

**KENYA LIBRARIES AND INFORMATION SERVICES CONSORTIUM**

**Workshop Theme:** Advancing Library and Information Services:  
Innovations, Research Excellence, and Holistic User Support

**Promoting Quality Research Output in Institutions of Higher  
Learning: Strategies for Success**

**Prof Paul Maku Gichohi**

**University Librarian, KeMU and KLISC Program Coordinator**

# Presentation Outline



**What does Quality Research Output constitute?**



**What impedes Quality Research Output in Institutions of Higher Learning?**



**The Evolving Role of Academic Libraries with Reference to Research**



**Strategic Interventions by Academic Libraries**



**Conclusion**

# What does Quality Research Output Constitute?



**ADHERES TO RIGOROUS  
QUALITY STANDARDS**



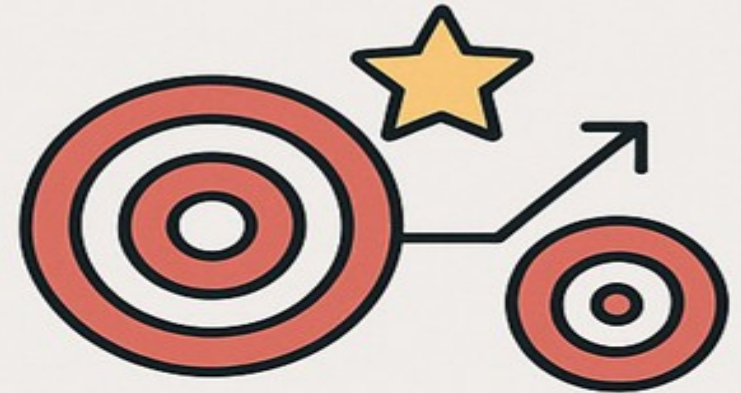
**CONTRIBUTES  
NEW KNOWLEDGE**



**ADDRESSES  
SOCIETAL NEEDS**



**DEMONSTRATES IMPACT  
THROUGH CITATIONS,  
POLICY, AND PRACTICE**



**ALIGNMENT WITH  
INSTITUTIONAL AND  
NATIONAL GOALS**

## **Metrics and standards** evaluating research quality

### **Citation Count**

Measures how often the work's cited by others

### **H-index**

A researcher's papers have been cited at least *h* times each

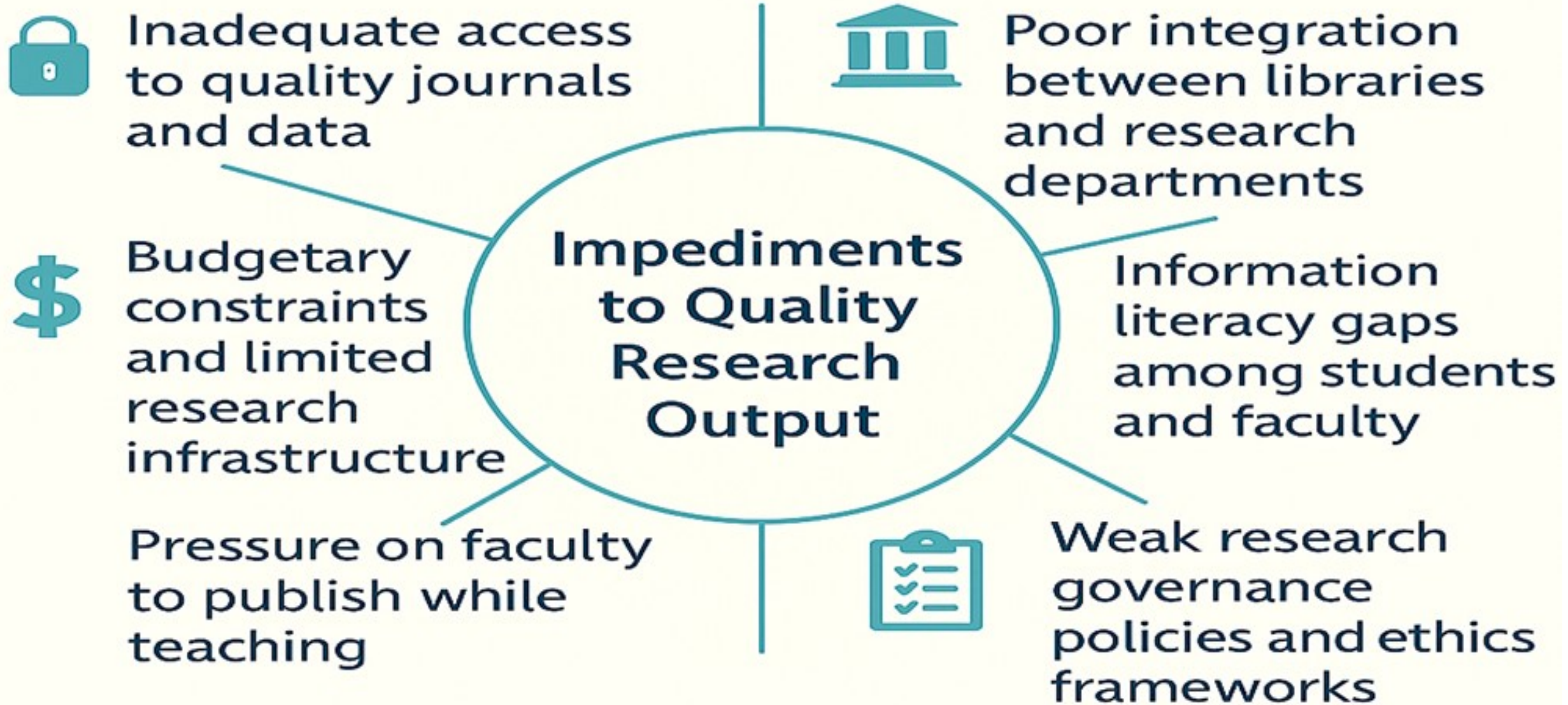
**Journal Impact Factor**  
Indicates average citations in articles in a journal

