RMarkdown, Bookdown or Clavertondown?

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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:

- – 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 WHATSIT custom blocks
- – Limited control 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
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6   More information

- ClavertonDown

- MASH Accessible Maths project