
Welcome to the 17th Annual
EMUG BOSTON
#EMUG2019

EMUG 2019

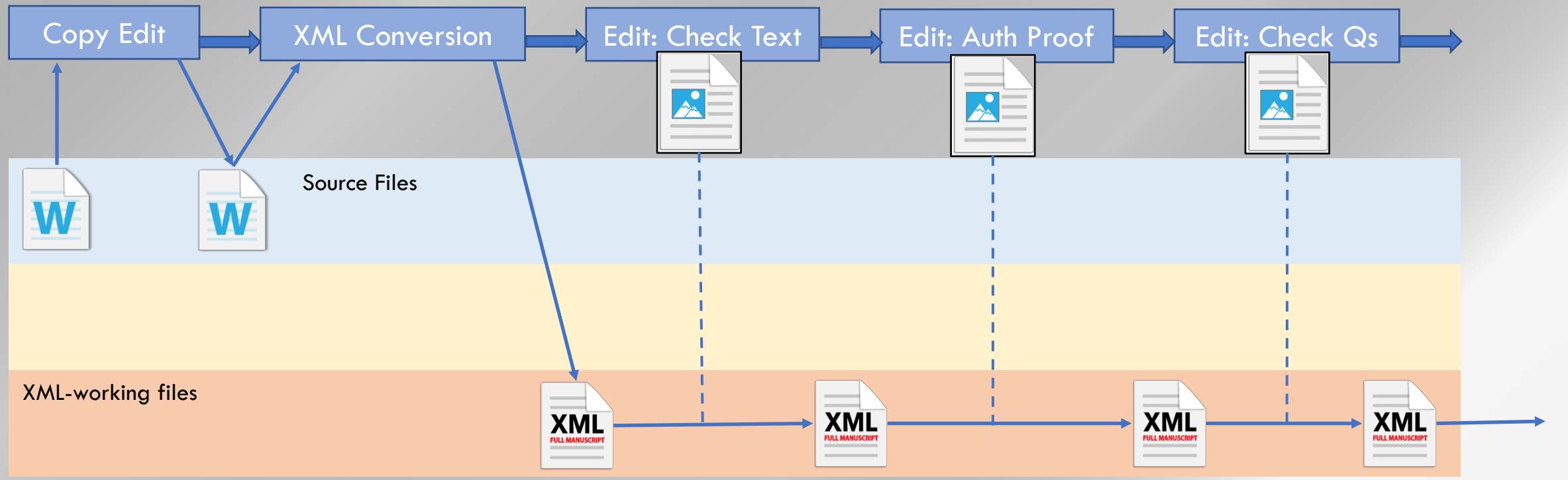
Update on LiXuid MS

SJ MacRae
C O'Connor
Business Systems Analysts

Aries systems
Publish Faster. Publish Smarter.

Where are we heading?

XML Workflows!



And how does Aries plan to get there?

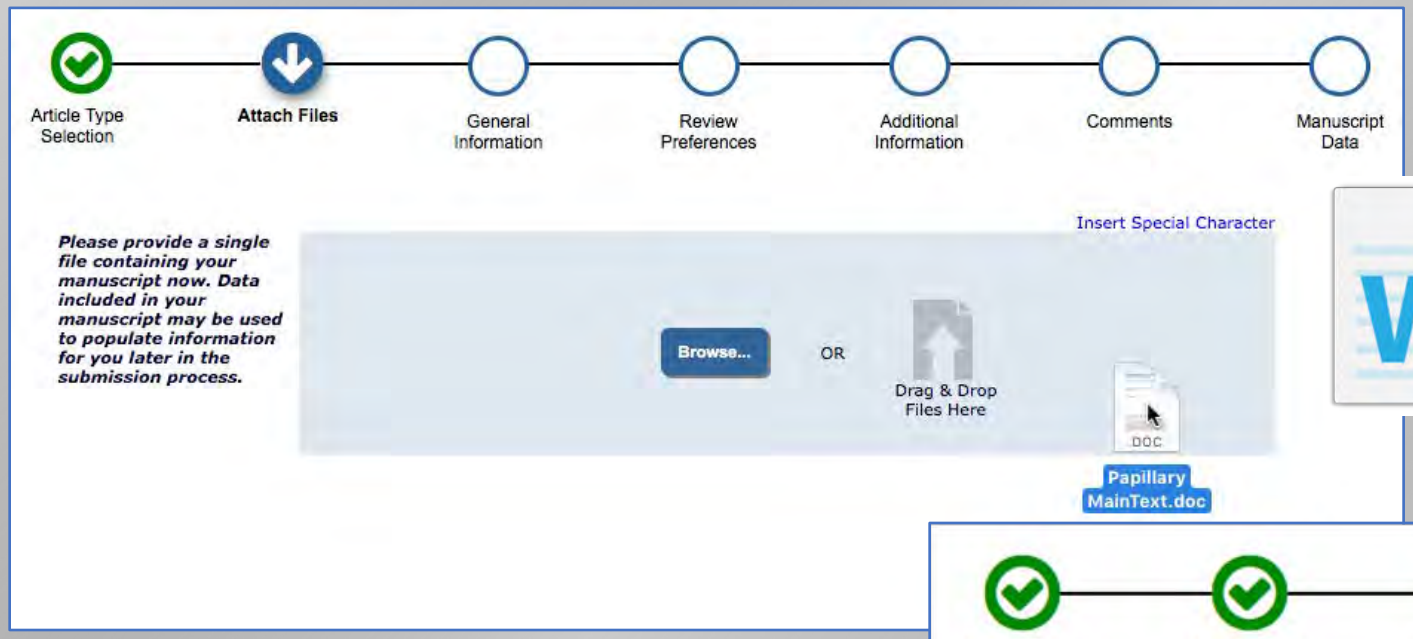
- Phase 1 – done! Front Matter conversion
- Phase 2 – Production-oriented Tasks (also TaskManager)
- Phase 3 – Bring into Peer-Review

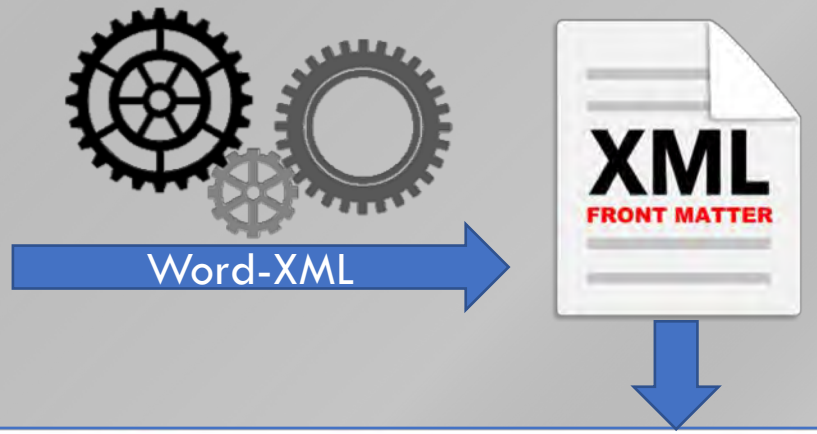
Phase 1

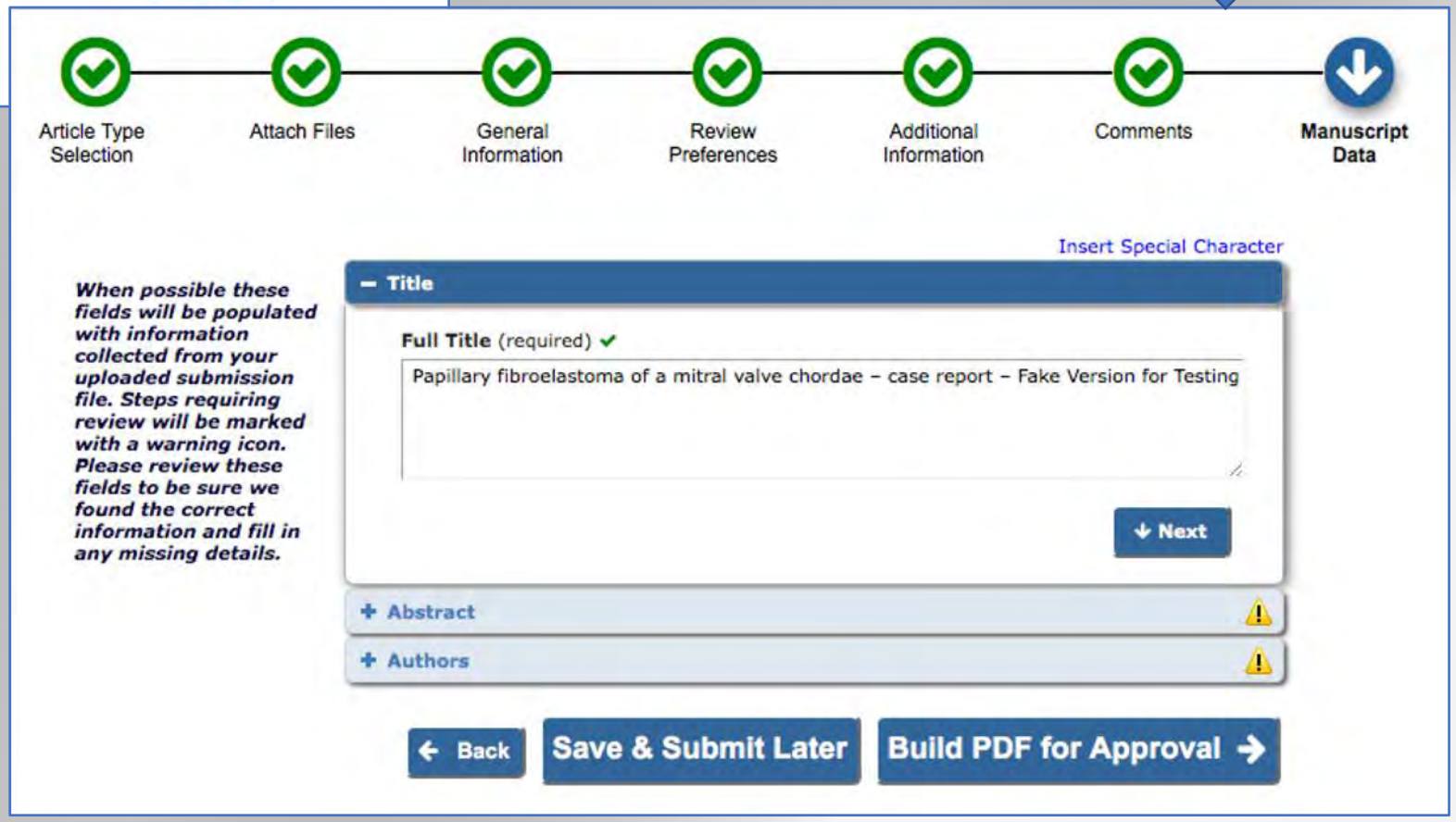
Front-Matter Conversion to XML on Submission

Phase 1 – Metadata Extraction on Submission

- Already released to all customers
- XML used behind-the scenes
  - Word doc part-converted to XML
  - XML used to populate EM
- Part of new submission UI:







Conversion to XML proceeds while Author completes other information

EM extracts metadata from converted XML ‘front matter’ to present to author on the last step

Phase 2

XML in ProduXionManager/TaskManager Workflows

Introducing Aries XML

- XML Files can be handled as Companion Files
- But LiXuid MS adds new ‘Aries XML’ file stream
- Specific XML format
  - Subset of JATS
  - Allows us to develop internal tools that expect this format

File Inventory

Aries XML – special XML file stream per submission

Aries XML?

