DocWright

Technical Reference

Making documents accessible.

Overview

DocWright is a locally installed desktop application that automatically remediates course documents to meet LMS accessibility requirements. It processes PDF, DOCX, and PPTX files, applies structural accessibility fixes, and uses AI-assisted image description to address the most common causes of low accessibility scores.

The tool is designed for faculty use with no accessibility expertise required. Documents are processed entirely on the faculty member's machine — no files are uploaded to any institutional or vendor server. The only external call is an optional AI step that sends document images to an AI service for description generation.

Deployment model	Desktop application — installed per machine, runs locally in the browser
Supported platforms	Windows 10/11, macOS 12+
Supported file types	PDF, DOCX (Word), PPTX (PowerPoint)
Internet required	Only for the optional AI image/equation description step
Data residency	Documents stay on the faculty machine. Only images leave during the AI step
LMS compatibility	Any LMS with an accessibility checker (Blackboard Ally, Canvas, Moodle, etc.)
License model	Per-institution annual license — contact us for pricing
Current status	Pilot deployment — Rowan College at South Jersey

Capability Matrix

The table below shows what DocWright fixes automatically, what requires the optional AI step, and what cannot be fixed programmatically for each file type.

Issue	PDF	DOCX	PPTX
Missing or incorrect headings	Auto	Auto	—
Missing document title	Auto	Auto	Auto
Missing language tag	Auto	Auto	Auto
Images with no alt text	AI	AI	AI
Images with placeholder alt text	AI	AI	AI
Math equations (Word/OMML)	—	AI	—
Math equations (LaTeX/tagpdf)	AI	—	—
Charts and diagrams	AI	AI	AI
SmartArt diagrams	—	Auto	Auto
Missing slide titles (PPTX)	—	—	Auto
Video embeds (PPTX)	—	—	Auto
Poor reading order	Auto	—	—
Low colour contrast	Partial	Partial	Partial
Print-to-PDF (no text layer)	Partial	—	—
Scanned PDF (image only)	Partial	—	—
Password-protected PDF	Partial	—	—
InDesign/Illustrator PDF	Partial	—	—
Inline math as text/vector in PDF	Partial	—	—
Complex table relationships	Partial	Partial	—
Fillable PDF form fields	Auto	—	—

Auto = fixed automatically • AI = requires AI step (internet) • Partial = detected, may need follow-up • — = not applicable to this file type

Note on colour contrast: DocWright detects and reports low colour contrast but cannot automatically change colours — doing so would alter the document's appearance without the author's intent. The fix must be made in the source application. DocWright provides specific guidance in the fix report.

Recommended Workflows by Source Type

Accessibility outcomes vary significantly by how the original document was created.

Word Document (DOCX) — Best results.

- Author saves as .docx (never print to PDF from Word)
- Drop DOCX into DocWright → click Fix Accessibility
- If equations or images are present → click Generate AI Descriptions
- Click Export as Accessible PDF
- Upload the PDF to the LMS

PowerPoint Presentation (PPTX) — Best results for presentations.

- Author saves as .pptx
- Drop PPTX into DocWright → click Fix Accessibility
- If images are present → click Generate AI Descriptions
- Download the fixed PPTX and upload to the LMS

PDF from Word or PowerPoint — Good results.

- Export PDF using File → Save As → PDF (not Print → Save as PDF)
- Drop PDF into DocWright → click Fix Accessibility
- If equations or images are present → click Generate AI Descriptions
- Download and upload to the LMS

LaTeX PDF — Full results require LuaLaTeX + tagpdf.

- Add tagpdf to LaTeX preamble, recompile with LuaLaTeX
- Drop PDF into DocWright → AI step will describe equations
- See Faculty Guide for full LuaLaTeX setup instructions

InDesign PDF — Limited results.

- Fix colour contrast in InDesign source first
- Export PDF from InDesign with accessibility tags enabled
- Drop PDF into DocWright → click Fix Accessibility

Print-to-PDF — Limited results — best effort only.

- Best outcome: locate source file and re-export properly
- If source unavailable: drop into DocWright — partial fixes applied
- Score will improve but is unlikely to reach 95%+ without re-export

Privacy and Data Security

Local Processing

DocWright runs entirely on the faculty member's machine. The application is a local web server that opens in the faculty member's browser — there is no cloud service, no shared server, and no network traffic during normal operation. Documents are never transmitted to any DocWright server at any point.

