

OA
Week

2024



Open Access Week
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Alternative Models for Open Access Publishing

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Open Access (OA) Publishing

Definition

OA refers to the unrestricted online access to scholarly research.

Importance

- Increased accessibility
- Greater visibility for researchers
- Wider dissemination of knowledge

Current Trends

Growing demand for OA due to funders' and institutions' policies.

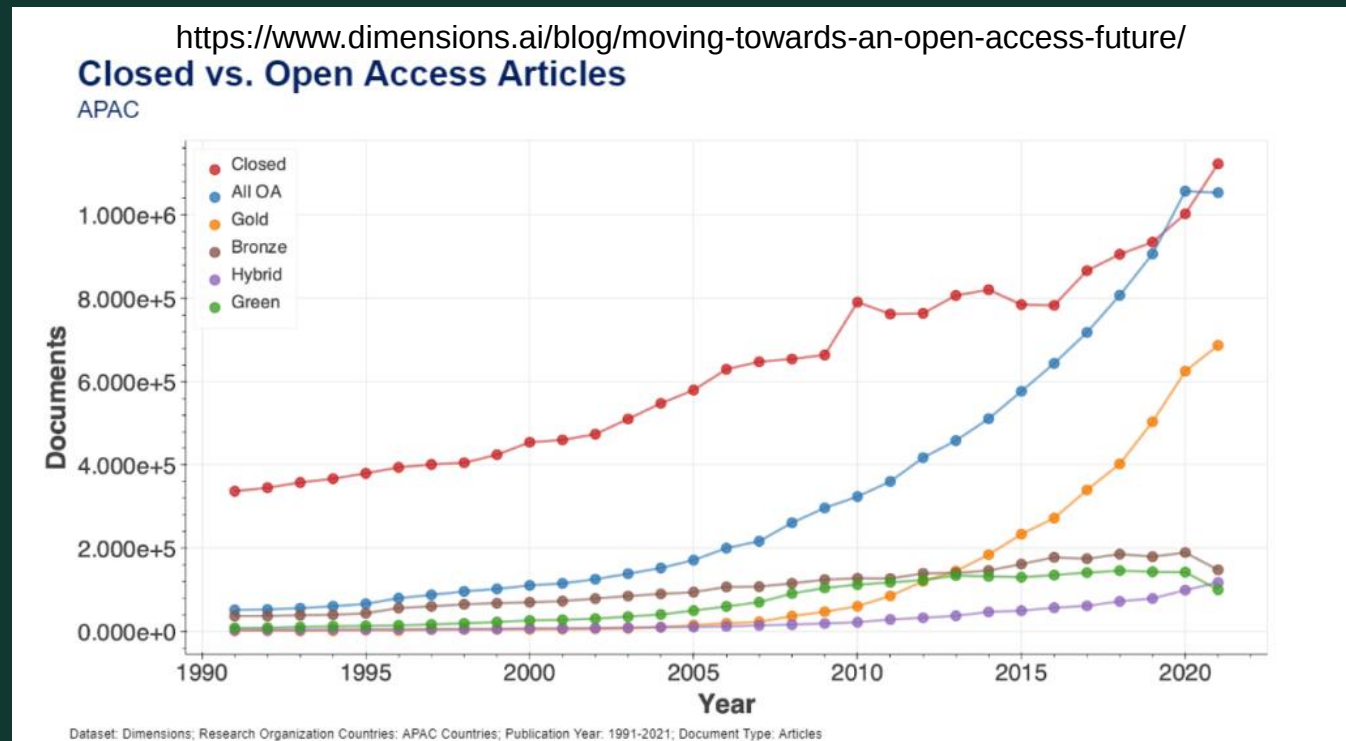
Traditional Subscription vs Open Access

Subscription Model

- Readers or institutions pay for access.
- Limited accessibility (paywalls).

Open Access Model

- Freely available to all readers.
- Cost burden often shifted to authors or institutions.



Types of Open Access Publishing

Gold OA

- Authors pay Article Processing Charges (APCs) to make their work OA.
- Example: PLOS ONE, BioMed Central.

Green OA

- Authors archive preprints or postprints in institutional or subject repositories.
- No cost to authors; delayed access.

Diamond/Platinum OA

- No charges for authors or readers.
- Funded by institutions, societies, or governments.

