

REF2021: Research Output Formats

This guide is for authors of REF2021 outputs.

Guide updated: 07/12/2020

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The EHU REF Decisions Panel and the Research England REF Panels need to access every output the University submits for assessment in REF2021.

This document explains what steps you need to take to make this possible.

Key updates on 25/11/2020 are highlighted yellow.

Key updates on 07/12/2020 are highlighted blue.

Further reading on this topic on the REF2021 website

If you would like more detail, this guide is informed by:

- [Submitting Research Outputs](#)
- [Guidance on Submissions, Annex K](#)

1. REF2

- There is a difference between the output record you created in Pure for the repository and the output needed for the REF2 section of the submission.
- The output file uploaded to Pure for open access reasons is not suitable for the REF.
- This guide explains when you may need to provide a file for the REF and what form that file should take.

2. What do you need to provide & when?

[Section 4](#) explains the preferred submission format for each type of output, as well as suitable alternative formats if the preferred format is not possible.

2.1 Articles & conference proceedings with a DOI

- If there is a **valid DOI** on the Pure output record for **these output types**, it will automatically be exported to the REF submission system.

If the article or proceeding you expect to be submitted to the REF **has a DOI in Pure**, you do not need to take any action (yet).

- If the DOI does not work when we check it, or the REF panel cannot obtain the output from it, you will be asked to send us a PDF. This will be urgent.

2.2 Everything else

For all other outputs you expect to be submitted to the REF, you need to provide the Research Office with a copy in a suitable format (see below) as soon as possible and **no later than 15 January 2021**.

This gives the REF Decisions Panel time to review them and us time to check and upload them to the REF submission system by the deadline on 31 March 2021.

- This means:
 - o **All** articles/proceedings **without** a DOI in Pure.
 - o **All** Other output types.
- **PDF** is the REF panels' preferred format **due to COVID-19**. **Physical outputs** should only be provided where there is no alternative.
- The same rules apply to any reserve outputs identified in the submission – they must be supplied in the submission at the same time as the first-choice outputs.

- Due to the number of REF2 outputs across the University as whole, we do not have resources to scan, convert or otherwise source your outputs for you. Neither can we search the repository to check if the version uploaded for open access is suitable for the REF.
- It is vital that you respond quickly to additional requests for outputs, as your UOA and the Research Office will need to co-ordinate many outputs at the same time.
- If we are unable to provide your output in a suitable format in the *final submission*, the REF Panel will give it a score of unclassified (0).

To avoid this risk to the University's REF submission, if the output is not provided in a suitable format in time, as stated above, it cannot be included in the submission.

2.2.1 Which output version is needed?

- The PDF copy or physical output needed for REF2 must be the final, 'published' form – or a suitable representation – of the output that the REF Panel can assess.
- Where it is not possible to submit the final version of the output **electronically**, we can submit a proof, author accepted manuscript, or another equivalent version.
 - o All the information required by the panels must be included in the PDF/URL as set out in section 4 of this document.
 - o You will need to tell us exactly which version you have supplied and why it is not the final form, so we can include the explanation in the REF submission.

2.2.2 Outputs & COVID-19

- To keep submission and assessment as simple and safe as possible, the official REF guidance is to minimise the number of physical outputs in the REF submission, opting for electronic formats wherever possible.

This means you should create/obtain and provide suitable PDF copies of your outputs for the REF wherever possible – you may need to contact your publisher.

- Doing this will reduce the risk of virus transmission between you, your UOA, the Research Office, the EHU REF Decisions Panel, the REF Team & REF warehouse at Research England, and the REF panels.

2.3 PDF format

Please e-mail PDFs to ResearchSystems@edgehill.ac.uk no later than **15th January 2021**. You cannot send a PDF for the REF through Pure.

- You may already have a copy of the output in a suitable PDF file (e.g. from your publisher).
- Or you may need to create a PDF especially for the submission (e.g. for chapters, or to collate URLs/DOIs and supplementary material for practice-based outputs).

- PDFs converted from other formats (such as eBooks) are acceptable, **provided you adhere to the appropriate copyright and licensing permissions.**
- Whatever the origin of your PDF, it **must** meet the PDF requirements below as well as the specific requirements of its output type, as per [section 4](#).

Remember: if the REF panel cannot open or access the output, it cannot assess it, so your output will be given a score of unclassified (0). **Avoid password protected files, those with time-limited access, and anything that may compromise the anonymity of the reviewer.**

2.3.1 Create a PDF: scan a new file

- Consider how easy your scan is for the panel members to read e.g. if a book's spine makes it hard to read all content in the scanned chapter, avoid using a flatbed scanner, or just scan a single page at a time instead of two pages.
- You could use the following mobile apps to scan the output:
 - o Microsoft Office Lens
 - o Adobe Scan
- These apps allow you to customise each page as you scan to maximise scan quality (see *PDF file requirements*, below).