- Subset of JATS 1.2 (Publishing)
  - 100% valid to JATS 1.2
  - JATS has 16 ways to associate authors and affiliations; Aries XML has 1
  - This allows us to develop tools based on this narrower subset
- Aries Full-Text Tagging Guidelines
  - Not everything can be restricted by the DTD
  - “Empty” cross refs for numbered bibliographies allow automation
- Compliant with JATS4R
  - Optimized for re-use and machine readability

New ‘XML Tool’ Tasks to cover key processes

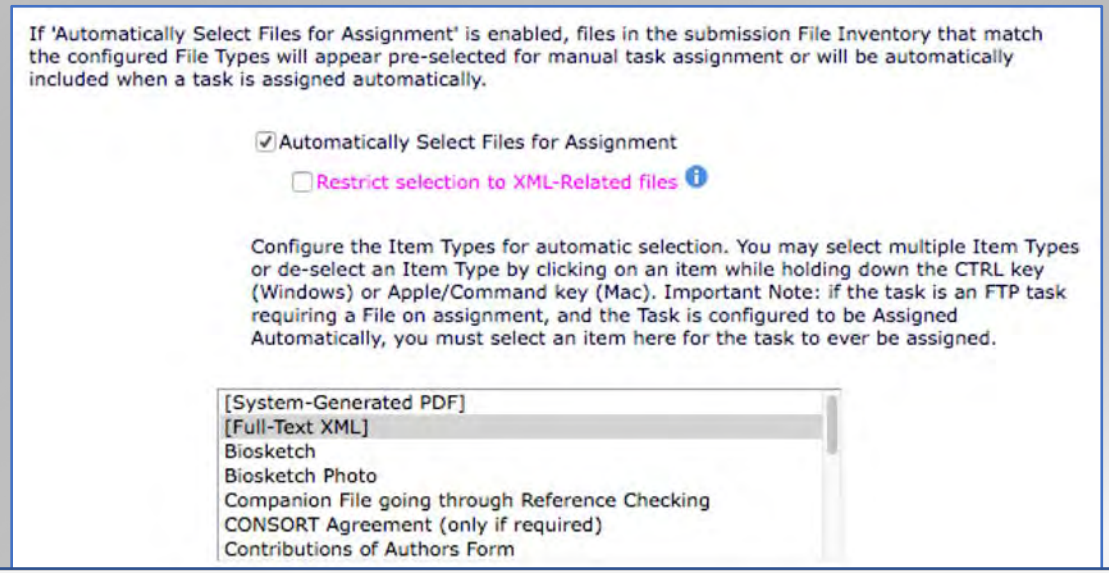
- Sending XML to third parties
  - Any Task can send out Companion File XML or Aries XML
- Transforming and Validating XML
  - Custom transforms for converting XML (e.g. to/from Aries XML)
  - Validating to Aries or non-Aries XML DTDs (structure)
  - Applying Schematron Rules (structure and content)
- Online Editing of the full document text in EM
  - By content experts not XML Editors
  - Hide the XML, while allowing creation of valid elements
  - Requires Aries XML file
- Conversion to XML

Aries XML Export

Available for any task

Aries XML Assignment File

- Aries XML selectable for any Task Assignment
- Or configurable under Automatic Assignment File Selection
- Or you can use Companion Files

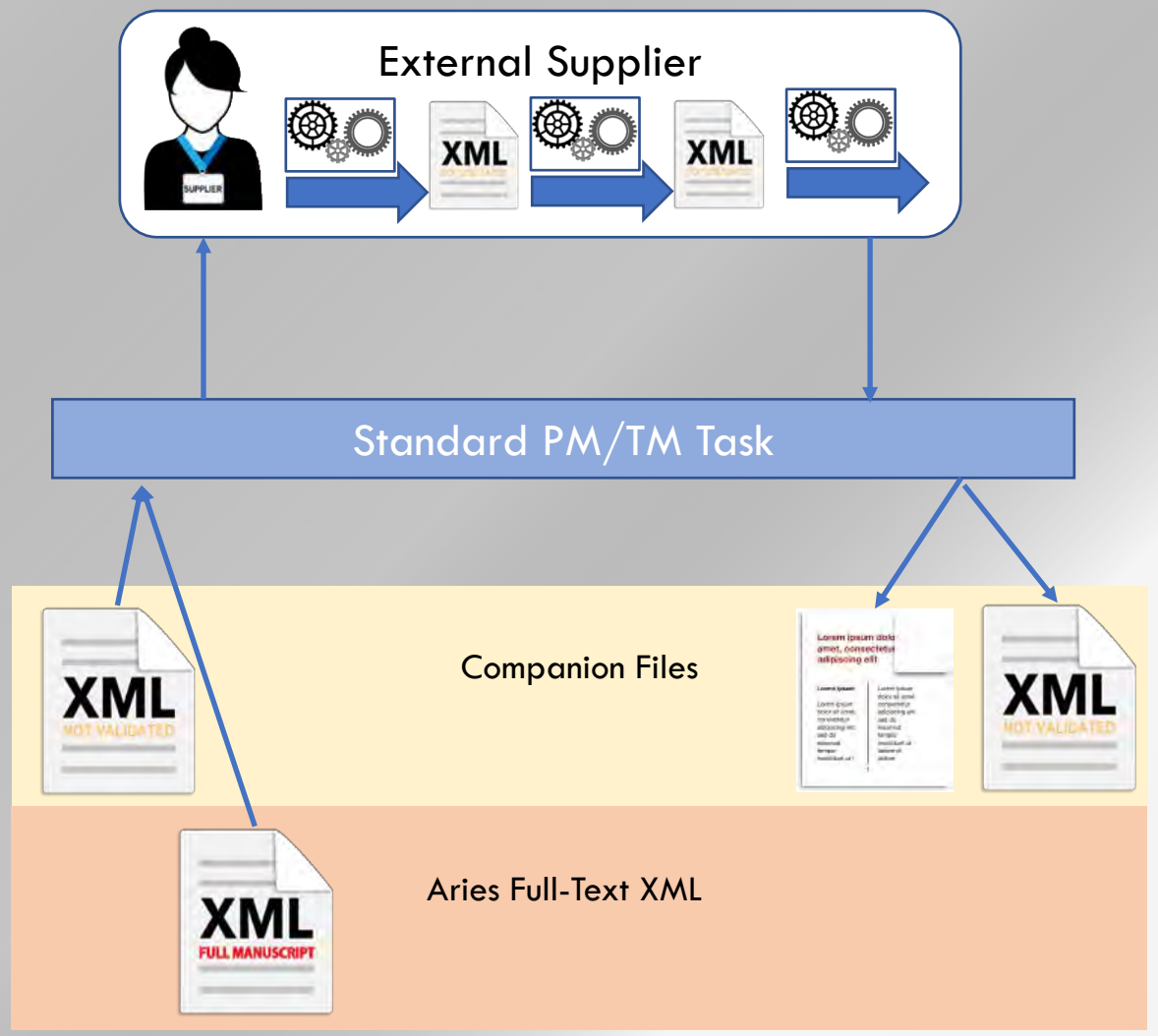


Submission Files

Item	Description	Item Family	File Name	File Reference	Size	Last Modified	QC Results	Use in XML	Allow Download
	PDF						N/A	✓	☐
Full-Text XML	XML		AJO_AJO-04-1344.xml		429.5 KB	Nov 01 2004 5:15PM	N/A	✓	☑
Abstract (MUST be submitted as	Abstract (MUST be submitted as a	Default	041002 Safety Abstract		20 KB	Oct 4 2004	N/A		☐

