

Suggested changes proposed by Wikimedia Sverige

About Wikimedia Sverige

Wikimedia Sverige is a non-profit association based in Sweden, independent of political parties and religious affiliations. The association shall work towards making knowledge freely accessible to all humans, especially by supporting the projects of the [Wikimedia Foundation](#). These include some of the largest and most well used free knowledge projects in the world, such as [Wikipedia](#), [Wikidata](#) and [Wikimedia Commons](#). The association shall also work to spread knowledge about these projects, promote their use, and support technology essential for them.

Wikimedia Sverige work with other organisations, such as government agencies, cultural heritage institutions, other non-profit associations and volunteers. Many of Wikimedia Sverige's closest partners are cultural heritage institutions in Sweden and abroad. The association develops various tools and make improvements to make it easier for volunteers and partner organisations to contribute their data within e.g. campaigns like [Wiki Loves Earth](#) and projects like [FindingGLAMs](#). Furthermore, the association is developing a [speech synthesis for Wikipedia](#) so that it is possible to listen to the articles and to collect speech data through crowdsourcing for improved natural language processing.

Suggested changes and comments per principle

Principle 1: 3D digitisation of tangible cultural heritage is valuable and necessary, especially for the preservation of cultural heritage that is at risk or has high re-use value in digitised form

Suggested additions (in red) and changes:

- Adjust the current text:
 - “Limited funding may also require selecting only a number of assets for digitisation. If funding is limited prioritise which objects to select for digitisation. Focus on cultural heritage that fulfils the purpose of the project, and within this objects that are at risk or which have a high re-use value for your intended audience.”
- To the following:
 - “Limited funding may also require selecting only a number of assets for digitisation. If funding is limited prioritise which objects to select for digitisation. Focus on cultural heritage that fulfils the purpose of the project, and within **these** objects that are at risk or which have a high re-use value for your intended audience. **Experiment with different ways to reduce costs and create interest by engaging the general public in crowdsourcing activities.**”
 - Comment: With the expectation that resources will continue to be limited in comparison to the amount of objects that should be digitised cost saving measures should, in our opinion, be investigated. Engaging the population through crowdsourcing has been shown to both increase engagement but also have the possibility to save funds and allow more objects to be 3D digitised.

Principle 2: 3D digitisation projects should have clear purpose(s)

General comment:

The document as it stands undersells the potential of 3D-capture as a step in creating accessible tactile experiences for persons with visual impairments. Persons who can not see art, artefacts or architecture, but who can experience them via touch. 3D-models on a screen are no help to these individuals.

See <https://www.raa.se/in-english/outreach-and-exhibitions/guide-for-increased-accessibility-through-3d-models/> for a simple guide on tactile accessibility and how 3D-printing is one technology that can support tactile accessibility.

Suggested additions (in red) and changes:

- Adjust the current text:
 - “Have a clear definition of the digitisation purpose(s), and consider both intended immediate uses and other opportunities for use that may arise in the longer term.”
- to the following:

- “Have a clear definition of the digitisation purpose(s), and consider both intended immediate uses and other opportunities for use that may arise in the longer term. **Ensure that future re-use is not artificially limited. E.g. by unclear or restrictive licensing.**”
- Adjust the current text:
 - “The equipment and strategy of digitisation vary with the purpose of the dig.”
- to the following:
 - “The equipment and strategy of digitisation vary with the purpose of the 3D-digitisation project.”
 - Comment: Not all 3D-documentation is archaeological in purpose and even when it is, it’s not always in the context of an excavation that 3D-documentation is carried out.