Hybrid OA

- Subscription-based journals allow authors to pay APCs to make specific articles OA.
- Critics argue it leads to "double-dipping."

Gold Open Access Model

Description

Authors pay APCs; immediate access to their work.

Advantages

- Immediate OA for readers.
- Widespread visibility.

Challenges

- High APCs can exclude underfunded researchers.
- Questionable sustainability for authors without funding support.

Diamond/Platinum Open Access Model

Description

Neither authors nor readers pay; journals funded by other means (e.g., institutions).

Advantages

- Truly free access for both authors and readers.
- Can support equity in academic publishing.

Challenges

- Long-term sustainability due to reliance on external funding.
- Less common compared to other models.

Green Open Access Model

Description

Authors self-archive their manuscripts in repositories.

Advantages

- No cost for authors.
- Wide dissemination through repositories.

Challenges

- Potential embargo periods.
- Final published version often not available.

Hybrid Open Access Model

Description

Subscription journals offering OA for individual articles upon payment.

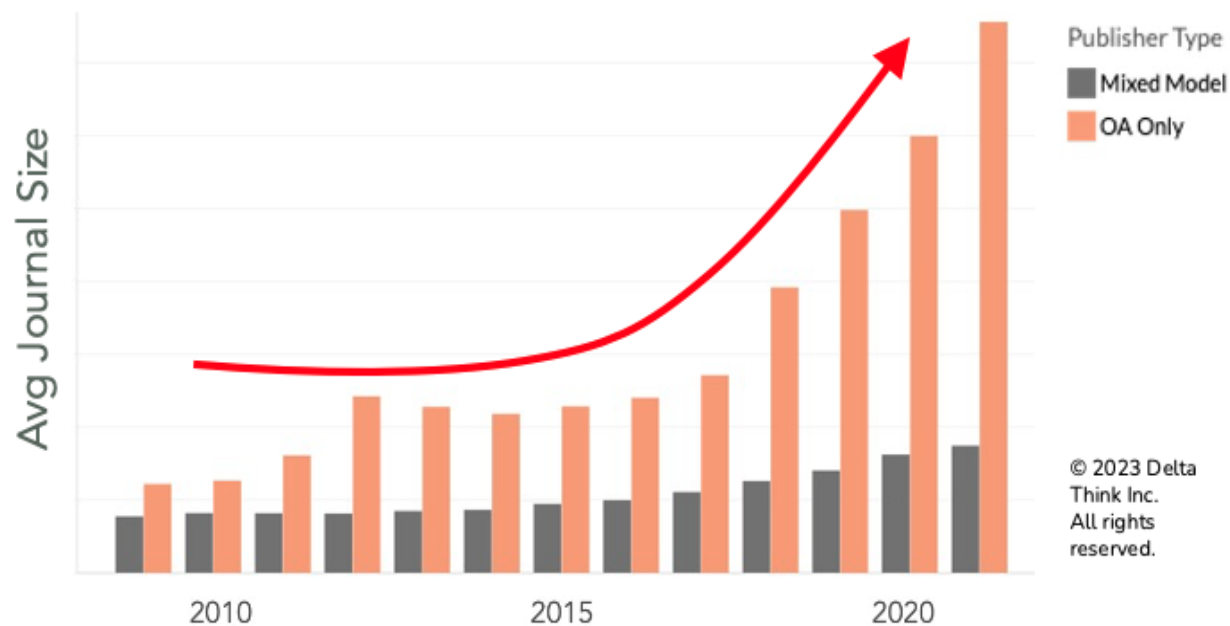
Advantages

- Option for authors to make their articles OA in high-impact journals.
- Flexibility for authors who publish in mixed-model journals.

Challenges

- Can lead to "double-dipping" (publishers charge for subscriptions and APCs).
- Not a fully OA solution.

Figure 2: Average fully OA journal size by publisher type over time



<https://deltathink.com/news-views-fully-open-access-journals-size-does-matter/>

Transformative Agreements

Description

Contracts between institutions and publishers that aim to shift subscription fees toward Article Processing Charges (APCs) for OA publishing (e.g., Read-and-Publish deals).

Advantages

- Facilitates transition from subscription to OA.
- Streamlines costs for institutions.

Challenges

- Potentially high costs for institutions.
- Publishers retain significant control over pricing.

Challenges in Open Access Models

Funding

How to sustainably fund OA without passing the burden to authors or readers.