XML Transfer, any Task

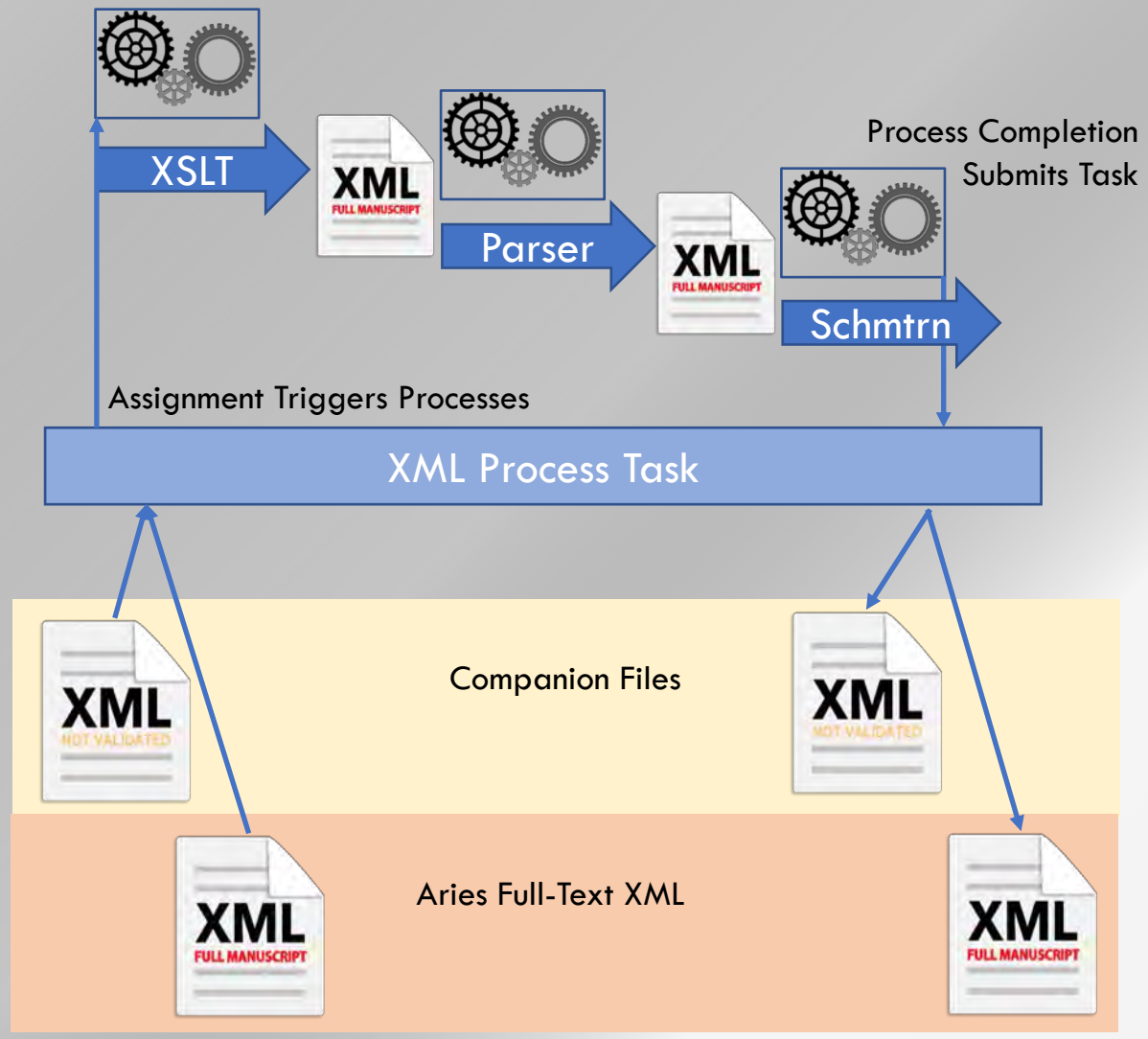
- Export Aries JATS XML to 3rd parties
  - If your supplier can use it directly
- Or a Non-Aries XML Companion File
- For whatever purpose
  - To get more XML back
  - Or to e.g. Typeset proofs from it
- To 'round-trip' Aries XML requires another Task Type…

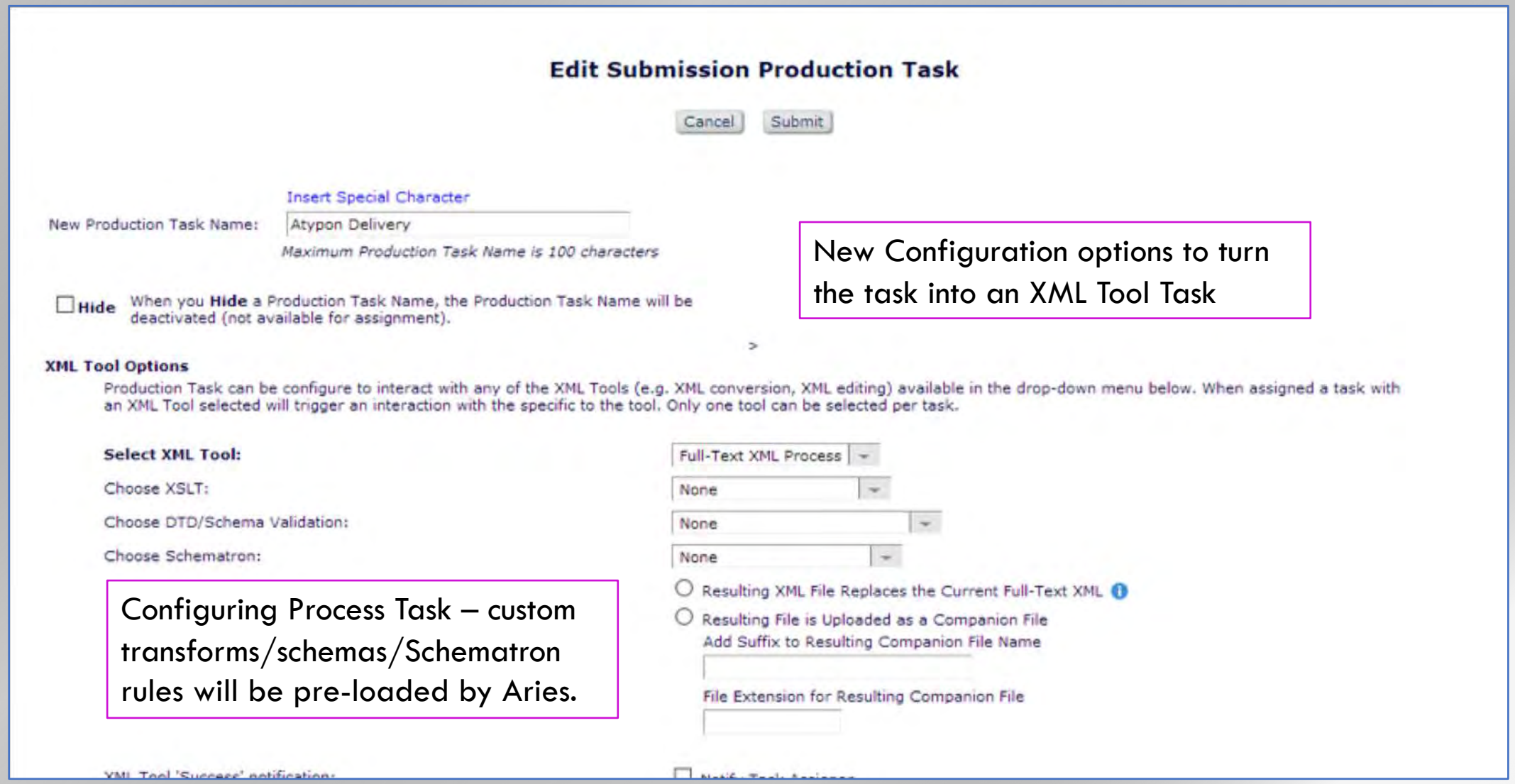


Custom XML Processing Task

XML Process Task

- Supports up to three Custom processes in sequence:
  - Transform (using XSLT)
  - Validation (e.g. to DTD)
  - Schematron validation – 'content rules'
- Can process:
  - Non-Aries XML Companion File
  - Aries XML File
- Result can be:
  - Left as Companion File
  - Validated to replace Aries XML File

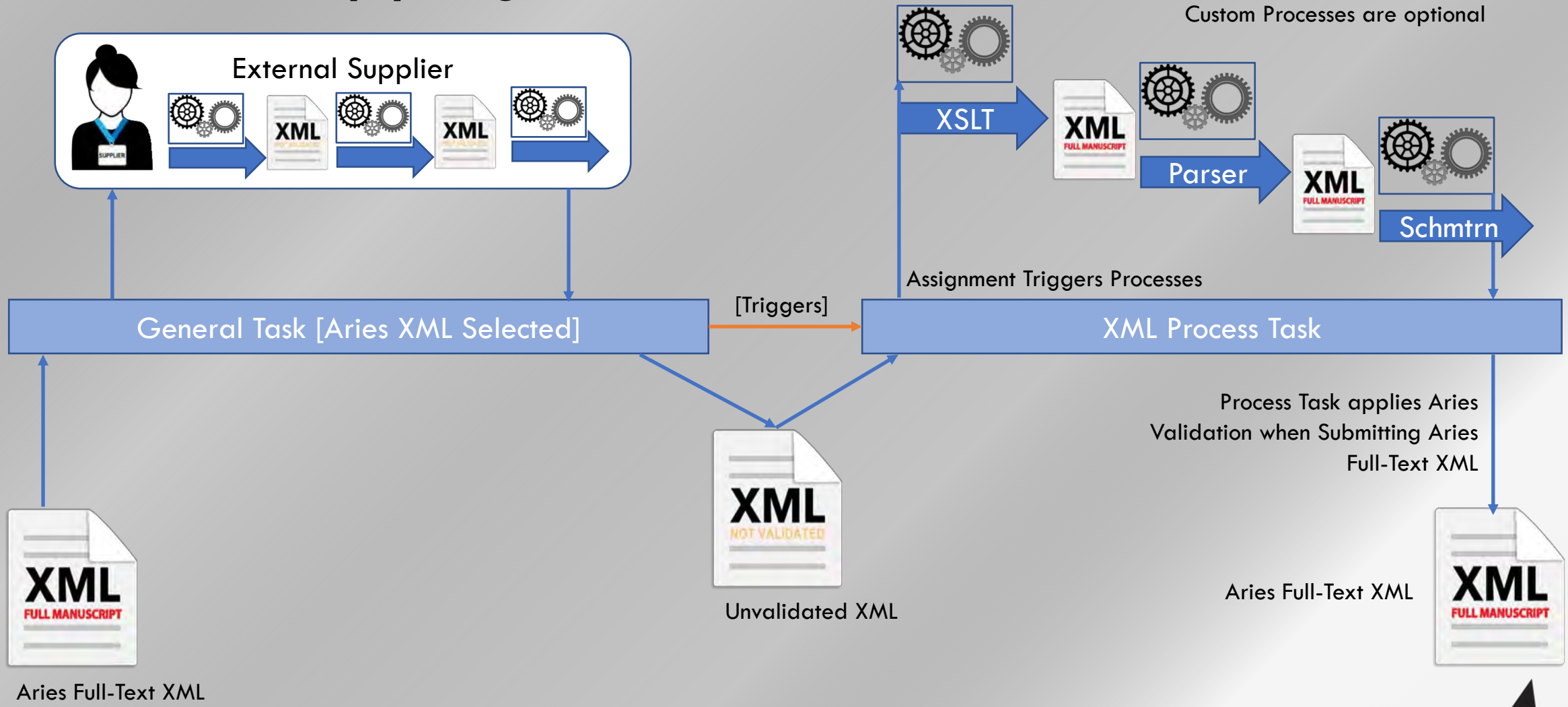




New Configuration options to turn the task into an XML Tool Task

Configuring Process Task – custom transforms/schemas/Schematron rules will be pre-loaded by Aries.