Principle 3: Decide whether to digitise in-house or outsource

Suggested additions (in red) and changes:

- Adjust the current text:
 - “Seek technical advice from 3D experts with experience in the area of cultural heritage, including in particular neutral 3D experts from non-profit research institutions.”

to the following:

 - “Seek technical advice from 3D experts with experience in the area of cultural heritage, including in particular neutral 3D experts from non-profit research institutions **or civil society organisations.**”
 - Comment: Multiple civil society actors have valuable knowledge and expertise that can inform both process and priorities.
- Adjust the current text:
 - “Consider using a 3D digitisation service provider with specific experience in working with cultural heritage. **ArcTron 3D is one such example.**”

to the following:

 - “Consider using a 3D digitisation service provider with specific experience in working with cultural heritage.”
 - Comment: Removing specific provider.
- Adjust the current text:
 - “If you decide to outsource the work, be sure to specify the purpose, standards, best practices and quality outcomes expected from the work in the call for tender. It is important to specify from the outset what the quality requirements are and what has to be delivered. Potential providers need this to make proposals that

match your requirements both for immediate use and long-term preservation.”

to the following:

- “If you decide to outsource the work, be sure to specify the purpose, standards, best practices and quality outcomes expected from the work in the call for tender. It is important to specify from the outset what the quality requirements are and what has to be delivered. Potential providers need this to make proposals that match your requirements both for immediate use and long-term preservation. **Ensure that the call and contract requires that any copyrights (or associated rights) are transferred to the institution or released into the public domain.**”
 - Comment: This smooths the path for re-use outside of the original thought of scope.

Principle 4: Plan for access from the beginning, and make 3D models openly and publicly accessible in order to amplify the reach and influence of cultural heritage

Suggested additions (in red) and changes:

- Adjust the current text:
 - “Make sure that the copyright is clear. Does your organisation own the asset to be digitised or do you need to get permission from the owners? If you are outsourcing who will own the copyright of the captured and processed data? Have you agreed a licence that permits use and re-use of the content.”
- to the following:
 - “Make sure that the copyright is clear. Does your organisation own the asset to be digitised or do you need to get permission from the owners? If you are outsourcing who will own the copyright of the captured and processed data? Have you agreed a licence that permits use and re-use of the content. **When digitising objects that have lapsed out of copyright no new copyright should be reasserted. To simplify re-use it is important that a standardised, machine readable rights statements, which permit re-use for commercial and non-commercial purposes should be used, such as the Creative Commons licences (PDM, CC0, CC BY, CC BY-SA).**”
 - Comment: When digitising objects that have lapsed out of copyright no new copyright should be reasserted it is actually not a good use of copyright, see arguments <https://creativecommons.org/2019/11/20/reproductions-of-public-domain-works/> As such the CC licenses are organised with the PDM and CC0 right statements first. This addition ensures that the needs of potential re-users are in focus when specifying the copyright status. These recommendations about rights statements will ensure that Europe can innovate, learn and capitalize on its unique cultural heritage treasures.
- Adjust the current text:
 - “Make sure that metadata needed for preservation and access to the 3D content is captured throughout the workflow – from data capture, data processing to

- publication and archiving.”
- to the following:
 - “Make sure that metadata needed for preservation and access to the 3D content is captured throughout the workflow – from data capture, data processing to publication and archiving. **The metadata should be captured as machine-readable interlinked data (Linked Open Data) to enhance find-ability.**”
- Adjust the current text:
 - “Make sure that the content is available in formats that support the access you wish to provide. You may need more than one format – for example a format for 3D printing, another for online visualisation and a third for archiving?”
- to the following:
 - “Make sure that the content is available in formats that support the access you wish to provide. You may need more than one format – for example a format for 3D printing, another for online visualisation and a third for archiving? **Ensure the content is (also) available in open formats to prevent vendor lock-in or restrictive re-use.**”
 - Comment: There are numerous examples of valuable content being lost as providers go out of business or fail to keep their formats, and the tools needed to read them, up-to-date. Ensuring that the content is also being available through open formats help to limit the risk.