Equity

APCs in Gold OA models create barriers for researchers from low-income regions.

Quality Control

Concerns over "predatory" OA publishers prioritizing profits over quality.

Benefits of Open Access

Increased Citations

OA articles are often cited more frequently.

Global Reach

Researchers from all regions can access knowledge.

Faster Dissemination

OA can accelerate research impact and innovation.

Conclusion

Summary

OA publishing offers a range of models, each with its benefits and challenges.

Future Trends

Expect growth in transformative agreements, increased Diamond OA support, and innovative funding solutions for sustainable OA.

Call to Action

Encourage institutions, funders, and researchers to advocate for equitable and sustainable OA models.

Prepare a PPT for Alternative Models for Open Access Publishing



To prepare a PowerPoint (PPT) on "Alternative Models for Open Access Publishing," here's a suggested structure and key content for each slide. This presentation will cover different models for open access (OA) publishing, comparing their features, advantages, and challenges.

Quality Control

Concerns over "predatory" OA publishers prioritizing profits over quality.

What is APC?



Article Processing Charge (APC) is a fee that authors or their institutions pay to publish their work in Open Access (OA) journals.

This fee covers the costs associated with

- the editorial process,
- peer review, typesetting,
- and long-term digital archiving

making the article freely available to readers without subscription barriers.

Key Aspects of APC

Purpose

APCs enable OA journals to operate without charging readers, ensuring that the content is accessible to everyone.

Amount

- APCs can range from a few hundred to several thousand dollars, depending on the journal's prestige, publisher, and the field of research.
- High-impact journals often have higher APCs, sometimes exceeding \$5,000 (e.g., **Nature** journals).

Who Pays

- Authors (or their institutions or funders) typically bear the cost of APCs.
- Many funding bodies, like the NIH or Horizon 2020, support researchers by covering APCs.

Variability by Journal

- Some OA journals (e.g., in the **Diamond OA** model) do not charge APCs.
- **Hybrid OA** journals offer an option where authors can pay an APC to make individual articles open access in otherwise subscription-based journals.

APC Criticism

Equity Issue

APCs can be a financial burden for researchers without institutional or funding support, particularly those from low-income countries.

Double-Dipping

In hybrid OA models, institutions sometimes pay both for subscriptions and APCs, leading to concerns over publishers profiting twice.

Funding strategies and alternatives to Article Processing Charges (APCs)

- Institutional Funding & Library Support
- Transformative Agreements (Read-and-Publish / Publish-and-Read)
- Funders Covering APCs
- Diamond/Platinum Open Access
- Crowdfunding & Collective Funding
- Governmental and Institutional Subsidies
- Open Access Platforms and Infrastructures
- Pay-It-Forward or Membership Models
- Open Source Publishing Platforms