**Altmetrics**  
Measures book mentions, social media... and use policy documents



# Impediments for Quality Research Output

## Systemic and Institutional Challenges:



# Evolving Role of Academic Libraries

## Active Research Partners



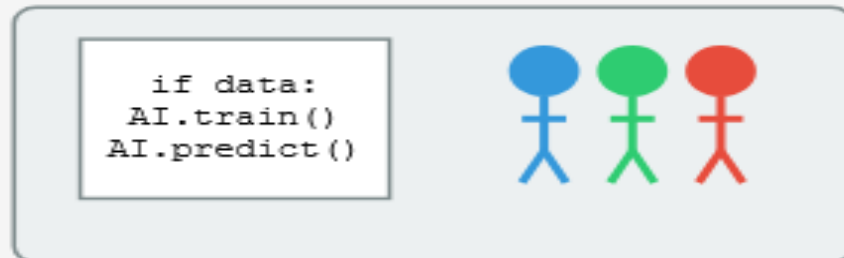
Interdisciplinary Collaboration

## Research Commons



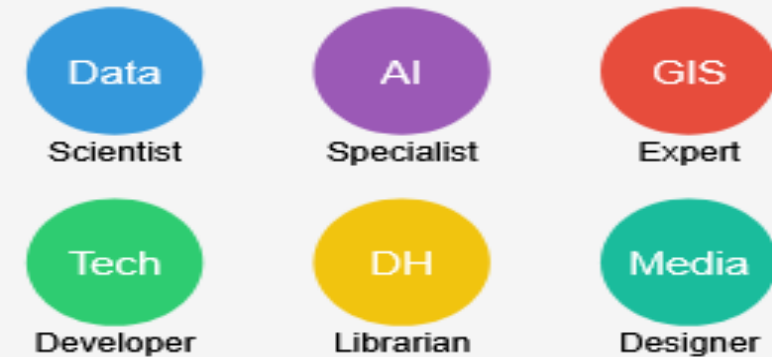
Flexible, Integrated Spaces

## Digital & AI Literacy



Basic → Advanced Training Path

## Specialized Staff Expertise



## Open Access & Data Management



Open Access



Research Data

F

A

I

R

Findable Accessible Interoperable Reusable

## Collaborative Spaces



VR Lab



Makerspace



Digital Collaboration Stations

## New Service Models



## Mentor, Counselor, Consultant



Mentor



Counselor



Consultant

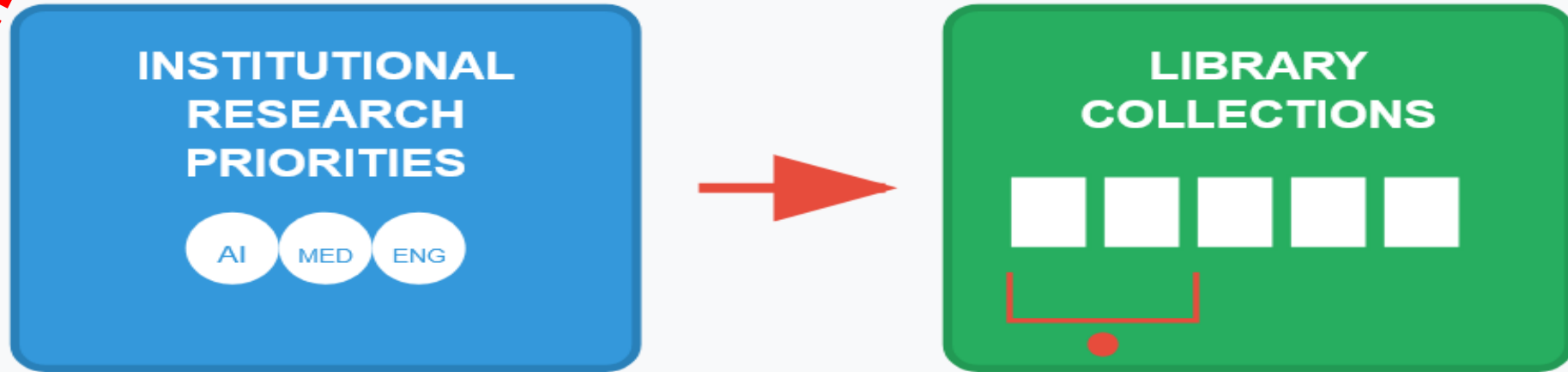
Supporting Research Journey

# **Strategic Interventions by Academic Libraries**



# Align Collections with Research Priorities

**Strategic Resource  
Development**



## Examples

- University of British Columbia (Canada): **Used analytics to guide evidence-based acquisitions.**
- Wits University (South Africa): **Consortium model increased database access by 65%.**
- Strathmore University (Kenya): **Specialized collection aligned to Vision 2030.**

