Q&A

Lingnan 嶺南大學 University 香港 Hong Kong

Fong Sum Wood Library

2026 JULAC Libraries Forum
User-Centric Libraries: A Sustainable Future through
INNOVATION, TECHNOLOGY, and COLLABORATION

# Leverage RIM-Metadata with Low-code Analytics @ Lingnan University


**Presented by:**

**Mandy TSE** | Research Support Librarian

**Sheila CHEUNG** | Senior Assistant Librarian (Research Support)



2026 JULAC Libraries Forum (9 January 2026)

# What is RIM?

- Research Information Management (**RIM**)
- **Aggregation**, **curation**, and **utilization** of research information

## Aggregation

Capturing all research-related information from **diverse sources**

## Curation

Data are processed & validated to ensure the **accuracy & integrity**

## Utilization

Leveraging validated data for **high-value tasks**, e.g. reporting, performance assessment

**RIM-Metadata Management**

**Insights**

# What is RIM Metadata? Why it matters?

- Information about **every aspect** of research throughout the **full research lifecycle**

**Aggregation**

Capturing all research-related information from **diverse sources**

**Research Outputs** / **Activities** / **Personnel**

Research Output

Events

Affiliations

Funding & Awards

Media & Press

Researchers

**Impact**

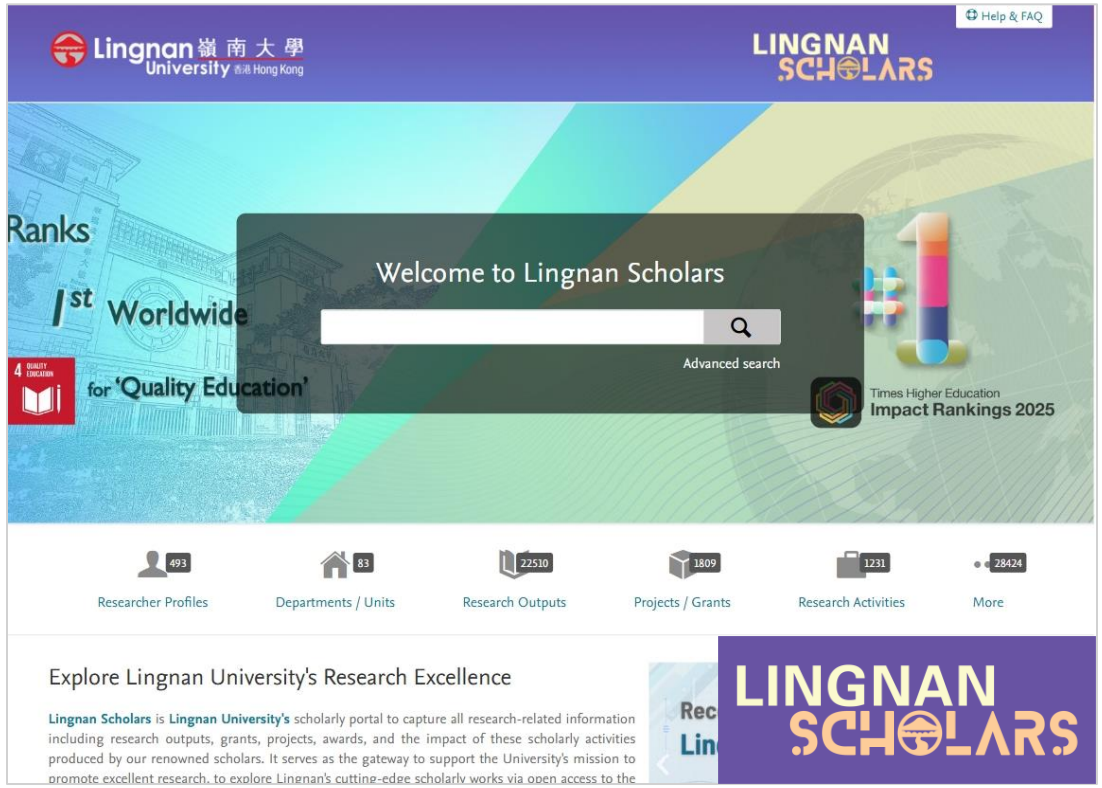
overton

Scopus® SciVal

Clarivate Analytics

**Useful Insights** ← **Analytics** ← ? ..... How?

# Lingnan's RIMS — Lingnan Scholars




- Powered by Elsevier's Pure
- Launched in early 2019
- **Single Source of Truth** for the University's research landscape
- Supports **critical reporting and assessment**, e.g. UGC's RAE and CDCF
- The **Library** oversees **research output harvesting and validation**