Share of Total Publishing on Artificial intelligent

SHARE OF TOTAL PUBLISHING ON ARTIFICIAL INTELLIGENCE

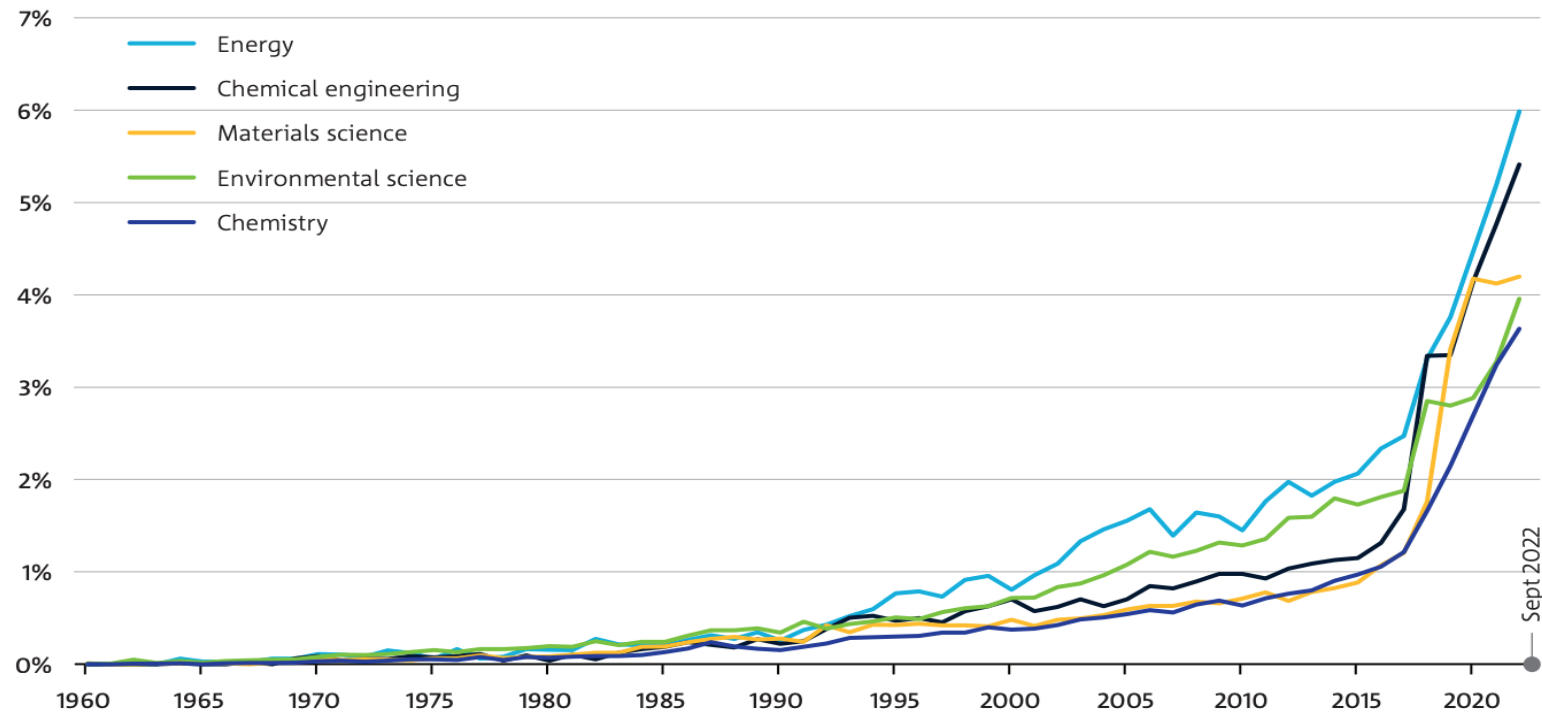


Figure 15. Artificial intelligence publishing intensity in the physical sciences (6–10 fields).