The AI Step — What Leaves the Machine

The optional AI image description step sends images extracted from the document to the Anthropic Claude API for description generation. This is the only point at which any document content leaves the faculty member's machine.

What is sent	What is NOT sent
Cropped images of individual figures, charts, equations	Document text content
A brief prompt with document title and context	Student data or personally identifiable information
	Full document pages
	File metadata (author, institution, etc.)

FERPA Considerations

Because document text is never transmitted and only images are sent during the optional AI step, DocWright is designed to minimise FERPA exposure. Institutions should review Anthropic's data processing terms for API usage before deployment, particularly for documents that may contain student work or personally identifiable information. The AI step can be skipped entirely if institutional policy requires it — all other fixes run without any network activity.

API Key Management

The AI step requires an Anthropic API key. The recommended model for institutional deployment is for the institution to obtain its own Anthropic API key — this keeps usage and billing fully under institutional control and avoids any dependency on a third-party vendor key. The API key is entered once by IT during deployment and stored locally in a configuration file, encrypted at rest using the operating system's built-in data protection (Windows DPAPI, scoped to the logged-in user account). Faculty never see or interact with the key.

System Requirements

Component	Windows	macOS
Operating system	Windows 10 or 11 (64-bit)	macOS 12 Monterey or later
Microsoft Word	Required for DOCX → PDF export (Office 2016+)	Required for DOCX → PDF export (Office 2016+)
LibreOffice	Bundled — no separate installation required	Bundled — no separate installation required
Internet	Required only for AI step	Required only for AI step
Disk space	~1.2 GB (includes bundled LibreOffice)	~1.2 GB (includes bundled LibreOffice)
RAM	4 GB minimum, 8 GB recommended	4 GB minimum, 8 GB recommended
Admin rights	Not required	Not required

Known Limitations

The following limitations are inherent to the current approach and are documented here for completeness. Each is communicated clearly to faculty within the tool with specific guidance on alternatives.

Scanned PDFs

A PDF created by scanning a paper document contains no text layer — only a photograph of each page. DocWright detects this condition and advises users to run OCR first using Ally's built-in OCR feature (Canvas/Blackboard), Adobe Acrobat, or Google Drive before re-processing.

Password-protected PDFs

Encrypted PDFs cannot be opened or modified. DocWright displays a clear error message advising the user to remove the password in Acrobat or Preview before processing.

Low colour contrast

DocWright detects and reports low colour contrast issues but cannot automatically change colours without altering the document's visual appearance. The fix must be made in the source application (Word, PowerPoint, or InDesign).

Complex table relationships

Tables with merged cells, nested headers, or irregular structure may not be fully remediable. The tool fixes what it can and reports what remains.

Inline math rendered as text or vector in PDF

Some PDF workflows render equations directly as text glyphs or vector paths without structural tagging. These cannot be identified or described automatically. The tool reports this when detected.

Print-to-PDF files

PDFs created with a print driver have no text layer or structure. DocWright can repair metadata but cannot reconstruct headings or reading order. Score improvement is partial without re-export from the source application.

Multi-column reading order in complex layouts

PDFs with complex multi-column layouts (e.g. academic journal articles with unusual structure) may have reading order issues that require manual inspection. Standard two-column layouts are handled correctly.

Colour as the only means of conveying information

If a document uses colour alone to convey meaning (e.g. a red cell means "fail"), this cannot be auto-corrected. The tool does not currently detect this pattern.

Accessibility Standards Addressed

Standard	Relevance	Coverage
WCAG 2.1 AA	Web Content Accessibility Guidelines	Text alternatives (1.1.1), reading order (1.3.2), language (3.1.1), headings (2.4.6)
Section 508	US federal accessibility law — applies to higher education receiving federal funding	PDF and document remediation aligns with Section 508 technical standards
PDF/UA (ISO 14289)	International standard for universally accessible PDF	Structure tagging, alt text, reading order, and language tags align with PDF/UA

Licensing and Deployment

License model	Per-institution annual license
Deployment	Per-machine installation via standard installer (.exe / .pkg)
API key	Institution provides Anthropic API key — billed directly to institution
Support	contact@docwright.org — response within one business day
Updates	Included during pilot period; update terms confirmed at contract signing
Evaluation	Available on request — contact us to arrange an evaluation build
Contact	Gregory Buthusiem · contact@docwright.org · (856) 817-5100

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