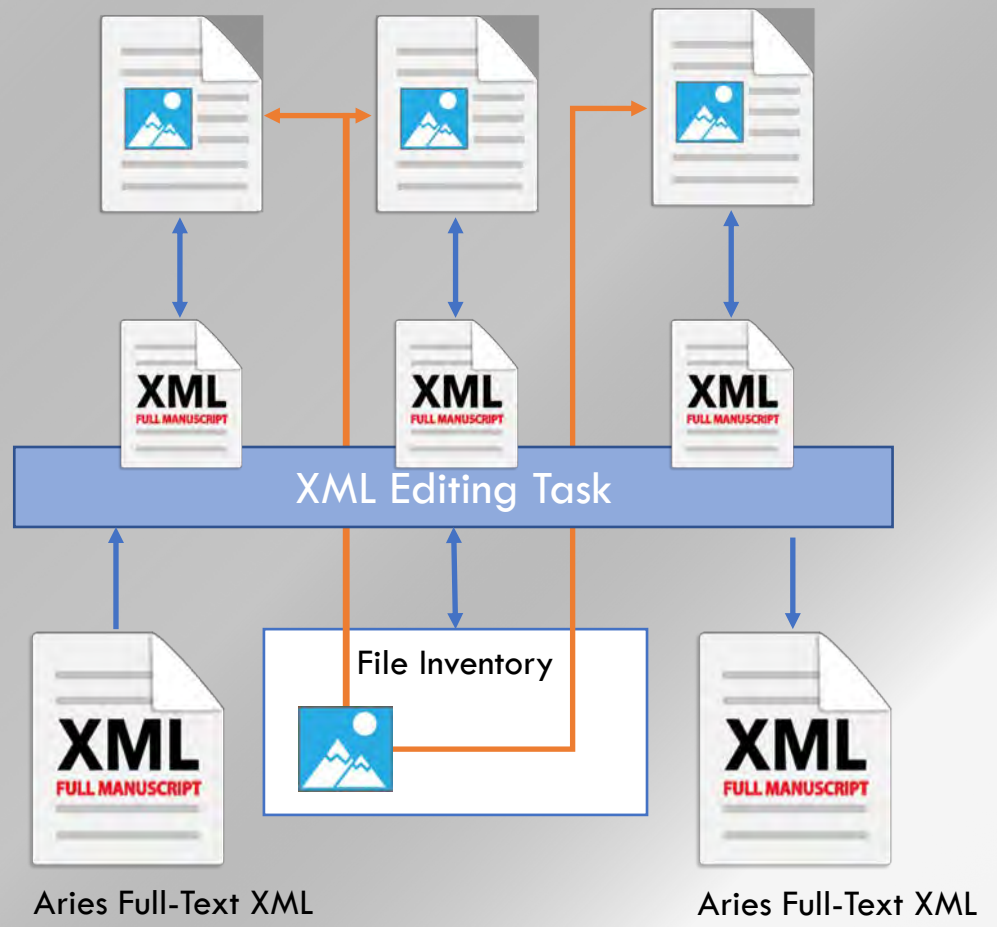
Round-tripping Aries XML



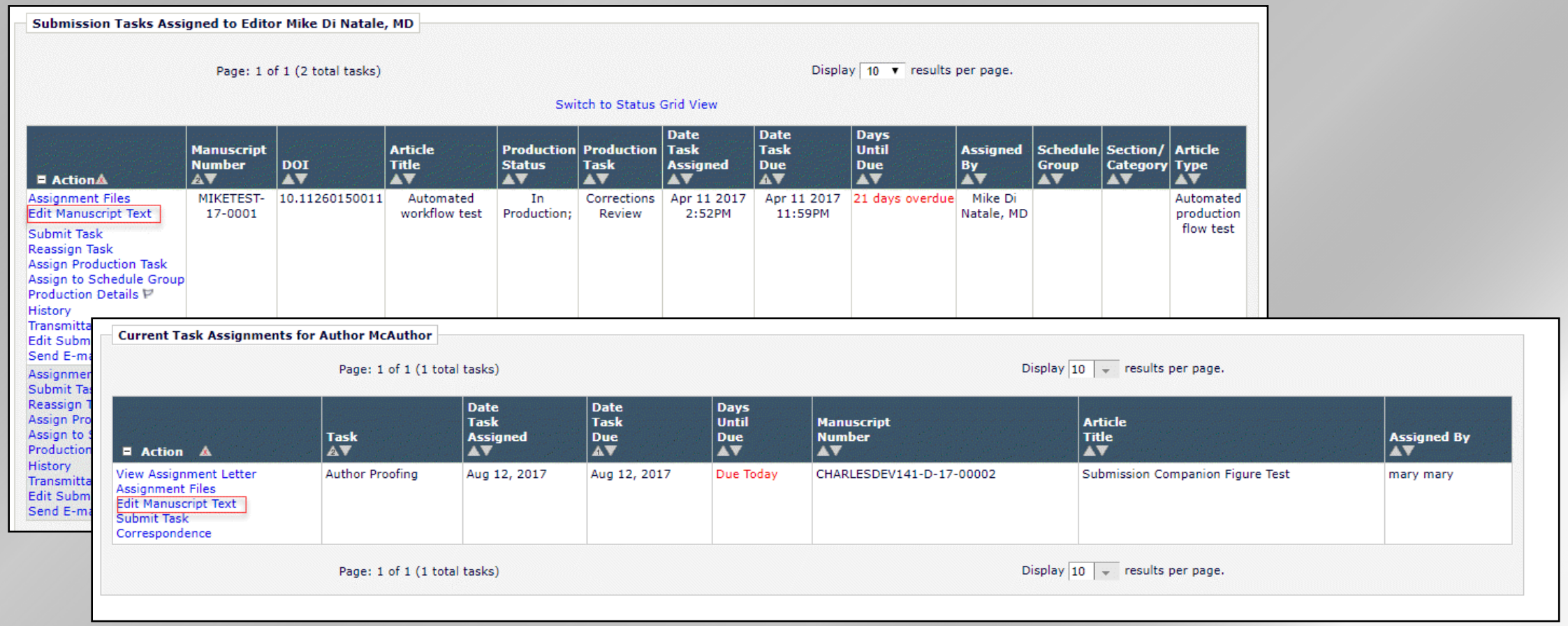
Full-Text Editing Task

XML Editing Task

- Assign Task to allow recipient to edit the XML text while task is open
- Editing via EM XML Editor
  - Based on Fonto-XML
- User sees Word-Processor like UI
  - Hides the XML
  - In-line maths, tables, figures
- The EM XML Editor understands XML rules
  - User cannot create 'bad' XML (we use JATS)
  - But can add new elements, not just edit text
- The EM XML Editor constantly 'validates' the text
  - We can warn the user of inconsistencies
- We're adding special tools to help you
  - E.g. Queries to the Author



XML Editor – Accessed via Task Assignment



Submission Tasks Assigned to Editor Mike Di Natale, MD

Page: 1 of 1 (2 total tasks) Display 10 results per page.

Switch to Status Grid View

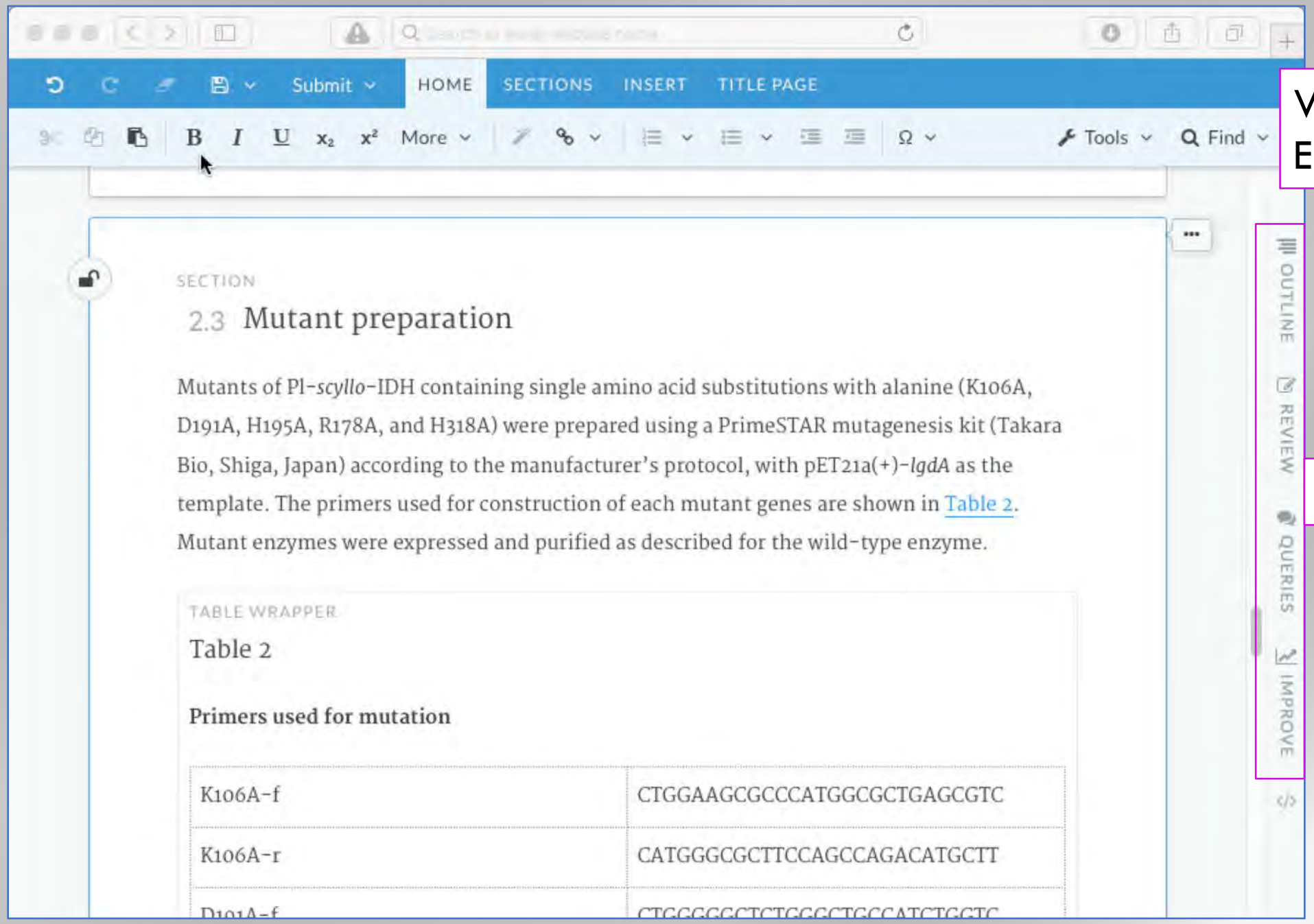
Action	Manuscript Number	DOI	Article Title	Production Status	Production Task	Date Task Assigned	Date Task Due	Days Until Due	Assigned By	Schedule Group	Section/ Category	Article Type
Assignment Files Edit Manuscript Text Submit Task Reassign Task Assign Production Task Assign to Schedule Group Production Details History Transmitta Edit Subm Send E-ma	MIKETEST-17-0001	10.11260150011	Automated workflow test	In Production;	Corrections Review	Apr 11 2017 2:52PM	Apr 11 2017 11:59PM	21 days overdue	Mike Di Natale, MD			Automated production flow test

Current Task Assignments for Author McAuthor

Page: 1 of 1 (1 total tasks) Display 10 results per page.