# Limitations of Built-in Report in RIMS

Research outputs > Journals

| I | J | K | L |
|---|---|---|---|
| *Type* | *Journal title* | *Journal ISSN* | *Publisher* |
| Book Chapter | | | |
| Journal Article (refereed) | SN Social Sciences | 2662-9283 | Springer |
| Journal Article (refereed) | Journal of e-learning Research | 2669-235X | Diamond Scientific Publishing |
| Journal Article (refereed) | IEEE Transactions on Emerging Topics in Compu | 2471-285X | Institute of Electrical and Electronics Er |
| Journal Article (refereed) | IEEE Transactions on Engineering Management | 0018-9391 | Institute of Electrical and Electronics Er |
| Journal Article (refereed) | Social Policy and Society | 1474-7464 | Cambridge University Press |
| Journal Article (refereed) | Molecules | 1420-3049 | Multidisciplinary Digital Publishing Insti |
| Journal Article (refereed) | Scientific Reports | 2045-2322 | Nature Publishing Group |
| Book (Editor) | | | |
| Journal Article (refereed) | International Journal of Computer Vision | 0920-5691 | Springer Netherlands |
| Journal Article (refereed) | Marketing Letters | 0923-0645 | Springer New York |
| Journal Article (refereed) | Teaching and Teacher Education | 0742-051X | Elsevier Ltd |
| Journal Article (refereed) | Expert Systems with Applications | 0957-4174 | Elsevier Ltd |
| Journal Article (refereed) | Journal of Management Studies | 0022-2380 | Wiley-Blackwell Publishing Ltd |
| Journal Article (refereed) | Comparative Strategy | 0149-5933 | Routledge |
| Book Chapter | | | |
| Journal Article (refereed) | Explicator | 0014-4940 | Routledge |
| Journal Article (refereed) | Fashion and Textiles | | Springer Singapore |
| Book Chapter | | | |
| Book Chapter | | | |
| Journal Article (refereed) | IEEE Transactions on Systems, Man, and Cybern | 2168-2216 | IEEE Advancing Technology for Humani |

**Fail to meet the increasingly complex data needs and inquiries of the University**

## Limited Data Sources

Need **manual mapping** to enrich external data

## Delayed Data Insights

Fail to capture **ongoing changes** in publication and citation data

## Difficult to Understand

**Challenging to deliver meaningful insights** from spreadsheet data

Q&A

# Shifting Beyond Built-in Reporting

## Intended Outcomes:

**Integrating** external data

**Automating** processes

**Visualizing** data

**Automated** analytics; **limited** analysis & visualization; **unstable** data connections

**Automated** data analytics; **Advanced** analysis & visualization; **Flexible** external data integration with **full control** over data sources

Phase 1 — **RIMS Report**

**Static, predefined** reporting

Phase 2 — **Experimental Approach**

Phase 3 — **Technical Approach**

**Automated** analytics; **Advanced** analysis & visualization; **limited** external data integration

Phase 4 — **Low-Code Approach**

Phase 2

# Experimental approach with Free Ware

**Unstable connectivity**
**No automated external data integration**

LINGNAN SCHOLARS — **Data Source (via API)**

Google Sheets — **Extraction** **Storage** **Processing**

Google Data Studio — **Visualization** **Reporting**

Data is retrieved from Lingnan Scholars via API

✅ Dynamic, real-time updates

✅ Automated sync

✅ Allow for bulk retrieval of data

▶

Employs coding (Google Apps Script) and advanced formulas for automated data extraction and processing

❌ Unstable data connections

❌ Unable to process large-scale datasets efficiently

▶

❌ Limited visualization options

❌ No SSO authentication integration

❌ No granular access control

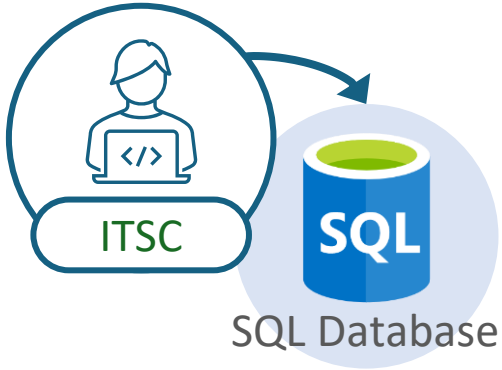
Phase 3

# Technical approach

**Heavy reliance on programming experts for data management and updates**

LINGNAN SCHOLARS

**Data Source (via API)**




**Extraction Storage**

Power BI

**Processing**

**Visualization**

**Reporting**

Data is retrieved from Lingnan Scholars via API

✅ Dynamic, real-time updates

✅ Automated sync

✅ Allow for bulk retrieval of data

Library specifies requirements → ITSC ingests to SQL Server

❌ Programming knowledge required

❌ Lack of flexibility expanding data fields on demand

Datasets in the SQL database are connected to Power BI for processing and visualization