2.3.2 Create a PDF: combine existing files

- If you already have one output spread across more than one PDF, you can merge/create them into a single file using Adobe Acrobat Pro on University PCs. Or you may have other appropriate hardware and software at home.

2.3.3 PDF file requirements

- Whichever method you use to create your PDF, it needs to:
 - o **Be one file per output** e.g. for a chapter, you will need to merge the chapter and the other required pages into a single PDF (see section 4).
 - o **Be of 'sufficient quality'** i.e.
 - Easily readable whether on screen or if printed in black and white.
 - Provides an accurate representation of the output e.g. the final published version of an article.
 - **The REF panels recommend 150dpi for images in PDFs.**
 - o **Minimise the file size** as far as practicable
 - e.g. converting directly to PDF if possible (rather than scanned)
 - If scanned, it should avoid high resolution and colour as far as possible while ensuring the PDF is of 'sufficient quality'.
 - It cannot be submitted electronically if it exceeds 100MB in size **(500MB for output types A & B – authored & edited books).**

- If a PDF of 'sufficient quality' cannot be submitted within 100MB, it needs to be submitted in a physical form instead: hard copy or on CD/DVD/USB, see below.
- Let us know if your PDF for output types A or B exceeds 500MB, we can check with the REF Team at Research England.

2.4 Physical formats

Physical outputs must be provided **contact-free**; from early December 2020 please drop the physical output off in the **designated drop-box/crate** in the open area of the Research Office (only emptied on set days). Alternatively, you may post it to the **RO**.

In either case it needs to be with us **no later than 15th January 2021**.

As PDF is the preferred format, physical outputs are dropped off or posted at your own risk – if it gets damaged or goes missing you will need to provide another copy. You can contact research@edgehill.ac.uk to check when someone may be available to retrieve the output from the drop-box.

- Depending on the output type, this could be a physical book, report, or other paper document, a CD/DVD/USB containing electronic files, or a combination of these media.
- Whatever form your physical output takes, it **must** meet the requirements below as well as the specific requirements of its output type, as per [section 4](#).
- Do not provide the only copy of the output that exists!

2.4.1 Preparing a physical output

- If the output cannot be provided using the DOI or as a PDF, as above, each physical output must:
 - o Comprise only one output.
 - e.g. a single USB can contain multiple files relating to output 1 **or** output 2, but it cannot contain files relating to output 1 **and** output 2.
 - o Be in commonly accessible formats (e.g. .pdf, .doc, .jpeg, etc.). Do not expect the panel members to have access to niche software.
 - o Be free of viruses and other malware.
- Library & Learning Services have [published advice on transferring your output to the correct file/physical format](#) for practice-as-research where appropriate (e.g. combining files onto a single readable DVD).
 - o For more advice, speak to the Library & Learning Services Academic Engagement Specialist for your department or contact REFCompliance@edgehill.ac.uk.

2.5 Web-based outputs

- For outputs submitted as a URL or DOI (where the link is included in a PDF or on a CD/DVD/USB), you must ensure that the link in the REF submission resolves to the version of the output that first became publicly available on or before 31st December 2020; examples of ways to do this include (but are not limited to):
 - o A copy of the site on the same or different web server. If the site serves dynamic content from a database, the site should use its own copy of the database, or
 - o A copy on a USB as a physical output.
- This is important for outputs that can change over time e.g. websites or databases.

2.6 Third-party hosting

- You can include a link to media hosted on third-party sites where such media is normally streamed, rather than provide the media as a file download. Such links can be included in a PDF or on a CD/DVD/USB but should only be supplied where:
 - o The media is video or audio.
 - o It is impractical to host it on the University's own site.
 - o The third-party site carries evidence of the last date when the video was uploaded/updated **or** the University (you) can evidence this.
 - o The third-party site can be accessed without requiring a login account.
 - o Access will preserve the anonymity of the reviewer.

2.7 Non-text & practice-based outputs

- For these outputs where the research dimensions are not evident within the output/representation of the output itself, a written description of the research process and/or content should be provided.
- Ideally, this information (max. 300 words) should be submitted in the REF2 'additional information' field so you cannot add it directly into Pure; you will need to provide it to your UOA Co-ordinators.
- Only where necessary to enable the panel to assess the research dimensions of the output should a fuller written description of the research process and/or content be provided as part of a PDF upload (or physical output) instead of the 300-word statement.

2.7.1 Non-text & practice-based outputs in Panel C

- Where the form of the output makes this essential, it may be supplemented by limited additional visual material in an accessible format.