Action	Task	Date Task Assigned	Date Task Due	Days Until Due	Manuscript Number	Article Title	Assigned By
View Assignment Letter Assignment Files Edit Manuscript Text Submit Task Correspondence	Author Proofing	Aug 12, 2017	Aug 12, 2017	Due Today	CHARLESDEV141-D-17-00002	Submission Companion Figure Test	mary mary

Page: 1 of 1 (1 total tasks) Display 10 results per page.



Word Processor-like Editing environment

Tabs for helper tools

Aries systems

Images, tables, maths in-line

Submit | HOME | SECTIONS | INSERT | TITLE PAGE

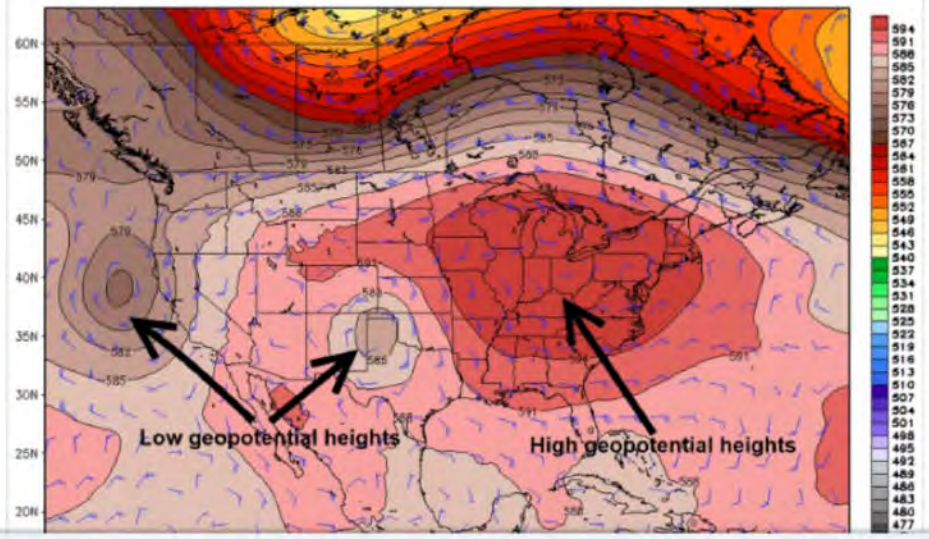
B I U x_2 x^2 More

flow upstream, leading the cold/dry air to arrive in SC, and converge with the warm/wet air from the edge of the WPSH. Consequently, a persistent precipitation process occurs in SC.

FIGURE

FIG. 4

Composited 500-hPa geopotential height (contours; every 5 dagpm) and normalized height anomalies (shaded; every 0.5σ). The vectors indicate wave activity flux (units: m^2s^{-2}). The number above each panel has the same meaning as in Figure 2.



Article | Body | Methods | Section | Paragraph | Equation

Submit | HOME | SECTIONS | INSERT | TITLE PAGE

B I U x_2 x^2 More

SECTION

2.2 Methods

The precipitation process that persisted for at least three consecutive days are referred to as persistent precipitation process.

The EAP index (I_{EAP}) was normally defined based on three key anomaly-center points; namely, the Sea of Okhotsk (OK), the mid-latitudes of East Asia (EA), and the western Pacific (WP), during the EAP regimes (1; 4; 9; Chen and Zhai, 2014):

EQUATION

$$I_{EAP} = \frac{1}{3}H_{OK} - \frac{1}{3}H_{EA} + \frac{1}{3}H_{WP} \quad (1)$$

where H_{OK}, H_{EA}, and H_{WP} represent the normalized 500 hPa geopotential height anomaly of OK, EA, and WP, respectively. This study is based on the typical EAP teleconnection pattern responsible for no persistent heavy precipitation cases in the YRV in June and July, as identified by 7 for the period 1961–2010. The cases are selected by requiring that the normalized domain-averaged daily precipitation in the YRV should be smaller than −1 standard deviation (denoted by σ hereafter), and are referred to as dry YRV EAP cases. At the

Methods | Section | Paragraph | Equation

Aries systems

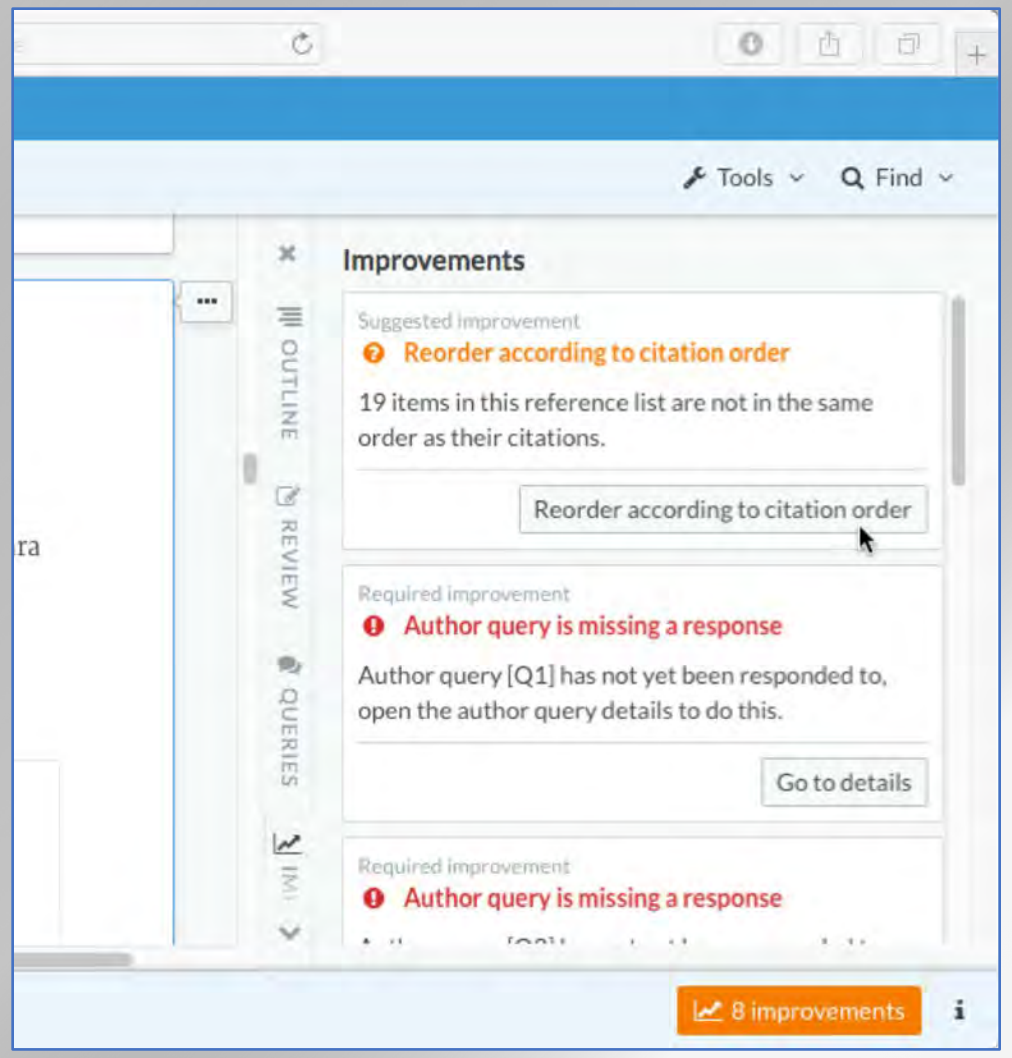
Editing Tool UX Configurable by Task

- Sections can be hidden or made read-only
  - E.g. stop authors from changing their Article Title at this late stage
  - Prevent the Author from changing the order of contributors
- Enforce editing ‘policies’
  - Such as forcing authors to answer all queries from Editors when submitting edits
  - Ensure all figures, tables etc. are cited in text
- Editing UI tools can be hidden
  - By role, e.g. hide the UI used to edit submission-related metadata
  - By journal style, e.g. hide the ability to use the box text element

Aries systems

Verification by the Aries XML Editing tool

- The Aries XML Editing tool constantly parses the XML
  - Knows what elements are valid, where
- Can warn of inconsistencies and issues, e.g.
  - Missing citations
  - Missing images, tables
  - Uncited images
- Configurable, so warnings can prevent submitting edits, or just warn



EM XML Editor Custom Components – e.g. Author Queries

- Author Query component – Questions to Author
- Question – Response – Review cycle
- E.g.:
  - Question to Author raised by Copy Editor
  - Response entered by Author; we can enforce this
  - Response marked as Viewed/reviewed by Desk Editor

Submit | HOME | SECTIONS | INSERT | TITLE PAGE

B I U x_2 x^2 More | Tools | Find

Rudney H (1940) The Utilization of L-Glucose by Mammalian Tissues and Bacteria. Science 92: 112-113. 10.1126/science.92.2379.112 17755265

2. REFERENCE

Sasajima KI, Sinskey AJ (1979) Oxidation of L-glucose by a Pseudomonad. Biochim Biophys Acta 571: 120-126. 10.1016/0005-2744(79)90232-8 40609

3. REFERENCE

Q1 Nakamura A (2015) Paracoccus laeviglucasivorans sp. nov., an L-glucose-utilizing bacterium isolated from soil. International Journal Systematic and Evolutionary Microbiology 65: 3878-3884. 10.1099/ijsem.0.000508 26243274

4. REFERENCE

Shimizu T, Takaya N, Nakamura A (2012) An L-glucose catabolic pathway in Paracoccus species 43P. J Biol Chem 287: 40448-40456. 10.1074/jbc.M112.403055 23038265

OUTLINE | REVIEW | QUERIES | IMPROVE

Author queries

Add query

All queries | Details of Q1

0 of 7 answered
0 of 0 reviewed

Anonymous — Invalid Date

Medline reports the journal title should be "Int. J. Syst. Evol. Microbiol.", not "International Journal Systematic and Evolutionary Microbiology". (Ref. 3 "Nakamura, 2015")

This query has not yet been responded to.