## Strategic Benefits

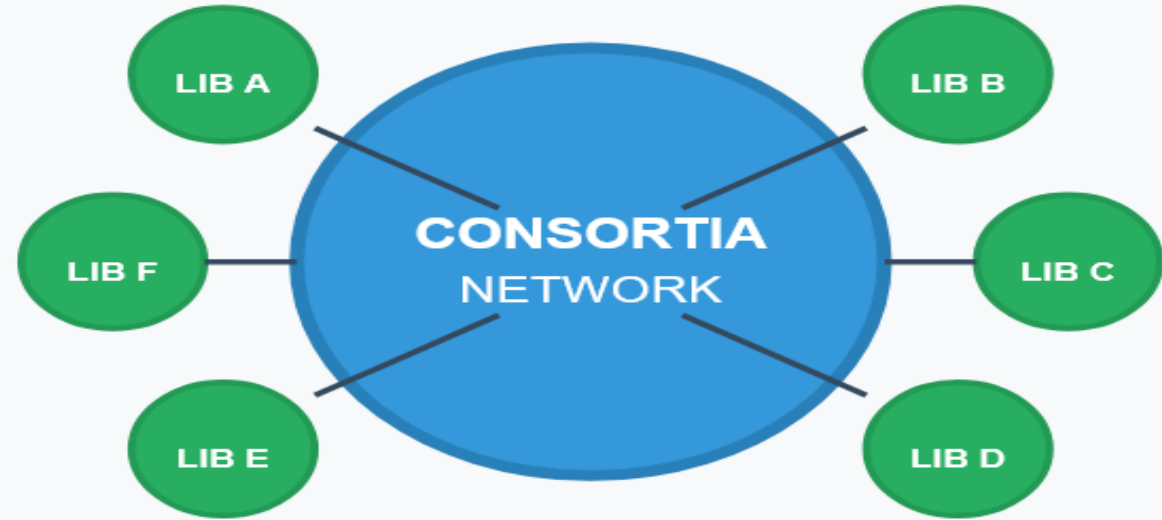
- Maximized resource utilization
- Enhanced research support
- Improved faculty satisfaction
- Strategic competitive advantage

# Join Consortia for Enhanced Database Access

## SINGLE LIBRARY

Limited Budget  
Few Resources  
High Costs

JOIN



## Specialized Database Access Through Consortia

SCIENCE  
DATABASE  
\$50K/year

MEDICAL  
RESEARCH  
\$40K/year

BUSINESS  
ANALYTICS  
\$30K/year

LEGAL  
ARCHIVES  
\$35K/year

ARTS &  
HUMANITIES  
\$25K/year

Individual Cost  
**\$180K/year**  
(All databases)