2.7.2 Non-text & practice-based outputs in Panel D

- This section is informed by Annex C of the [Panel Criteria & Working Methods](#).

- An output will either consist of a single item (e.g. article, book, etc.) or an integrated presentation of a range of material that makes clear the research dimensions of the submitted work in terms of:
 - o Research process
 - o Research insights
 - o Dissemination i.e. how/where insights/discoveries were 'effectively shared', while satisfying the REF requirements around dates at which the work first entered the public domain.
- While the output should be classified as one of the allowed output types (e.g. article, book, etc.), Panel D affords authors more flexibility in what the output may contain.
- But an output must be submitted **either electronically as a PDF** through the REF submission system or as a **physical output** (e.g. paper, USB, etc.). See section 4 for more information on your chosen output type in both cases.
- Where the role of the researcher or the research process is not self-evident in the submitted output, you could choose to present the output:
 - o As a single item, either:
 - With a 300-word supporting statement, as above, or
 - Supported by contextual information (portfolio). The item and contextual information may include moving image, sonic, visual or other digital media or written text, as appropriate, to enable the panel to access the research dimensions of the work and assess its significance, originality & rigour. The 300-word statement should indicate what is the output and what is the contextual information.
 - o As a multi-component output, either:
 - With a 300-word supporting statement, as above, or
 - Supported by contextual information (portfolio). The item and contextual information may include moving image, sonic, visual or other digital media or written text, as appropriate, to enable the panel to access the research dimensions of the work and assess its significance, originality & rigour. The 300-word statement should indicate what is the output and what is the contextual information.

3. The REF submission

- For PDFs and physical outputs:
 - o If the output is associated with more than one submitted staff member in a **single UOA**, only one author needs to supply it.
 - o If the output is attributed to staff **in more than one UOA**, we need a copy from one author in **each UOA** submitting it.

- o You need to include clear enough information for us match the PDF/physical output to the corresponding REF2 record in the submission, its attributed author and the submitting UOA.
- For physical outputs:
 - o If affixing a temporary label, it needs to be secure enough that it does not detach if deposited in a drop-box, but not so we cannot remove it (we will need to add a special label for the final submission).
 - o Make sure you include a return contact, so we know who to send it to when it comes back from the REF Panel.
- Artefacts, devices, products and items of great rarity or value should **not** be deposited.
 - o Instead, a representation of the output and sufficient information about the research it embodies should be submitted to enable the panel to assess it (see section 4).
 - o However, the panel can request a viewing through the University, so you will need to be able to make such items available at short notice.

4. Which submission format do you need to provide?

Below is a summary of what you need to supply but refer to the full details in the official [Guidance on Submissions](#) – Annex K: Output glossary and collection formats for REF2 and REF3 when producing your final output for submission.

- Because this information is based on the official REF guidance, there is no flexibility in the acceptable formats.
- If the panel cannot access the output in one of the formats specified, it will not assess it so it will be scored unclassified (0).

Type code	Output type	Preferred REF submission format	Alternative format
A	Authored book	PDF of entire published book from title page to the end of the index, including: <ul style="list-style-type: none"> • Full referencing information • Any bibliography • Where applicable, any illustrations, maps, figures or similar images 	Hard copy of book
B	Edited book		
C	Chapter in book	<u>If the version of the chapter submitted IS the final, published version</u> PDF containing the pages of the book that bear: <ul style="list-style-type: none"> • Chapter as published • Book title, publisher, editor, publication date 	Hard copy of: <ul style="list-style-type: none"> • Printed scan of the same pages of the book as per the preferred submission format, or • The entire book

Type code	Output type	Preferred REF submission format	Alternative format
		<p>If the version of the chapter submitted is NOT the final, published version (section 2.2.1, above): If author IS NOT also (co-)editor of the book: Same as above plus:</p> <ul style="list-style-type: none"> • Full referencing information for chapter • Volume bibliography if it exists • Where applicable, any illustrations, maps, figures or other apparatus • Editor's introduction if setting out a case for the relationship of the chapter to the volume <p>If author IS also (co-)editor of the book: PDF of entire book (proof) from title page to the end of the index, including full referencing information and any bibliography, illustrations, maps, figures or similar images</p>	Hard copy of book
R	Scholarly edition	PDF of short written description, including details of how it can be freely accessed (e.g. URL, DOI)	Hard copy of scholarly edition
D	Journal article	DOI in Pure	Publisher's PDF version (or scanned PDF of hard copy published version)
E	Conference contribution (proceeding)	DOI in Pure	Publisher's PDF version (or scanned PDF of hard copy published version)
U	Working paper	PDF of: <ul style="list-style-type: none"> • The working paper or how it can be freely accessed (e.g. URL, DOI), and • Evidence of year of publication 	Scanned PDF of output
L	Artefact	PDF of: <ul style="list-style-type: none"> • Photographic/visual record, or • How it can be freely accessed (e.g. URL, DOI) 	Paper and/or DVD/CD/USB containing photographic visual record
P	Devices &	PDF of:	Paper and/or