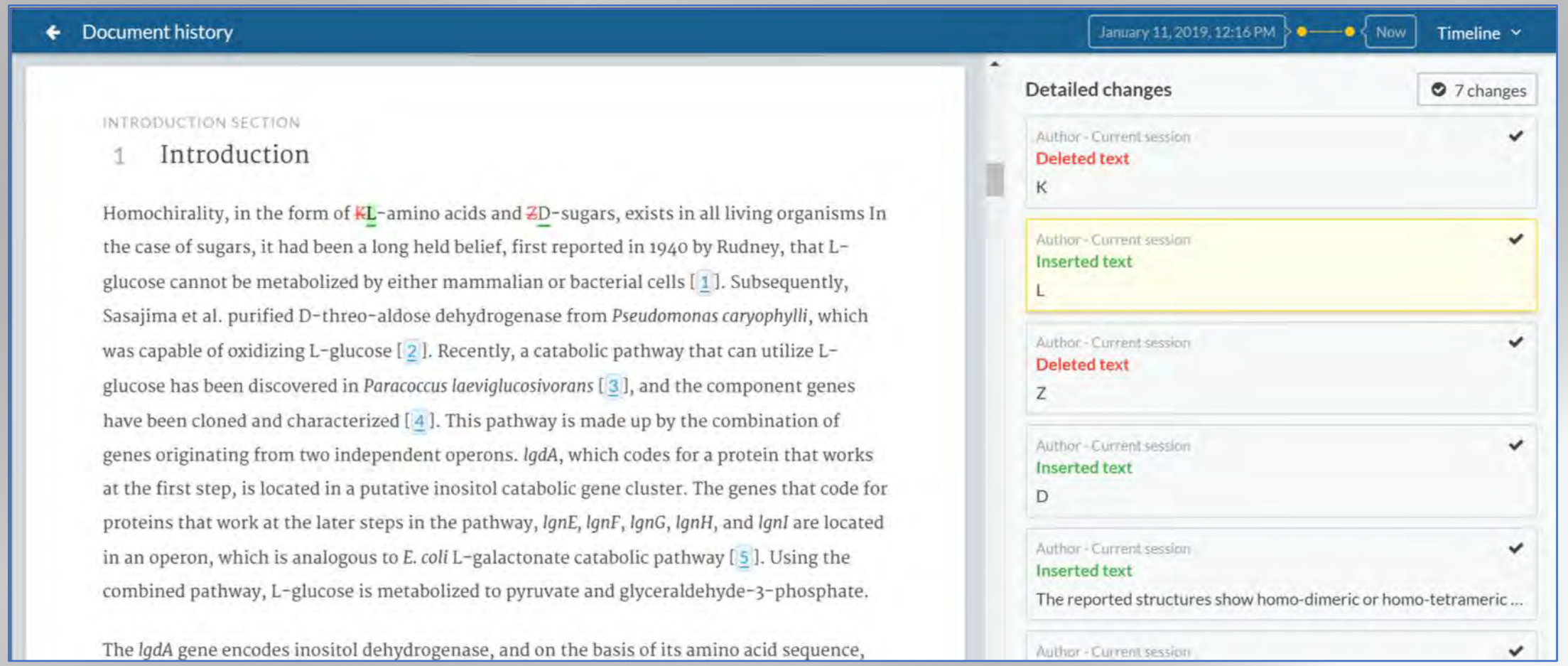
Response

Click to add a response.

Article | Body | Section | Section | Title

8 improvements

XML Editing tool: Review changes

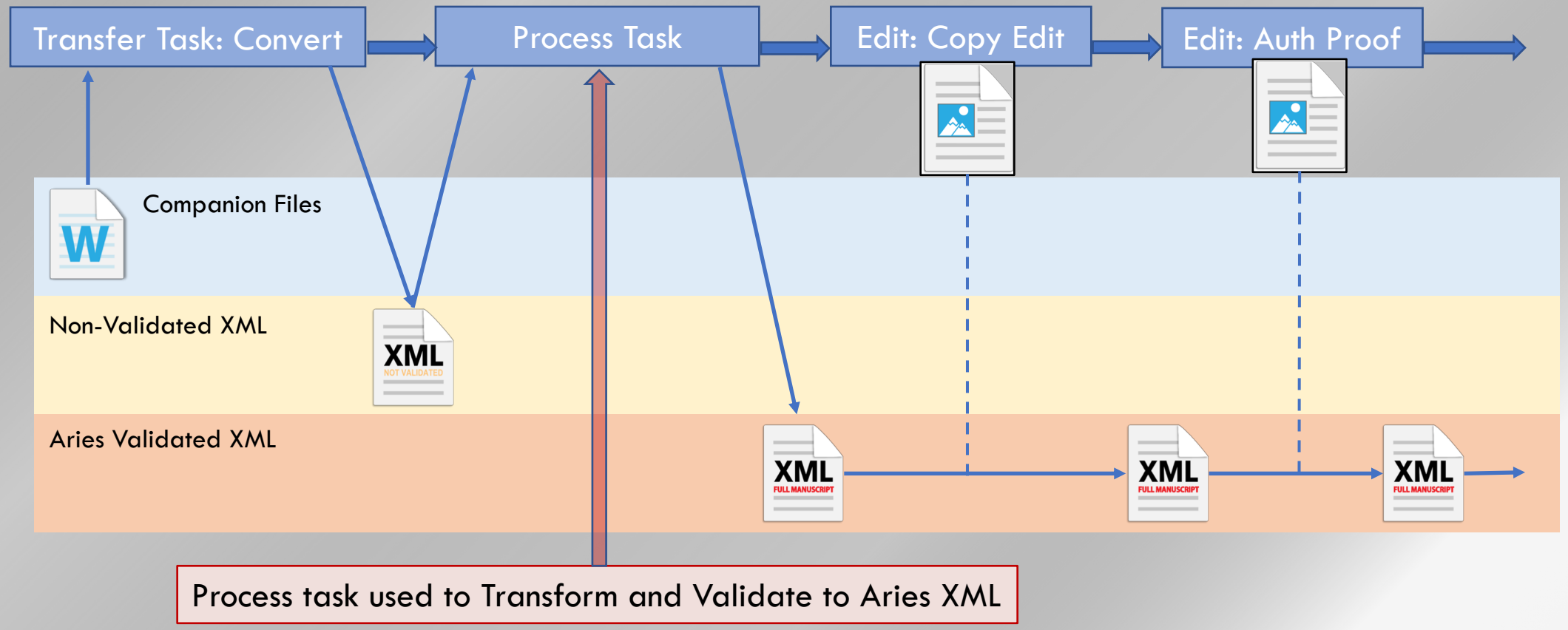


Creating Aries XML

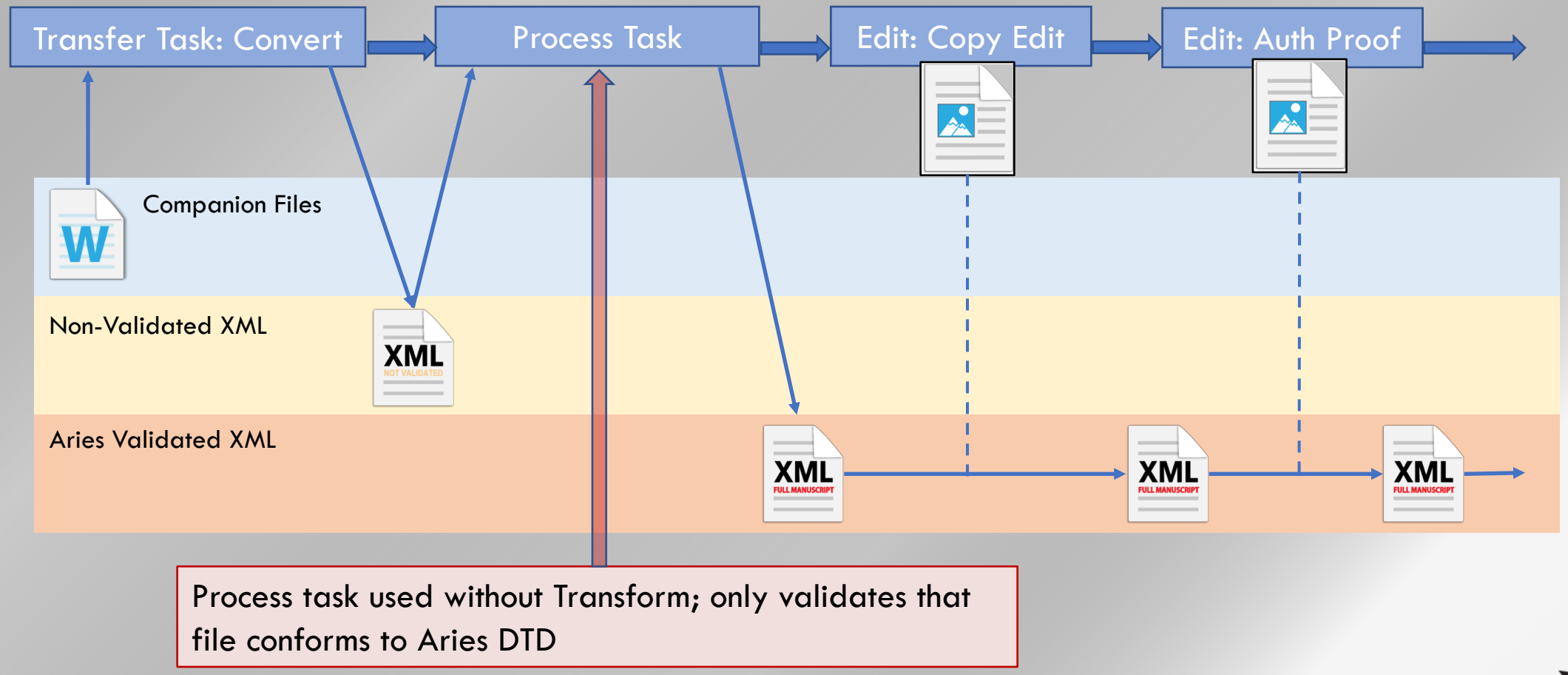
XML Workflows: Possible Approaches

- Work with third party XML
  - Third parties convert text as now
  - Import/Export XML as Companion Files
  - EM tasks can apply XSLT and Schematron transforms if needed
- Work with 'Aries XML'
  - Subset of JATS XML
  - Allows use of EM XML Editing Task, other processes in future
- Hybrid workflows?
  - Use EM Tasks to convert to/from Aries JATS
  - i.e. EM as online XML Proofing system