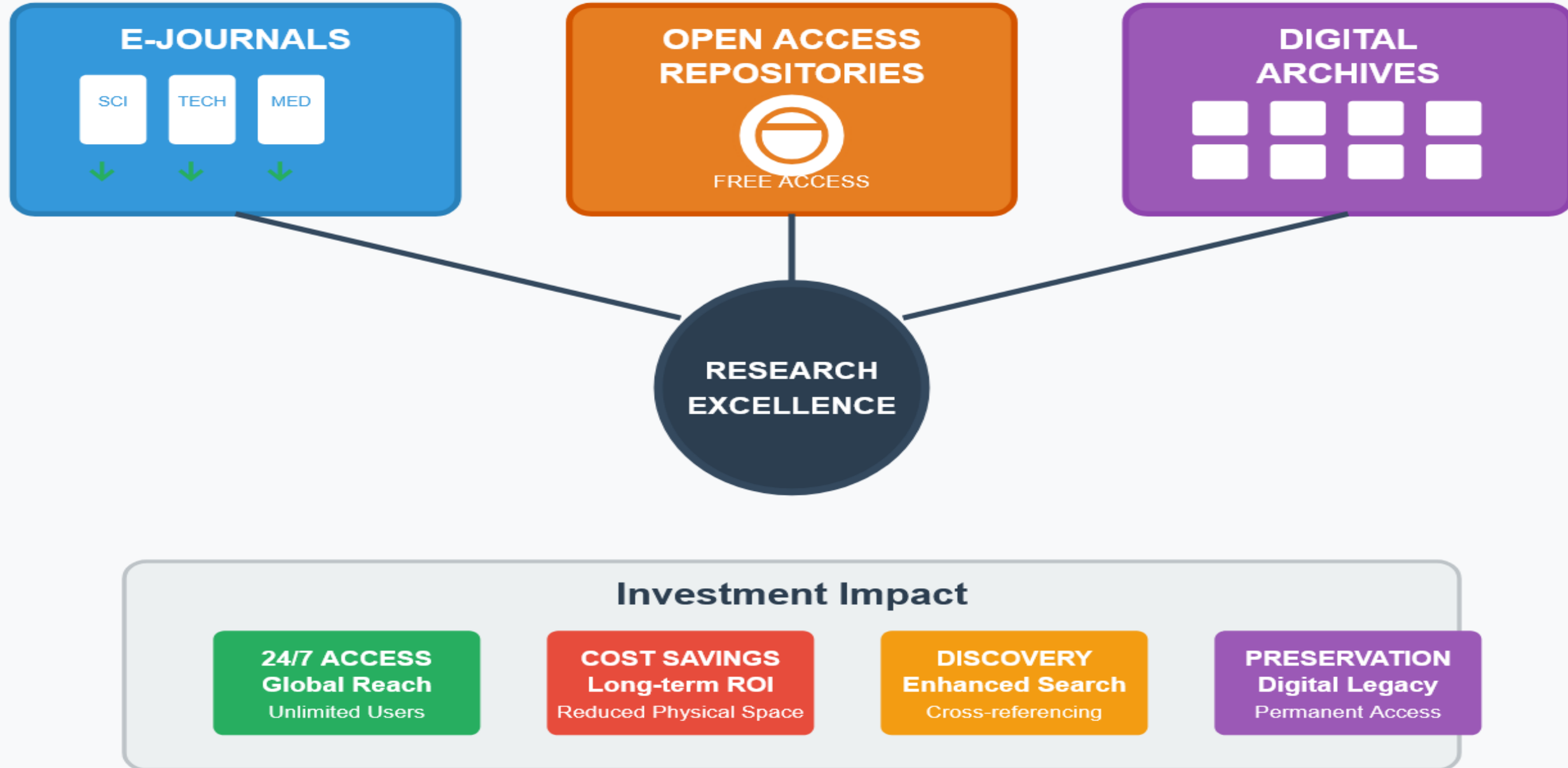
VS

Consortia Cost  
**\$30K/year**  
(Shared access)

