

RMarkdown, Bookdown or ClavertonDown?

Emma Cliffe, Skills Centre: MASH

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An introduction

- Requirements
- Formats and transforms
- RMarkdown
- Bookdown
- Clavertondown

1 Requirements

- Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations requires at least one of:
 - Web: WCAG 2.1 AA + MathJax!
 - Word 365: Accessibility checker + Equation editor
 - PowerPoint 365: Accessibility checker + Equation editor
 - EPub3 with MathML
- Equality Act 2010
 - Authors may need to provide additional formats to meet the needs of a specific student

2 Formats and transforms

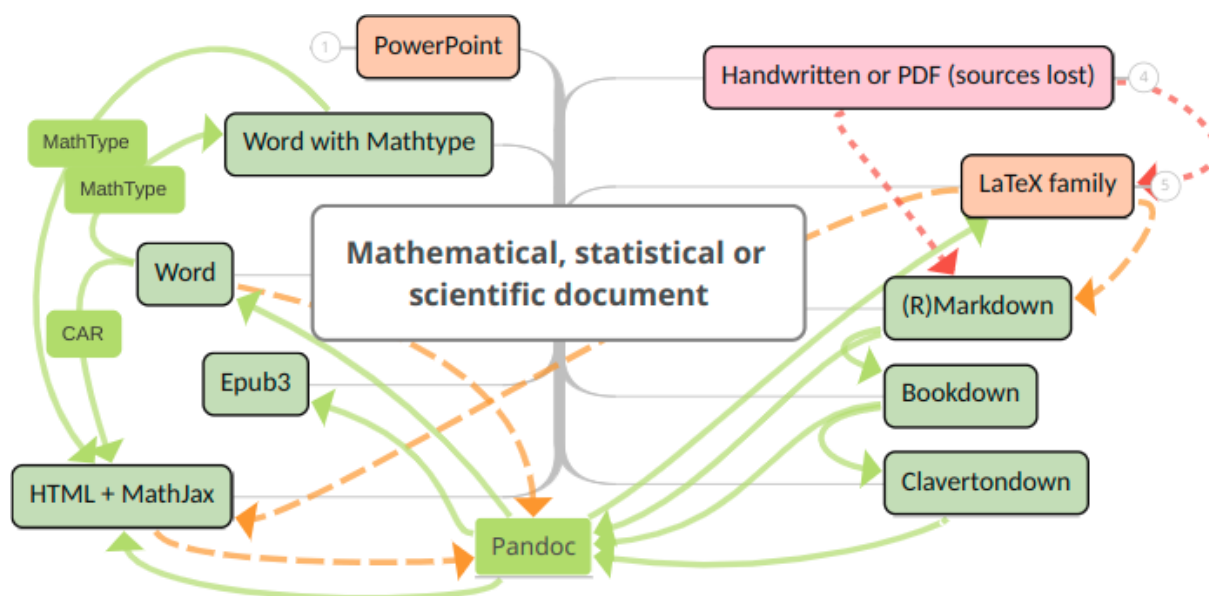


Figure 1: Accessible and interactive map at <https://www.mindomo.com/mindmap/document-transforms-2d8186b662758e26ccf50ef82a3828b2>

3 RMarkdown

- Simple one page documents
 - Accessible: HTML, Word
 - Accessible if no mathematical content: ODT, RTF
 - Inaccessible: LaTeX/PDF
- Slides
 - Possibly accessible: PowerPoint, HTML using ioslides, reveal.js, Slidy
 - Inaccessible: LaTeX/Beamer

4 Bookdown

- Designed to enable authors of **books** or longer structured documents
- Needed for:
 - Parts and appendices
 - Finer control of figures
 - Automatic numbering and cross-referencing of figures, tables with captions
 - Cross referencing of pieces of text
 - Equation numbering and referencing
 - Theorem and proof environments with numbering and referencing
 - Definition of custom environments
 - Citation management via Pandoc, biblatex or natbib
 - Embedding of web pages and HTML widgets
- Output to HTML book, LaTeX/PDF and EPub3 only

5 ClavertonDown

- Designed to enable authors of **lecture notes** to meet the diverse needs of students by production of a coherent **set** of formats
- Needed for:
 - Bookdown features but with transformation to Word
 - Flexible theorem-like environments akin to newtheorem in LaTeX including styling, numbering and classification of type to enable structured colour
 - * Numbering system of inbuilt Bookdown theorems can be changed
 - * It is possible to reference other environments within theorem names
 - * Unnumbered theorem environments
 - * Shared numbering e.g. between theorem and proposition
 - * Newtheorem-type definition of theorem-like environments
 - * Repeating theorem-like environments
 - Inclusion of figures in knitr engine based custom blocks including all theorem-like
 - Supplied limited controls over visual presentation to enable a coherent set of notes with
 - * Known accessibility features
 - * Clear visual markers of structure
- Output as a mini-linked site of a set of formats which can include HTML book, HTML page, Word, EPub3, standard PDF, clear print PDF and large print PDF

6 More information

- [ClavertonDown](#)
- [MASH Accessible Maths project](#)