3rd Party supplies Non-Aries XML

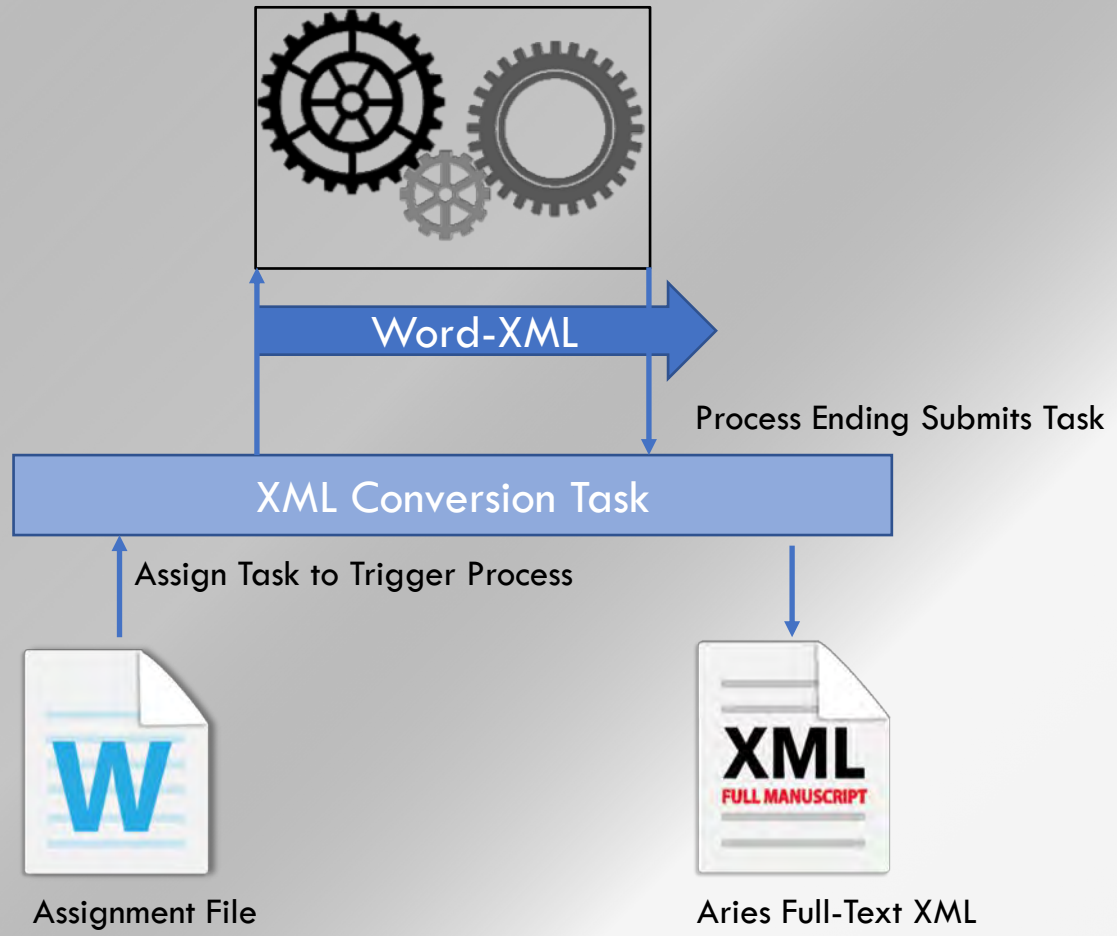


3rd Party supplies Aries XML



Aries Full-Text Conversion Task

- XML Tool Task, assigned like any other
- Takes a Word document to convert as the Assignment File
- Triggers a new system process
- New software to automatically convert Word document to structured XML
- No template needed
- Heuristics to deconstruct files with a variety of structures
- On completion of the process, EM automatically submits the Task



Full-Text Conversion: Embedded Images

Word file contains embedded image

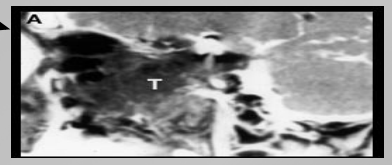
Conversion creates XML reference, extracts image, creates filename

Journal Code from EM

ID from EM Submission

<inline-graphic xlink:href="JXYZ_JXYZ-D-18-00017.fx1" />

'fx' prefix + count

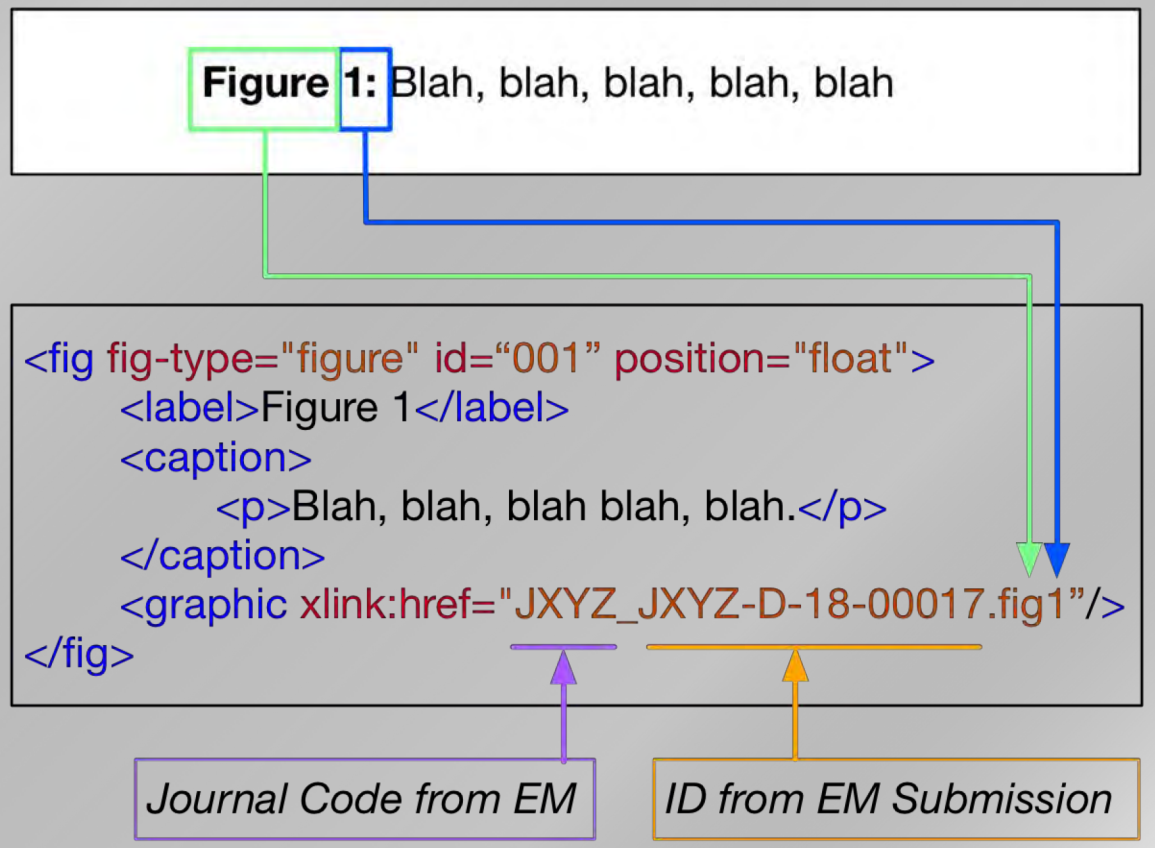


Matching filename created

JXYZ_JXYZ-D-18-00017.fx1.jpeg

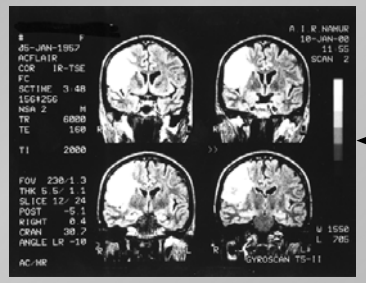
Full-Text Conversion: External Images

Conversion identifies a caption; builds XML version with an *assumed* filename



Full-Text Conversion: External Images

When Author uploads image files, caption-related information is collected



Smith 1998 Fig1.tiff

EM Metadata:

