Automating & Systematizing the Generation of Documents Related to Water Rights

Tim Wallin

Water Rights Program Manager

Oregon Water Resources Department

June 8, 2015

Challenges

- Backlogs make faster & more accurate processing of business products an imperative

- Document creation & editing is labor-intensive; the introduction of human error by repetitively typing potentially referential information is a certainty

- Too few staff in IT to respond quickly

Objective

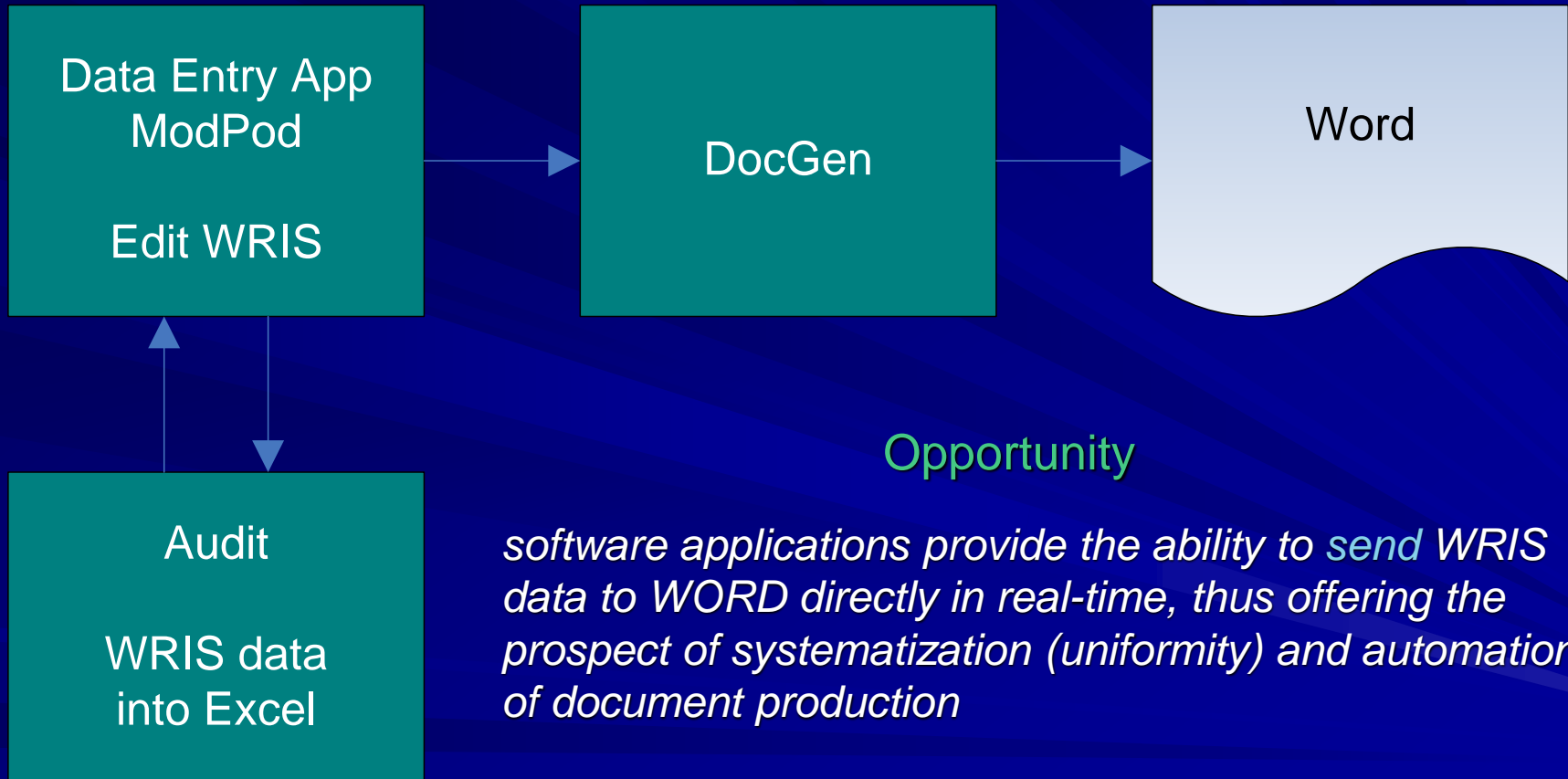- use technology to facilitate work & eliminate backlogs
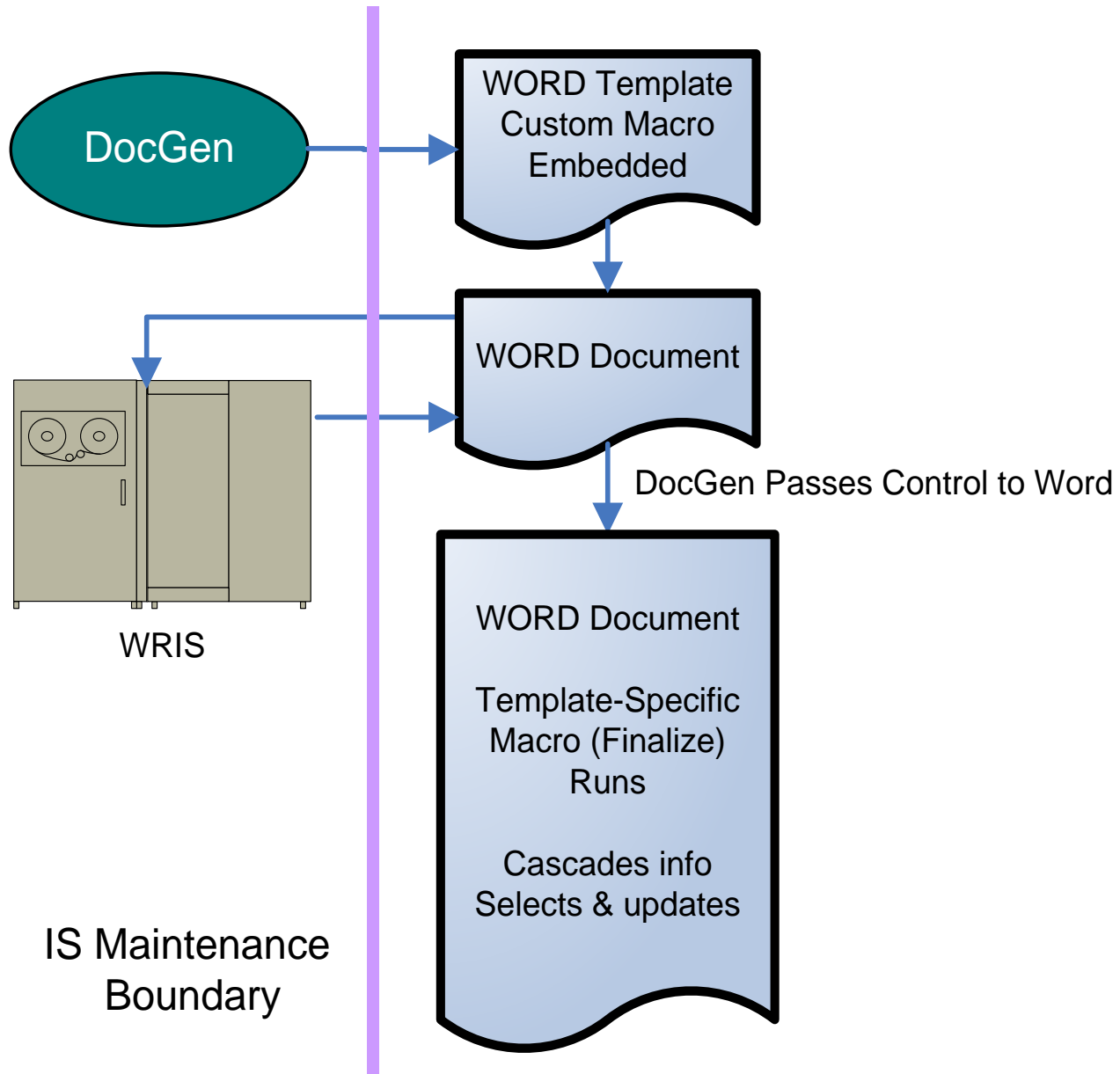
You are a Symbol Manipulator

