Using Data to make (good) decisions

Kathryn Sharples
Director, Publishing Development
Using to data to make....

- Portfolio Planning
- Editorial and Journal programme development
Portfolio Planning and Development
STM Week 2017: New People, New Markets, New Challenges
Net change in Society titles
Subject Strengths
Current and Future Customer research focus and output
Broader subject trends
Funding trends

Considerations

New Launches
New Launches

Materials Science

EEE and Information Systems

Medicine

Traditional Sciences
Product Management & Development
Intelligent Solutions

Journal editorial

Product management

Data science
Machine learning can be used to inform journal editorial decisions and journal program development.

Machine re-engineering journal editorial and journal program management to:

• Increase the number of topics and papers we publish
• Increase productivity and efficiency
• Make better decisions more consistently
Journal editorial workflow

Processes

Identify hot/growing topics → Find and invite authors → Manuscript submission → Editor evaluation of manuscript → Referee selection → Review evaluation → Accept/revise/reject/transfer decision → Data validation and annotation → Production → Publication → Article promotion

Author revisions
Journal editorial workflow

Processes

Classification
- What are the topics being funded?
- What topics are my competitors publishing?
- Which topics are growth topics in target markets?
- Prediction
  - How much will it be cited or downloaded?

Find and invite authors

Classification
- Who are the authors working on this topic?
- Prediction
  - Which authors will be most downloaded or cited?

Manuscript submission

Lookup
- Is it novel?
- Prediction
  - How much will it be cited or downloaded?

Editor evaluation of manuscript

Lookup
- Author recommends or excludes referees?
- Are referees related?
- Prediction
  - What journal would be more suitable for this manuscript?
  - Who are experts on this topic?

Referee selection

Prediction
- Are reports sufficient for a decision?
- Classification
  - Are reports positive or negative?

Review evaluation

Accept/reject/transfer decision

Prediction
- What should be the decision on the manuscript?
- Classification
  - What journal would be more suitable for this manuscript?

Data validation and annotation

Publication

Classification
- Is it novel?
- Prediction
  - How much will it be cited or downloaded?

Article promotion

Machine learning

Identification of hot/growing topics

Classification
- What are the topics being funded?
- What topics are my competitors publishing?
- Which topics are growth topics in target markets?
- Prediction
  - How much will it be cited or downloaded?
Examples
Rejected paper tracker

Where do papers go when we reject them?

- A PhD editor can spend three afternoons Googling to manually find 160 manuscripts.
- Application matches thousands of papers in minutes.
Expert finder

Finding the best authors, reviewers, and board members.

Manual search tools are far from comprehensive and only as good as the person conducting the search.

Application finds hundreds of experts in any topics without the user needing specialist expertise.
Journal Finder

How do authors and editors find the most suitable journal for a paper?

- Editor/author experience has been the primary tool until now.
- Application picks the correct journal (from Wiley’s 1500+) as the first choice > 50% of the time based only on the title of a manuscript.
“We'll be able to have a discussion grounded in data rather than assumptions.”
Thank you

Ksharples@wiley.com