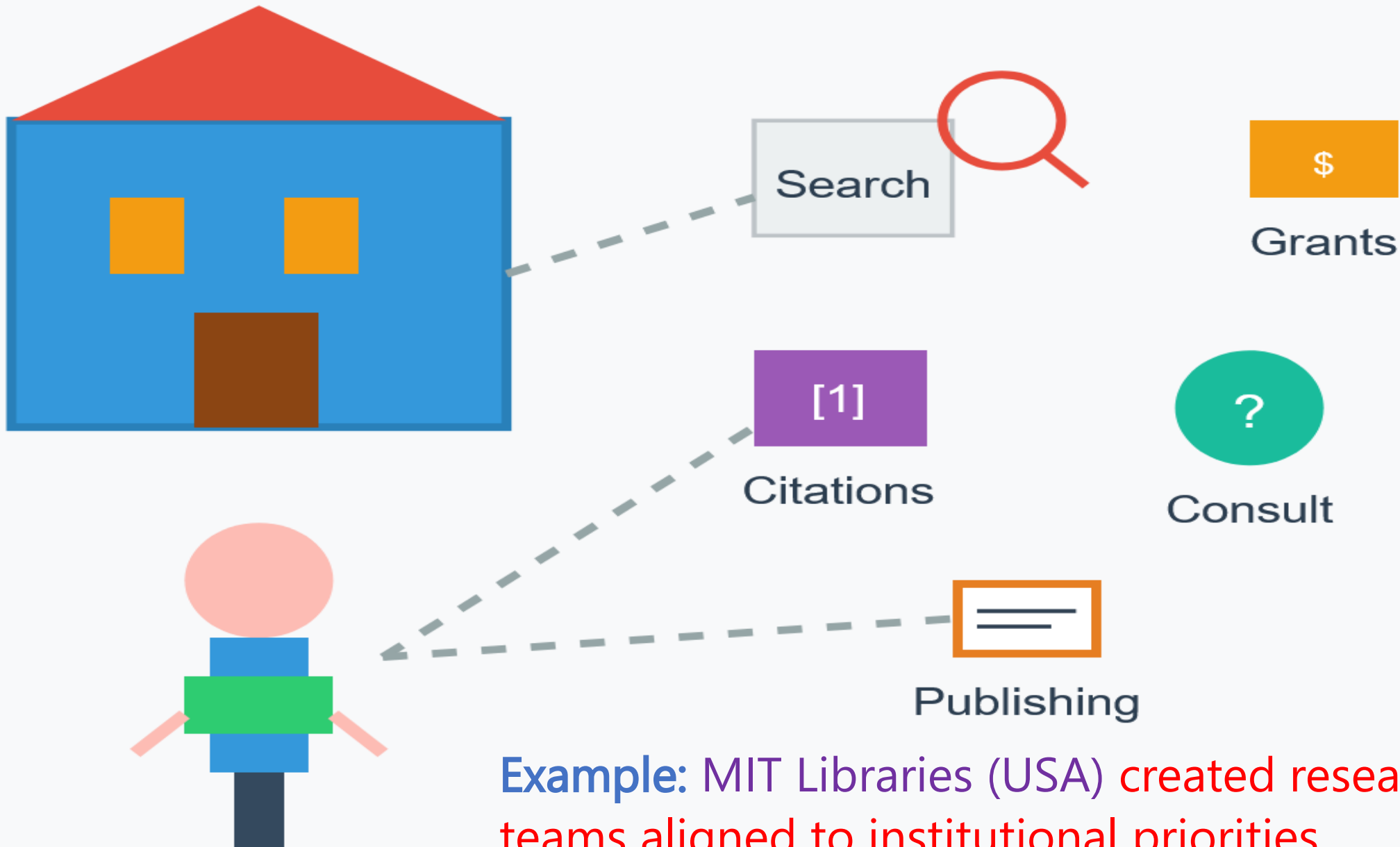


**83% COST SAVINGS + Enhanced Access**

# Strategic Digital Investments



# Research Support Services



Example: MIT Libraries (USA) created research support teams aligned to institutional priorities.



# AI-Powered Discovery Tools, Chatbots & Dashboards

## Examples:

-University of Melbourne: **AI dashboards for trend analysis.**

-Cornell University: **AI-enhanced discovery system**



Search research papers...



"Machine Learning in Academic Libraries" 100% match

"Digital Scholarship Trends 2024" 87% match

"Research Data Management" 82% match

## Library Assistant

How do I find papers on digital humanities?

I can help you search our digital humanities collection. Try these keywords: "computational analysis"...

Show me recent publications

Here are 5 papers from 2024...