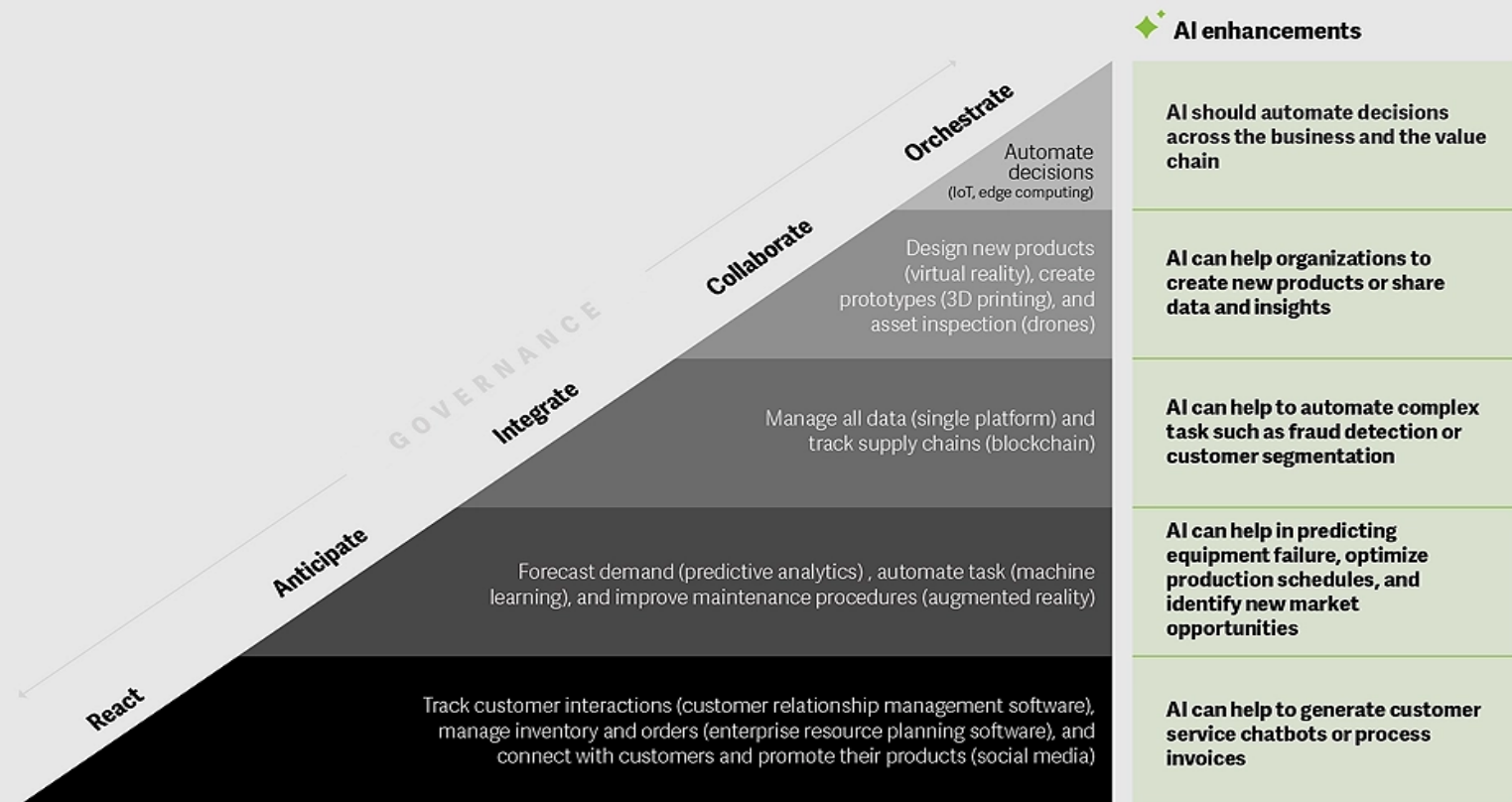
Data source: The Lens [32]. Data is sourced from January 1960 to September 2022.

Source: Deloitte, 2024 chemical industry outlook;CSIRO Artificial Intelligence for Science report

The Rise of AI in Chemical & Research Industry

Figure 4

AI is poised to play an important role across the digital maturity model for chemical companies



Source: Deloitte analysis of Deloitte, *Achieving the next frontier of chemicals excellence*, accessed October 20, 2023.

Deloitte | deloitte.com/us/en/insights/research-centers/center-energy-industrials.html

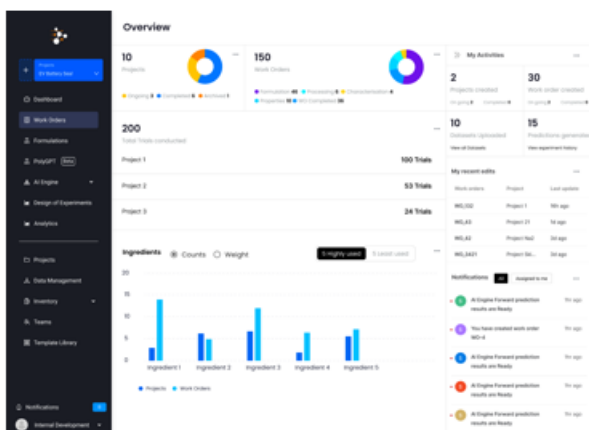


Polymerize is a cloud-based materials information learning platform, specially designed for researchers by researchers.

- 35 domain-guided AI models
- Up to 95% accuracy
- Saves up to 50% of costs in the research process
- Seep up R&D by 3-10 times
- Only 25 data points to make successful predictions