- smooth flow of information is vital to success

- the attention of skilled people is very expensive

- incrementalism is anything but incremental:
  - creates FTE out of thin air
  - allows staff to work at a higher cognitive level

Solutions

- **Originating rights:** use a system of templates with custom macros to *receive* data from the enterprise database (WRIS) in WORD, & distribute it automatically

- **Transfers:** use Excel to compare POU data from two rights in WRIS to highlight differences (QQ = smallest POU "pixel" in WRIS) $\rightarrow$ draw the caseworker's attention to them (large-scale maps illustrate finer POU details)

Three Applications

Data Entry App ModPod

Edit WRIS

→ **DocGen** → **Word**

Audit

WRIS data into Excel

Opportunity

software applications provide the ability to send WRIS data to WORD directly in real-time, thus offering the prospect of systematization (uniformity) and automation of document production

DocGen

WORD Template
Custom Macro
Embedded

WORD Document

WRIS

DocGen Passes Control to Word

WORD Document

Template-Specific
Macro (Finalize)
Runs

Cascades info
Selects & updates

IS Maintenance
Boundary

Noteworthy Features 1

- Completed documents can be generated via several mouse clicks

- Complex formatting is synchronized among all documents, thus precluding the need for reformatting after cut & paste operations

- Data occurring more than once in documents is cascaded throughout the document automatically (e.g., transfer number, certificate number, etc.)

Noteworthy Features 2

- Personalized contact information for each caseworker is inserted automatically in documents

- The content of headers & footers is dynamic, with information and formatting self-adjusting automatically (no editing required)

- Virtually all functionality is transparent to the user

Switch to DocGen

Generate Final Order & Permit
for G-XXXXX

Switch to Audit

Compare POUs for T-XXXXX

Significance

- dramatically reduces the introduction & propagation of errors in business processes, & thus WRIS

- makes resulting documents more uniform

- speeds document production

- precludes the preparation, approval, & data-entry for correcting orders (because they don't exist)

Quantitative Improvement

- Pending water-right application caseloads:
  - Originating Rights: 1500 $\rightarrow$ 250
  - Transfers: 780 $\rightarrow$ 200

- Qualitative improvement *even more* important
  - High cost of re-work by staff & management ($$$)
  - Legal exposure: win eventually, but at what cost?

Advantages

- real-time interaction with WRIS

  - when used with a WRIS-editing application, allows staff to edit data directly $\rightarrow$ does not require dependence on others $\rightarrow$ staff can "own" the entire edit $\rightarrow$ reduces transactional friction (a trip to Data Center)

- simpler document-generation system (not path-dependent) $\rightarrow$ allows a simpler electronic file storage & retrieval system for business products

- allows the Sections to retain control of modifications to document content & formatting $\rightarrow$ frees IS from maintenance programming

- initial programming investment can be leveraged by all agency staff

Questions / Comments ?

- extend DocGen capability across organization:
  - cover letters
  - forms
  - notices
  - ??