## Research Analytics Dashboard

2,847

Papers Accessed

↗ +23%

341

Citations Found

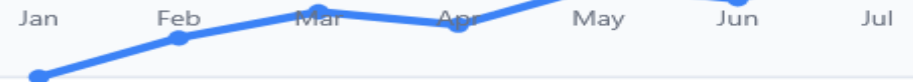
↗ +15%

156

Active Users

↗ +8%

### Usage Trends



# Tools for Analytics and Digital Curation

## Research Analytics Tools

### Citation Analysis



### Usage Statistics



### Research Impact Metrics

H-Index: 23

Total Citations: 847

Altmetric: 156

## Digital Curation Tools

### Repository Management

Data Organization

### Metadata Management

Title Author Date  
Subject Keywords  
Schema Mapping

### Digital Preservation & Access

PDF

XML

DOC

EPUB

CSV

## Integrated Workflow Management

### Data Collection

1

Automated  
Harvesting

### Quality Control

2

Validation &  
Cleaning

### Metadata Enhancement

3

Auto-tagging  
& Indexing

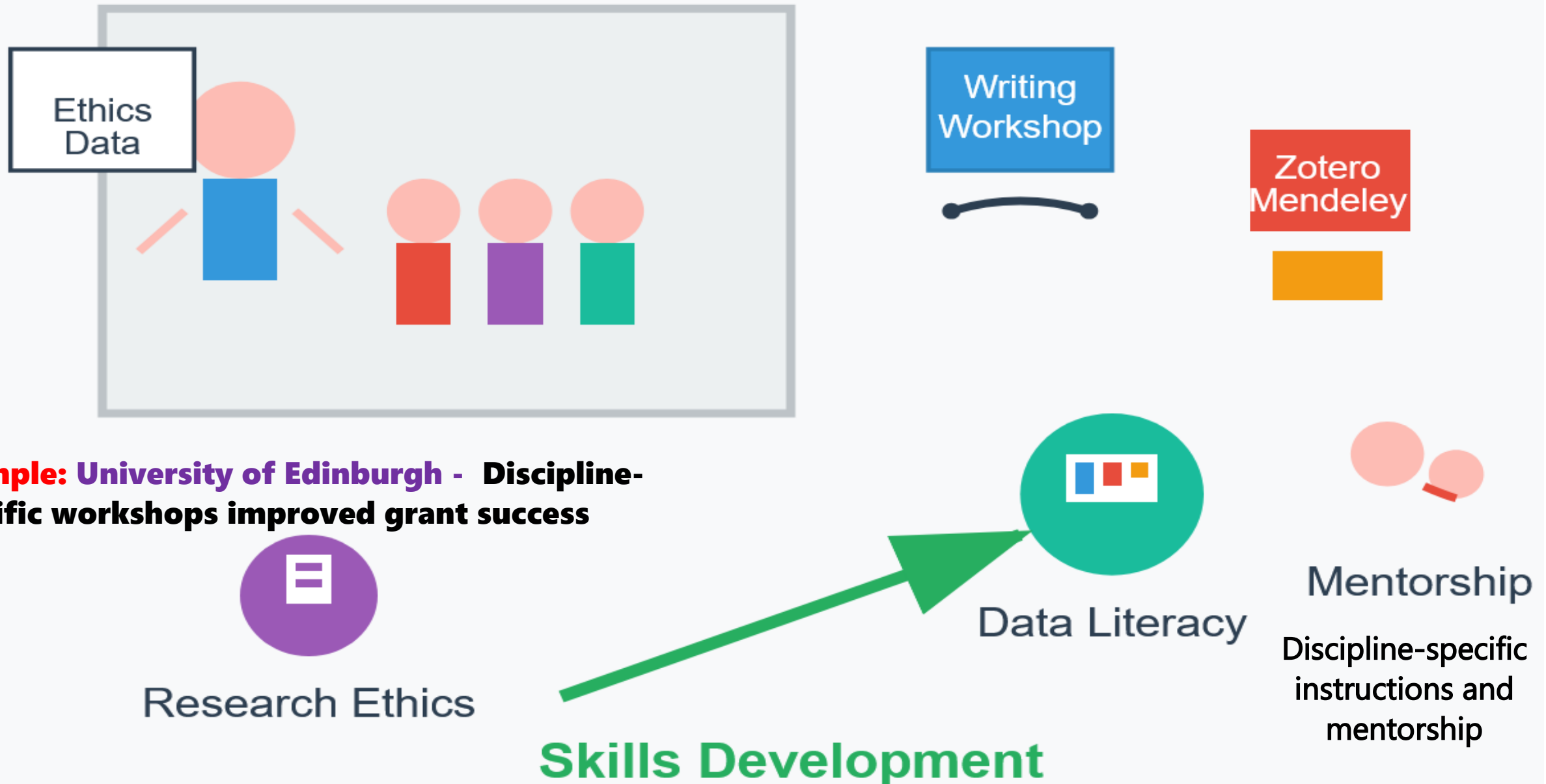
### Publication

4

Discovery &  
Access

Continuous Analytics & Performance Monitoring

# Capacity Building & Research Training



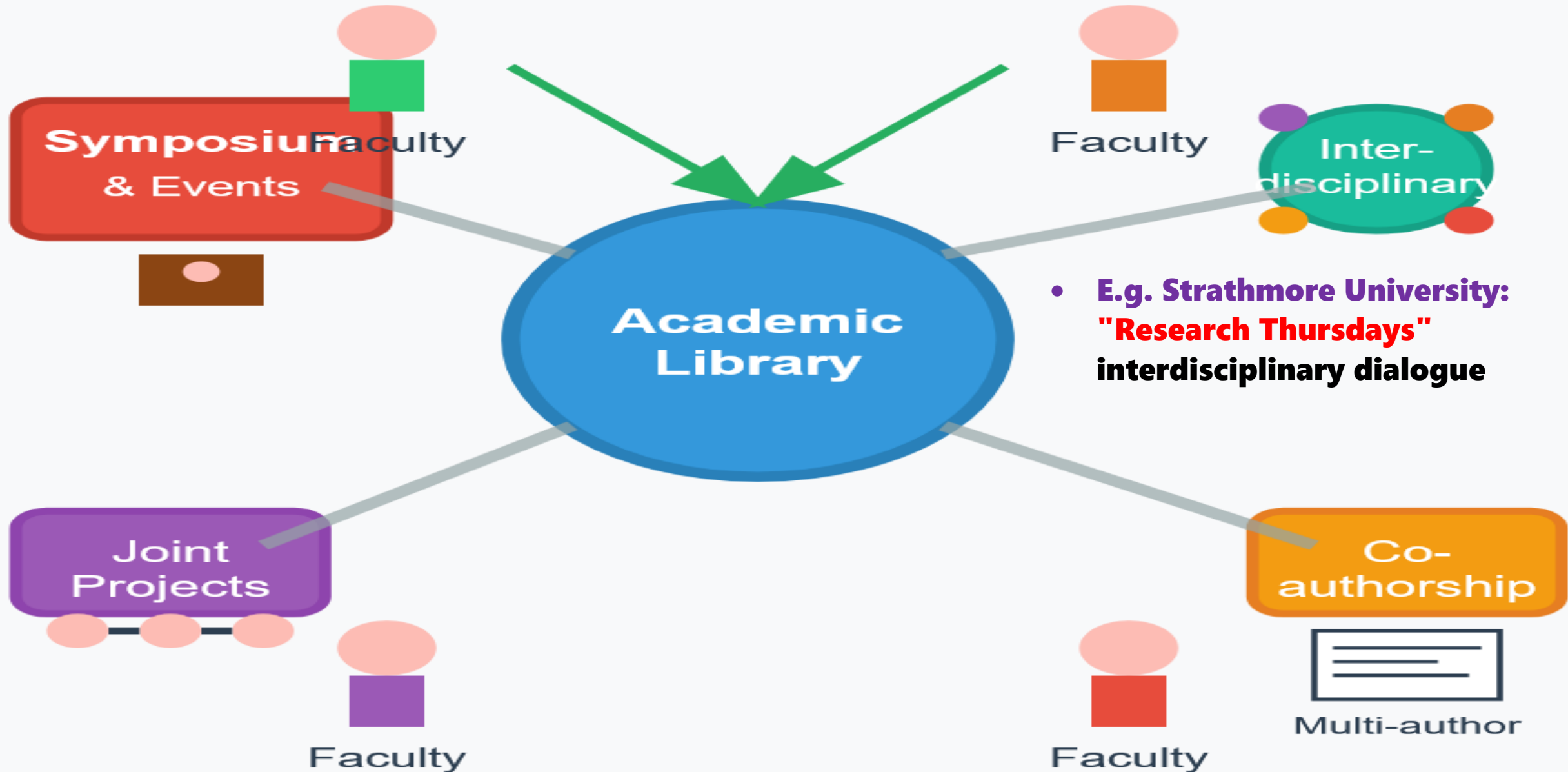
## Open Science and Open Access

- Establish and manage institutional repositories
- Promote open access publishing and faculty self-archiving
- Educate on predatory journals