Principle 5: Copyright aspects need to be clear from the beginning

General comments:

- Encourage adherence to the principle that what is in the public domain should remain in the public domain as captured in a digital representation. This principle is described well in the Europeana Public Domain Charter, <https://www.europeana.eu/en/rights/public-domain-charter> This is also arguably the underlying premise of Article 14 of the EU Copyright Directive, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0790#014>
- It should also be noted in this principle that even for works that are in-copyright creating a digital representation for preservation purposes, 3D or otherwise, should not require of a collections-holding institution the explicit permission of the copyright holder. This is in line with Article 6 of the EU Copyright Directive, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0790#006>

Suggested additions (in red) and changes:

- Adjust the current text:
 - “**I**dentify the rights involved and the individuals and organisations holding them, and engage in discussions with them.”
- to the following:
 - “**For heritage assets which are not at risk,** identify the rights involved and the individuals and organisations holding them, and engage in discussions with them

prior to starting the digitisation.”

A bullet about heritage assets at risk should be added.

- For heritage assets which are at a severe risk of damage or destruction the digitisation should be initiated as soon as possible and the identification of rights involved and the individuals and organisations holding them should not take precedence.
 - Comment: This is to establish the principle that in the case of an emergency the copyright discussion does not have to take place in advance of necessary digital preservation work.

- Adjust the current text:
 - “Identify the purpose for which the digitisation is carried out, and the copyright that would be most suitable to that purpose.”
- to the following:
 - “Identify the purpose for which the digitisation is carried out, and the copyright that would be most suitable to that purpose. Ensure the chosen copyright does not needlessly limit future re-use in not yet envisioned ways. If unsure err on the side of more freedom to re-use with the most open license possible as a standard. Open licenses make it easier to have the work stored by multiple parties, aiding in long term preservation (this is in line with initiatives such as [LOCKSS](#)).”

- Adjust the current text:
 - “Integrate licensing and copyright provisions into your agreement from the start of a digitisation project, to define clear rules of access and re-use of the 3D content at any step in the digitisation process. Provide such copyright information also as part of the metadata.”
- to the following:
 - “Integrate licensing and copyright provisions into your agreement from the start of a digitisation project, to define clear rules of access and re-use of the 3D content at any step in the digitisation process. Provide such copyright information also as part of the metadata. Use standardised, machine readable rights statements that permit reuse for commercial and non-commercial purposes should be used, such as the Creative Commons licences (PDM, CC0, CC BY or CC BY-SA).”

Principle 6: Safety and protection of cultural heritage assets during and after digitisation are paramount

Suggested additions (in red) and changes:

- *No changes suggested.*

Principle 7: The equipment, methods and workflows have to match the purpose of the 3D digitisation projects and the required quality

Suggested additions (in red) and changes:

- *No changes suggested.*

Principle 8: Recommended digitisation quality is the highest quality possible

Suggested additions (in red) and changes:

- Adjust the current text:
 - “Most of the time only the final output of a digitisation is delivered to the customer. For further re-use, raw data should be required as well.”
- to the following:
 - “**In cases where the digitisation is performed by a provider** most of the time only the final output of a digitisation is delivered to the customer. **To allow** for further re-use, the raw data should be required as well **with contextual information and metadata.**”
 - Comment: The expectation is that when a separate provider (e.g. a company) is involved with the digitisation *all* the information created during the digitisation should be released.
- After the bullet starting “Post-processing is required” add a new bullet reading:
 - “**Establish a process for providing the raw data to re-users to allow them to create the 3D models which fit their needs.**”
 - Comment: Such practices will help spur innovation, interest and artistic works through and from the 3D digitisation.

Principle 9: High-quality digitisation projects should ensure adequate and comprehensive annotation of 3D models with technical, administrative and provenance metadata

Suggested additions (in red) and changes:

- Adjust the current text:
 - “Include metadata that is as rich as possible, because it supports discovery, access, and understanding of the model and of the cultural heritage asset represented.”
- to the following:
 - “Include metadata that is as rich as possible, because it supports discovery, access, and understanding of the model and of the cultural heritage asset represented. **Ensure that there is a feedback loop available for suggested improvements and corrections from re-users of the materials (what is sometimes referred to as [roundtripping](#)).**”
 - Comment: By involving the community in the work with e.g. metadata or with the models themselves valuable content will be created and should be

possible (re-)use by the 3D digitisation projects themselves.