Item Type: Standard Figure

Fig No: 1

This can be used to link the figure to the XML, same rules as conversion

Item Type	Index Value	XML Reference
High Res Fig	1	JXYZ_JXYZ-D-18-00017.fig1

Journal Code from EM

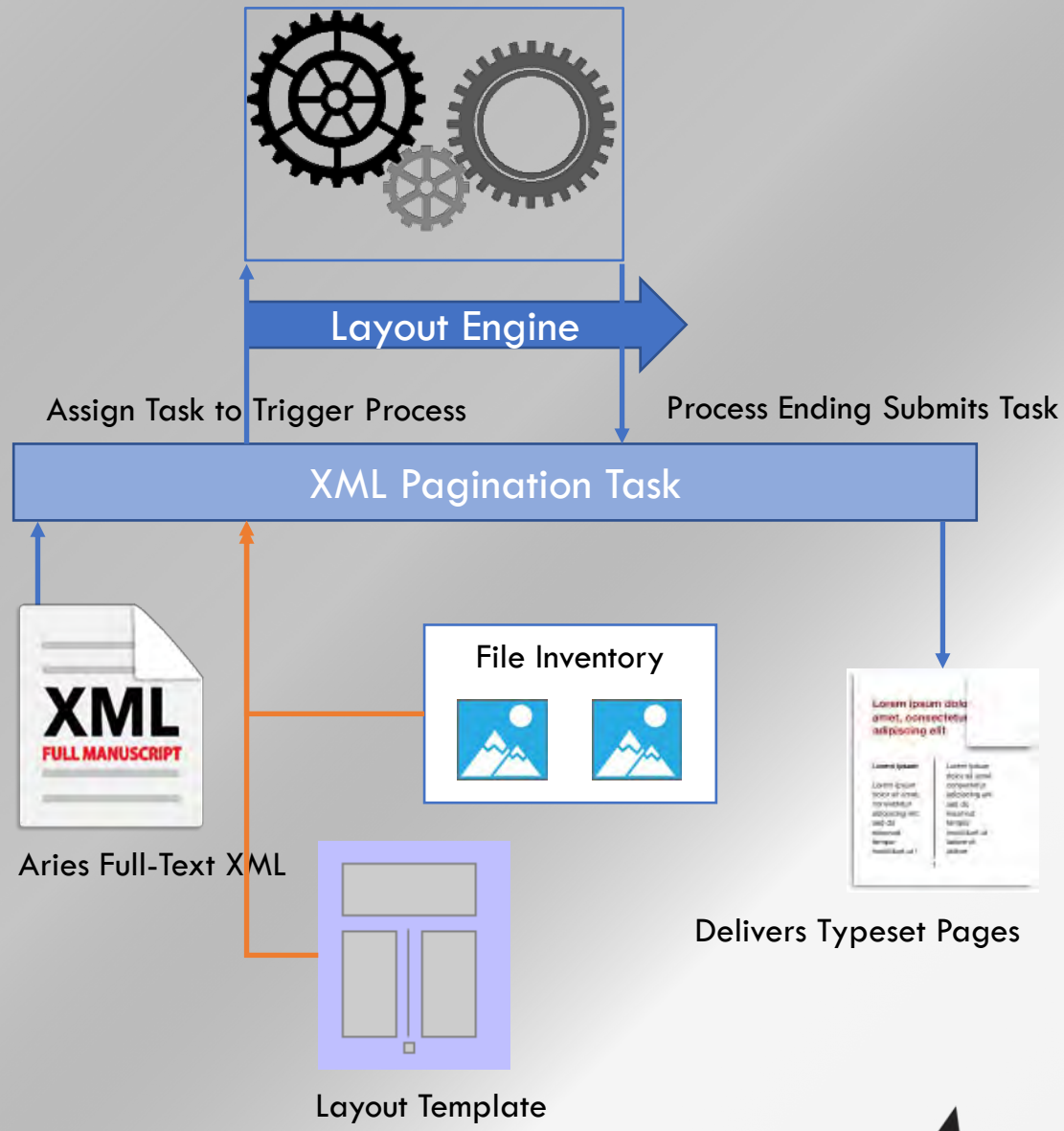
ID from EM Submission

And more for Phase 2

- Continue to develop ideas
- More Editing Tools
  - E.g. more suggested Improvements
- More XML Task Types, e.g.:
  - Auto-pagination
  - PDF Rendering

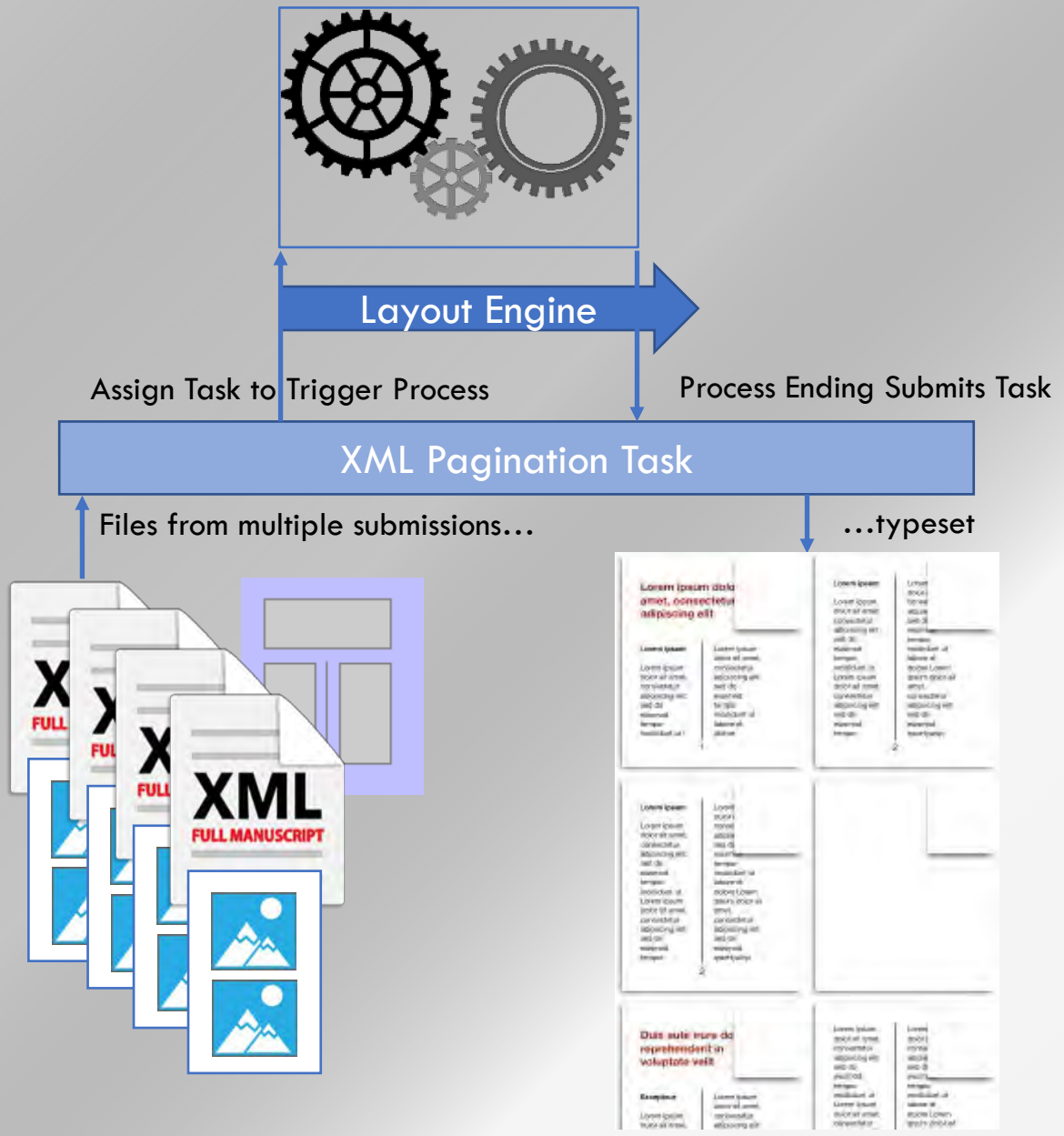
‘Pagination’ Tasks

- We will integrate a layout/pagination engine
- Will reformat and layout XML for delivery
  - E.g. Print, PDF
- Based on customer layout templates
- Solo task for a single submission…



‘Pagination’ Task

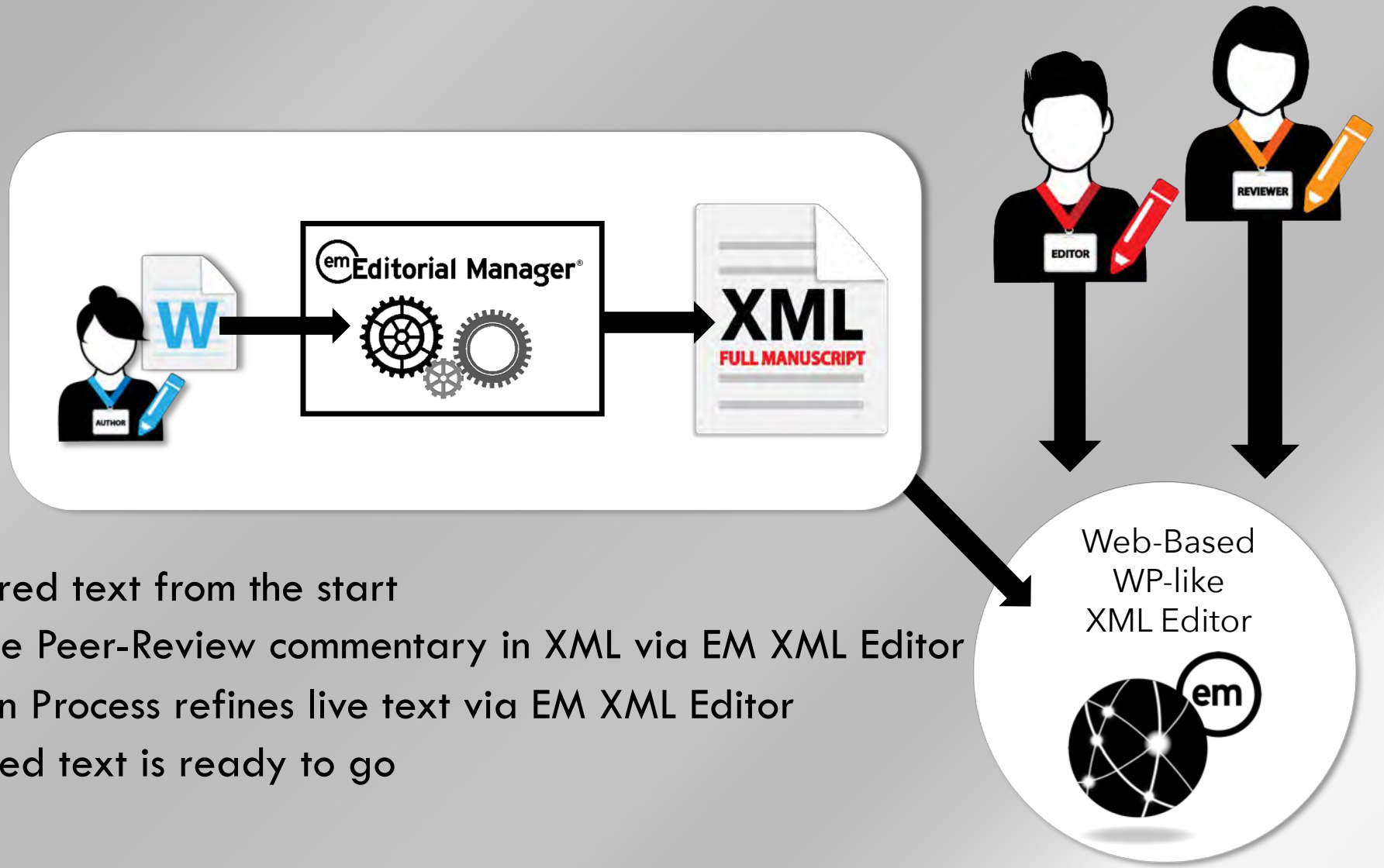
- SG/Batch Task for multiple submissions
- Issue makeup and pagination



Phase 3

Bringing it forward

Phase 3: Full-Text Conversion on Submission



- Structured text from the start
- Capture Peer-Review commentary in XML via EM XML Editor
- Revision Process refines live text via EM XML Editor
- Accepted text is ready to go

The end

Any Questions?