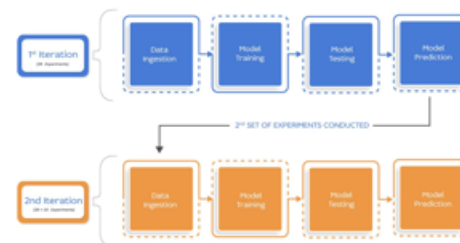
Data Management

- Collaborative research space
- Data visualization & centralization

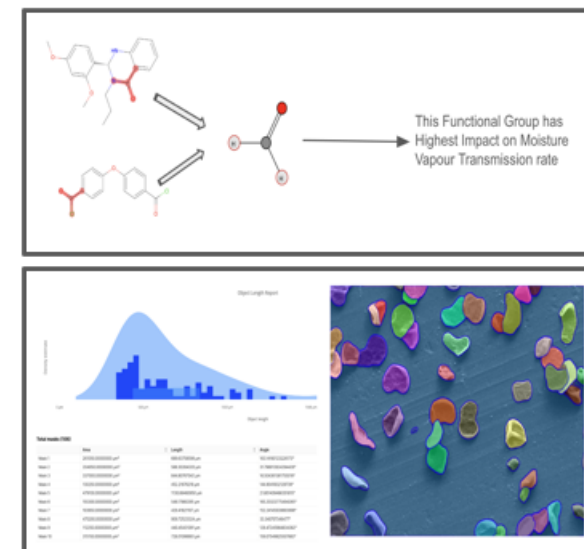


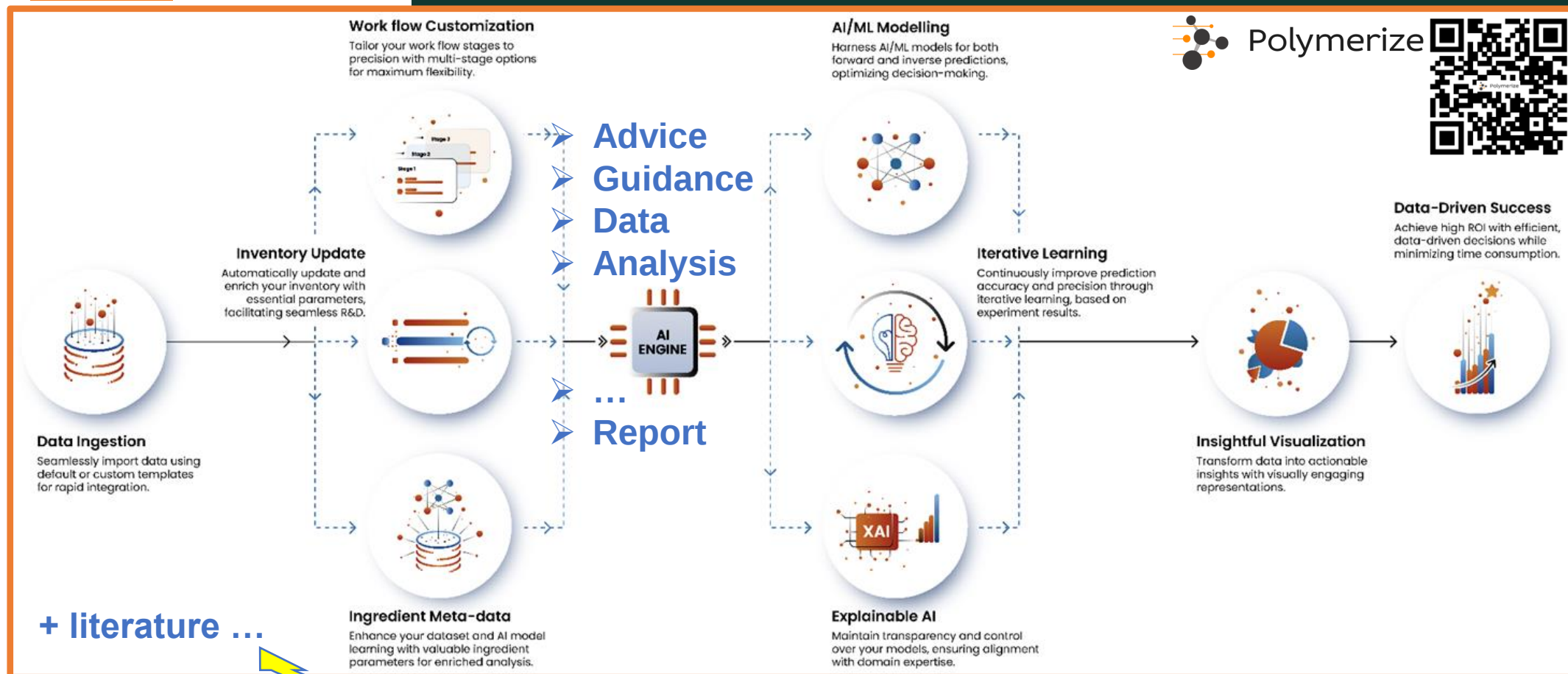
AI Prediction

- Property prediction & formulation optimization
- Explainable artificial intelligence
- Polygpt's unique generative AI



Other Features (Visual Analysis, Image Analysis, etc.)