# Collaborative Research Culture

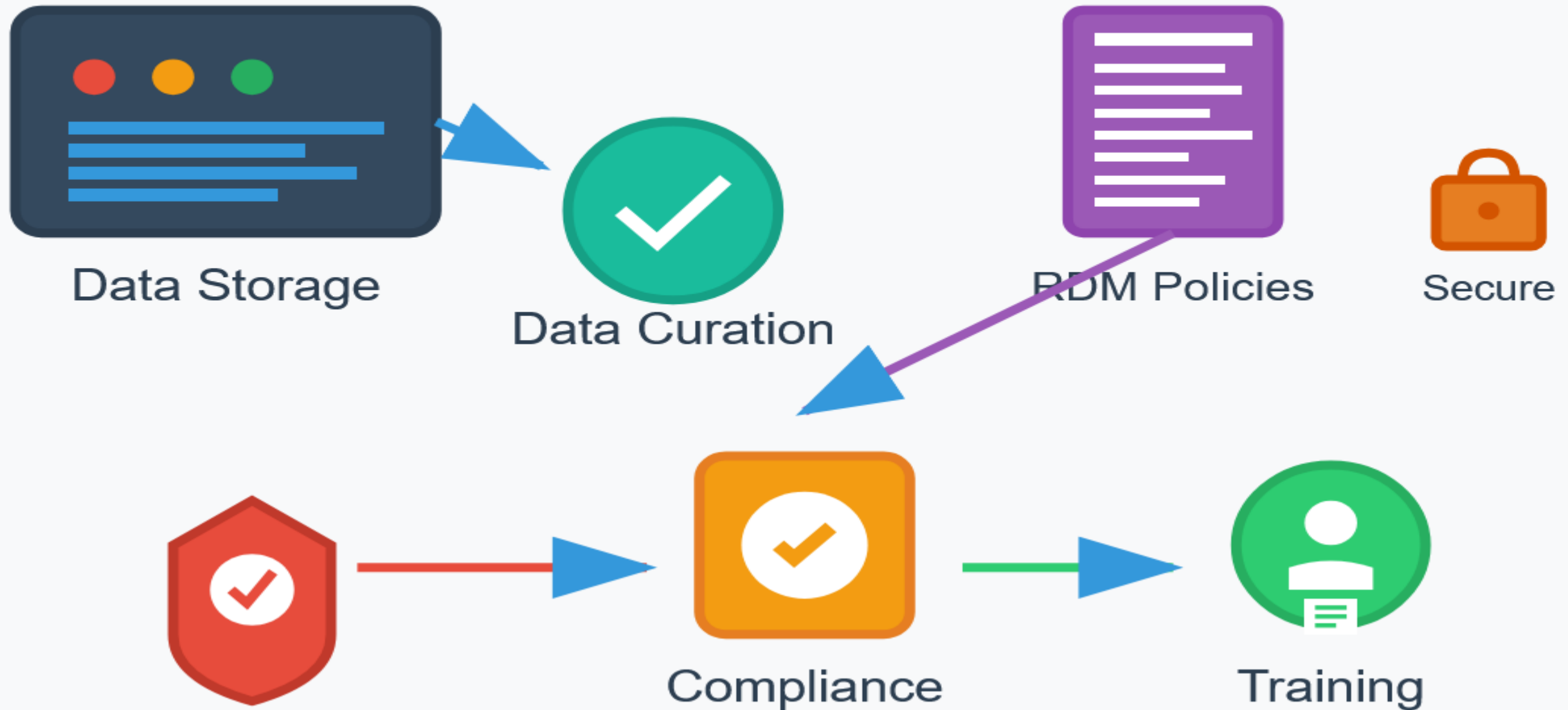


# INTERDISCIPLINARY RESEARCH



## RESEARCH COMMONS

# Research Data Management & Ethics



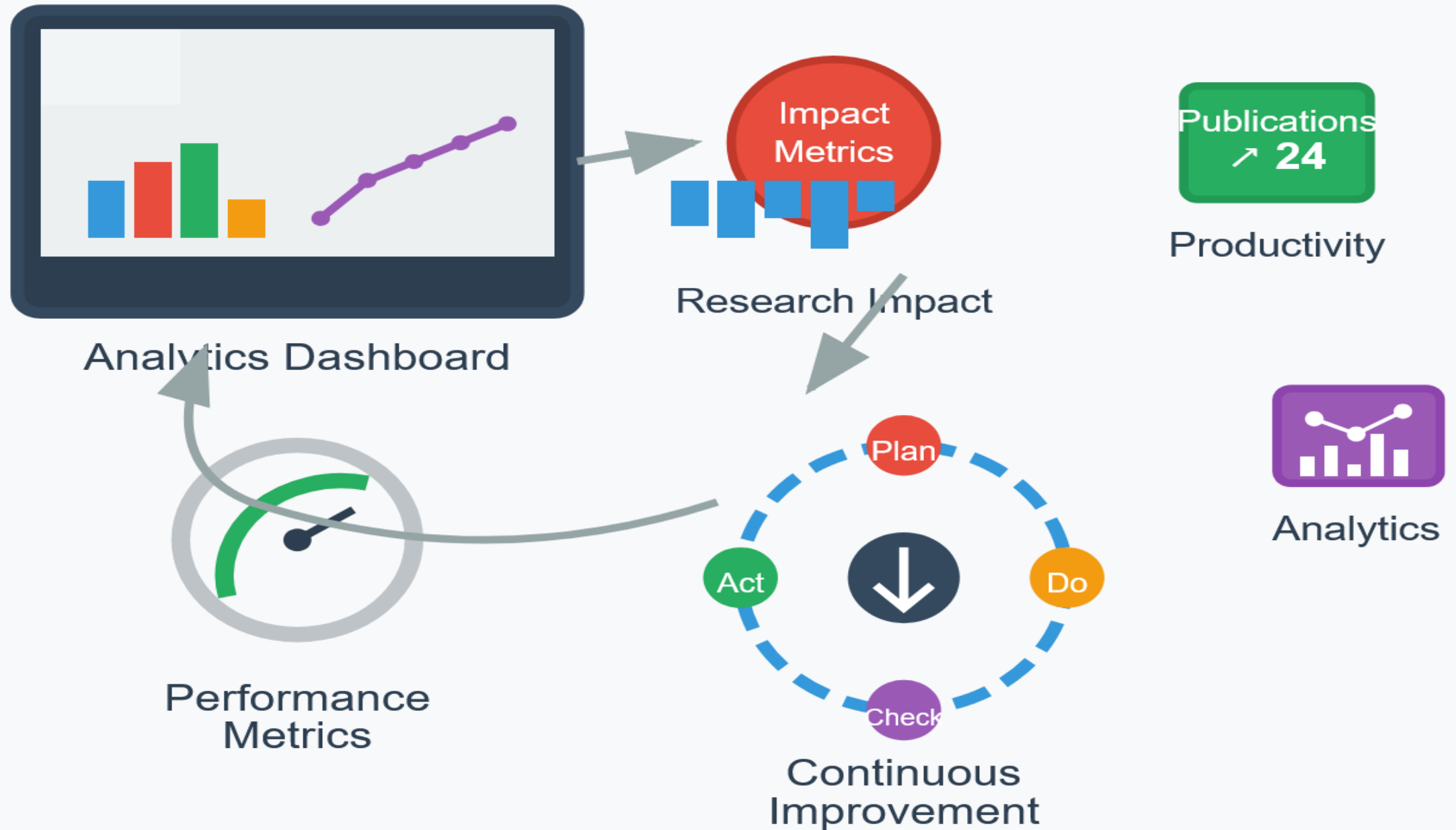


# MONITORING, EVALUATION, AND CONTINUOUS IMPROVEMENT





# Monitoring, Evaluation & Continuous Improvement



# Library Performance Evaluation Framework

Comprehensive monitoring and continuous improvement system

## Key Performance Indicators

### Research Output

- Publications
- Citations
- Impact Factor

### User Engagement

- Resource Usage
- Training Sessions
- Satisfaction

### Quality Metrics

- Data Quality
- Compliance
- Standards

### Innovation

- New Services
- Technology
- Partnerships

### Cost Efficiency

- ROI
- Budget Utilization
- Resource Sharing