Principle 10: Different use cases require multiple versions and formats of the same 3D asset

Suggested additions (in red) and changes:

- Adjust the current text:
 - “Make sure you follow standards and best practices. To maximise the long-term usefulness, accessibility and potential of your 3D content choose open and/or commonly used formats for 3D. This increases the potential for re-using the content for opportunities that may arise in the longer term.”
- to the following:
 - “Make sure you follow standards and best practices. To maximise the long-term usefulness, accessibility and potential of your 3D content choose open and commonly used formats for 3D. This, **together with clear licensing**, increases the potential for re-using the content for opportunities that may arise in the longer term.”
 - Comment: The choice should not stand between choosing open *or* commonly used formats for 3D. If needed the material should be made available with multiple formats, of which at least one should be an open format to ensure that the content is accessible to everybody and is persistent over time. Licensing should be highlighted also here as irrespective of the format the licensing needs to be clearly done to allow for re-use.
- Adjust the current text:
 - “Use the raw data to produce a master high-resolution 3D model, used as the basis for decimation and conversion into different formats to serve different purposes. The metadata and the paradata can be used for linking multiple version to the original 3D source when the capturing phase is the same.”
- to the following:
 - “Use the raw data to produce a master high-resolution 3D model, used as the basis for decimation and conversion into different formats to serve different purposes. The metadata and the paradata can be used for linking multiple versions to the original 3D source when the capturing phase is the same. **Establish a process for providing the raw data and/or master model to re-users to allow them to create the 3D models that best fit their needs. The holder of the content should have a long term archiving strategy in place.**”

Principle 11: All the data generated and collected is important for long-term preservation

Suggested additions (in red) and changes:

- Adjust the current text:
 - “In some cases, the raw data may require some kind of continuous processing for keeping them usable. For instance, raw proprietary data may require a maintenance process. Sometimes raw proprietary data from some laser scanners cannot be opened anymore due to new software releases. The conversion may be possible only using a step-by-step procedure (version 1 to 2, 2 to 3, etc.), but big jumps from one version to another (from version 1 to 10) should be avoided, due to the risk of file corruption. This is what has happened with some 3D databases after 15 years of storage.”
- to the following:
 - “In some cases, the raw data may require some kind of continuous processing for keeping them usable. For instance, raw proprietary data may require a maintenance process, **for this reason choose an open formats whenever possible.** Sometimes raw proprietary data from some laser scanners cannot be opened anymore due to new software releases, **for this reason consider also archiving the software needed to open the file.** The conversion may be possible only using a step-by-step procedure (version 1 to 2, 2 to 3, etc.), but big jumps from one version to another (from version 1 to 10) should be avoided, due to the risk of file corruption. This is what has happened with some 3D databases after 15 years of storage. **When necessary, actively support the development of open formats.**”
 - Comment: 3D-digitisation is a rather new area and strategic work to develop open formats early on will solve a lot of issues and challenges and prevent new ones to occur in the future (e.g. when the commercial formats can no longer be opened because of bankruptcies etc.).

Principle 12: Knowledge of 3D technologies, processes and content is a valuable effort and investment

Suggested additions (in red) and changes:

- General comment:
 - Many of the EU member states’ national heritage agencies and other heritage institutions have published guidelines and/or best practices for 3D-digitisation. These should be compiled, indexed and made available and sometimes translated.
- Adjust the current text:
 - “Training courses on 3D for cultural heritage or on 3D technologies more generally are also available via the major e-learning platforms.”
- to the following:
 - “Training courses on 3D for cultural heritage or on 3D technologies more generally are also available via the major e-learning platforms. **If you produce learning material and/or documentation on different aspects of 3D digitisation the content should be made available under fully open licences that permit reuse for commercial and non-commercial purposes (PDM, CC0, CC BY, CC BY-SA).**”
 - Comment: A huge amount of time, effort and money can be saved if the material does not have to be recreated over and over again. By allowing

reuse and improvements of the material the quality will increase over time as well, similar to how e.g. Wikipedia has become better and better over the years when more people help to improve the content.