the research (project) have <b>societal relevance</b>, with a clear connection to citizens, organizations, or networks in (mainly) Brussels, or, by extension, other cities.</li> <li>• A <b>democratic attitude</b> adds value for <b>all participants</b>, both citizen scientists and professional scientists.</li> <li>• Citizen scientists get <b>feedback</b> from and about the project.</li> <li>• Citizen receive <b>recognition</b> in the project results and publications.</li> </ul>

<p><b>Ethics</b></p>	<ul style="list-style-type: none"> <li>• The researcher or project coordinator considers <b>ethical aspects</b> during the design and duration of the research (project) (e.g. diversity, inclusion, gender equality, reflection on inclusion or exclusion of specific groups).</li> <li>• The researcher or project coordinator has <b>evaluated</b> and mitigated all <b>risks</b> related to participation.</li> <li>• It is clearly communicated what <b>data</b> (personal and research data) will be collected within the project or study, and participants must <b>consent</b> to this information via informed consent, prior to participation.</li> </ul>
<p><b>Data Management</b></p>	<ul style="list-style-type: none"> <li>• The project has a <b>data management plan (DMP)</b> that complies with European data protection regulations.</li> </ul>
<p><b>Open Science</b></p>	<ul style="list-style-type: none"> <li>• The <b>data and metadata</b> of the project or research will be made public, provided there are no legal or ethical arguments against doing so.</li> <li>• The <b>results</b> of the project will be published in an <b>open-access format</b>, provided there are no legal or ethical arguments against doing so.</li> </ul>
<p><b>Protocol</b></p>	<ul style="list-style-type: none"> <li>• The objectives of the research (project) can be achieved with a <b>clear and simple protocol</b>.</li> <li>• The assignment of <b>tasks and roles</b> in the project (from the project leader to citizen scientists) is clear and transparent.</li> <li>• The <b>technology</b> needed to perform the tasks is readily available for citizens, or is being provided by the researchers or project coordinators.</li> <li>• The objectives of the research (project) (amount of data needed, coverage, required number of participants) are <b>reasonable</b> and <b>achievable</b> within a given time frame.</li> <li>• The protocol ensures that the data collected by citizens are of sufficient <b>quality</b> to answer the research question (and to generate a scientific publication) and/or to derive indicators for policy.</li> </ul>

In case of any questions or remarks, do not hesitate to reach out at [citizenscience@vub.be](mailto:citizenscience@vub.be).