### Impact Measures

- Researcher Success
- Grant Funding
- Collaboration

## Real-time Analytics Dashboard

### Usage Trends



### Research Output



### Quality Score



### Active Users

1,247

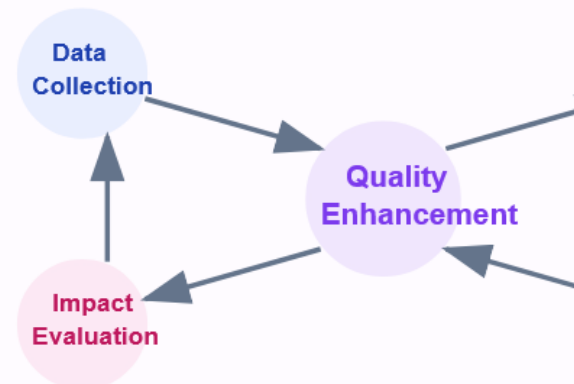
### Monthly Growth

+12.5%

### Satisfaction

4.8/5

## Continuous Improvement Cycle



### Implementation Steps

#### 1. Data Collection & Monitoring

- Automated data harvesting
- Real-time performance tracking

#### 2. Analysis & Insights

- Statistical analysis
- Trend identification

#### 3. Strategy Development

- Evidence-based planning
- Resource optimization

# Conclusion



Modern academic libraries play a crucial role in supporting quality research output by offering **infrastructure, digital tools, open access platforms, training programs, and ethical guidance.**