How nutritious is that workflow API?

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Are APIs a miracle food that will satiate our appetite for new functionality?

Yes…No… Maybe …. we really all know there are no miracles…. 
“Simple” APIs

“Read-only” APIs have no impact on workflow

Results used elsewhere

Data Mining

Reporting
Bi-directional APIs in workflow systems
Use Case 1: ORCID
Use Case 1: ORCID
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Derived workflow examples:

- Single Sign On (SSO)
- Data portability (e.g. reviewer form portability)
- APC processing and business models
- Data integrity
Use Case 2: Reviewer Discovery

Manual labor: search, web browse, cut and paste
Use Case 2: Reviewer Discovery

3.5 Million curated scholar profiles

Manuscript fingerprint

Candidate reviewers
Use Case 2: Reviewer Discovery

Data Quality

Without reliable current contact information (especially email address) API is less valuable.
Use Case 2: Reviewer Discovery

Triggering the API interaction:

The workflow interface has to allow the “right” users to trigger the API at the “right” point in the workflow.
Use Case 2: Reviewer Discovery

Integrating the API results with existing data:

The workflow interface has to avoid creating unnecessary duplicate records or otherwise damaging data integrity.
Use Case 2: Reviewer Discovery

Integrating the API results with functionality:

Inviting the candidate reviewer, tacking the invitation, sending reminders etc.

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<th>Inv.</th>
<th>Alt.</th>
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<th>Board Member</th>
<th>Classifications</th>
<th>Reviewer Statistics (Agreed Invitations)</th>
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Use Case 2: Reviewer Discovery

For the Reviewer Discovery API to be really useful it had to:

• Access contextually appropriate data
• Generate appropriate results
• Be available to the “right” users at the “right” point in the workflow
• “Play nice” with existing data
• Integrate with workflow
Use Case 3: APC Processing

Author Submits

API notification to CCC with XML metadata (e.g. author, author IP address, country, institution, ORCID, FundRef, article type, journal, publisher, etc.)
Use Case 3: APC processing

API notification to CCC with XML metadata (e.g. author, author IP address, country, institution, ORCID, FundRef, article type, journal, publisher, etc.)

Editorial workflow proceeds

Author confirmation page

Payment Processing System: Business Rules
Use Case 3: APC Processing

Manuscript Accepted

API - notification

API - payment complete

Payment resolved with author(s), funders, library etc. based publisher business rules.
Use Case 3: APC Processing

APC API Solution Characteristics:

- Editorial workflow integrity
- To maximum extent possible separates workflow from business rules
- Seamless experience
- Configurable to meet different models
Additional API Use Cases

- Reference processing
- Reference formatting
- Plagiarism checking
- Data extraction
- Auto-composition
- Editor selection
- Credit card processing (PayPal)
- Taxonomy engines
APIs by themselves may leave you hungry

An API by itself is not sufficient. To be fully satisfied, you need:

- Context appropriate tools and data
- Data integration
- Workflow integration
- Fail-safe designs
- Appropriate configuration options
Time’s Up!

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