Type code	Output type	Preferred REF submission format	Alternative format
	products	<ul style="list-style-type: none"> Photographic/visual record, or How it can be freely accessed (e.g. URL, DOI) 	DVD/CD/USB containing photographic visual record
M	Exhibition	PDF of: <ul style="list-style-type: none"> Evidence of year of dissemination, and Photographic/visual record, or How it can be freely accessed (e.g. URL, DOI) 	Paper and/or DVD/CD/USB containing: <ul style="list-style-type: none"> Representation of the output (e.g. recording or photographic visual record), and Evidence of year of dissemination
		See section 2.7 for additional information you may need to provide.	
I	Performance	PDF of: <ul style="list-style-type: none"> Evidence of year of dissemination, and Photographic/visual record, or How it can be freely accessed (e.g. URL, DOI) 	Paper and/or DVD/CD/USB containing: <ul style="list-style-type: none"> Representation of the output (e.g. recording or photographic visual record), and Evidence of year of dissemination
		See section 2.7 for additional information you may need to provide.	
F	Patent	PDF of published patent application/granted patent	Hard copy
J	Composition	PDF of: <ul style="list-style-type: none"> Evidence of year of dissemination, and Details of how audio recording (if available) can be freely accessed (e.g. URL, DOI), and/or Score 	Paper and/or DVD/CD/USB containing: <ul style="list-style-type: none"> Evidence of year of dissemination, and Audio recording (if available) and/or Score
		See section 2.7 for additional information you may need to provide.	
K	Design	PDF of: <ul style="list-style-type: none"> Evidence of year of dissemination, and Photographic/visual record, or How it can be freely accessed (e.g. URL, DOI) 	Paper and/or DVD/CD/USB containing: <ul style="list-style-type: none"> Photographic visual record, and Evidence of year of dissemination
N	Research	PDF of:	Hard copy of report

Type code	Output type	Preferred REF submission format	Alternative format
	report for external body	<ul style="list-style-type: none"> • Year of publication/dissemination, and • Published report, or • How it can be freely accessed (e.g. URL, DOI) 	bearing year of publication/dissemination
O	Confidential report for external body	PDF of: <ul style="list-style-type: none"> • Report, and • Evidence of year of receipt (e.g. letter, e-mail, delivery notice) 	Hard copy of: <ul style="list-style-type: none"> • Report, and • Evidence of year of receipt (e.g. letter, e-mail, delivery notice)
G	Software	PDF of: <ul style="list-style-type: none"> • Written description of the software, and • Details of how the software, and if relevant, source code, can be accessed (e.g. URL, DOI) 	n/a
H	Website content	PDF of: <ul style="list-style-type: none"> • Content as at date of publication (e.g. date certified electronic copy of content), or • How it can be freely accessed (e.g. URL, DOI) 	Hard copy: <ul style="list-style-type: none"> • DVD/CD/USB containing content as at date of publication (e.g. date certified electronic copy of content), or • Date-stamped printout of content
Q	Digital or visual media	PDF of: <ul style="list-style-type: none"> • How it can be freely accessed (e.g. URL, DOI), and • Evidence of year of dissemination 	<ul style="list-style-type: none"> • Evidence of year of dissemination, and • The published DVD, CD or other visual output, or • DVD/CD/USB containing a digital or other visual copy of the broadcast content
S	Research data sets and databases	PDF of: <ul style="list-style-type: none"> • Written description of the data set or database, and • How it can be accessed (e.g. URL or DOI), where relevant. Not a copy of the data set or database.	n/a

Type code	Output type	Preferred REF submission format	Alternative format
V	Translation	PDF of: <ul style="list-style-type: none"> • Output, or • Description of output and how it can be freely accessed (e.g. URL, DOI) 	PDF of: <ul style="list-style-type: none"> • Output, or • Description of output and how it can be freely accessed (e.g. URL, DOI)
T	Other	PDF of: <ul style="list-style-type: none"> • Evidence of year of dissemination (if not clear from output), and • Representation of the output, or • Details of how it can be freely accessed (e.g. URL, DOI) 	<ul style="list-style-type: none"> • Evidence of year of dissemination (if not clear from output), and • Actual output, or • Paper and/or DVD/CD/USB containing a representation of the output