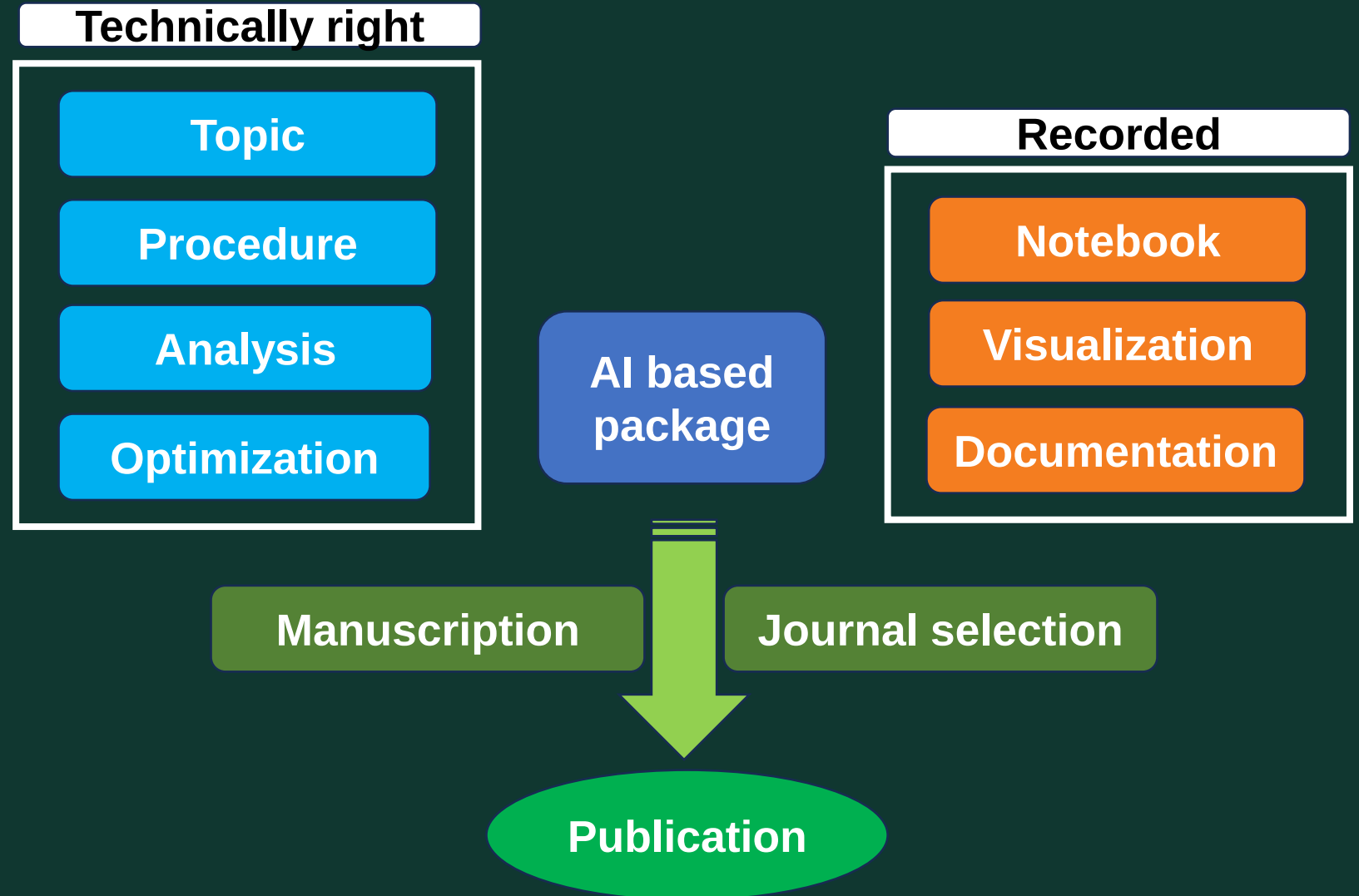




- ✓ Quality-control
- ✓ Cost-value

Quality Control

Concerns over "predatory" OA publishers prioritizing profits over quality.





Thanks for your attention