✅ SSO authentication integration

✅ Granular access control

# Leveraging RIM data via Low-code analytics tool

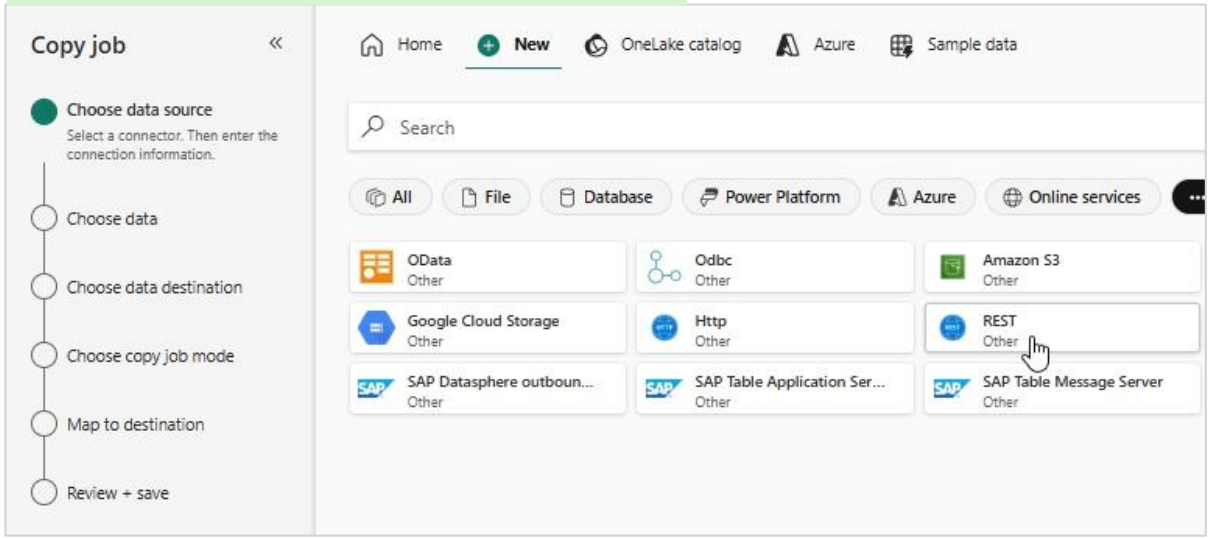
In 2025, Lingnan University subscribed to Microsoft Fabric, a **low-code data analytics** platform

**Traditional line-by-line coding**

```
        "retryIntervalInSeconds": 30,
        "secureOutput": false,
        "secureInput": false
    },
    "typeProperties": {
        "source": {
            "type": "RestSource",
            "httpRequestTimeout": "00:01:40",
            "requestInterval": "00.00:00:00.010",
            "requestMethod": "GET",
            "paginationRules": {
                "supportRFC5988": "true"
            },
            "datasetSettings": {
                "annotations": [],
                "type": "RestResource",
                "schema": [],
                "externalReferences": {
```

**Easy to use visual interface**

Microsoft Fabric




→ Allow non-technical staff to create & complete data projects **independently**, **without needing deep coding expertise**

Phase

# 4 Low-code approach

**Minimize dependency on coding experts → Library can manage data & updates independently**

LINGNAN SCHOLARS

**Data Source (via API)**

Microsoft Fabric

**Extraction**

**Processing**

**Storage**

Power BI

**Analysis**

**Visualization**

**Reporting**

Data is retrieved from Lingnan Scholars via API

✅ Dynamic, real-time updates

✅ Automated sync

✅ Allow for bulk retrieval of data

**Library** is responsible for the **end-to-end data workflow**, from collection and processing to storage — all within Fabric

✅ Allow non-technical staff to manage data

✅ Increased Flexibility

Datasets in the SQL database are connected to Power BI for processing and visualization

✅ SSO authentication integration

✅ Granular access control

# Why Low-code analytics works for Libraries

## Librarian Expertise

Focuses on our expertise in **metadata and bibliometrics** without requiring advanced coding knowledge

## Sustainability and Continuity

Eliminates “key person risk” by making the entire data project **easy to audit, edit, and maintain by non-technical staff**

## Autonomy & Flexibility

Comprehensive bibliometric analysis should never rely on a single data source. By maintaining self-controlled workflows, we gain the flexibility to **expand our data scope on demand as our subscriptions grow**

Q&A

**RIM-Data Sources** → **INGESTION** → **TRANSFORM** → **STORAGE** → **DATA LAKE** → **VISUALIZATION**

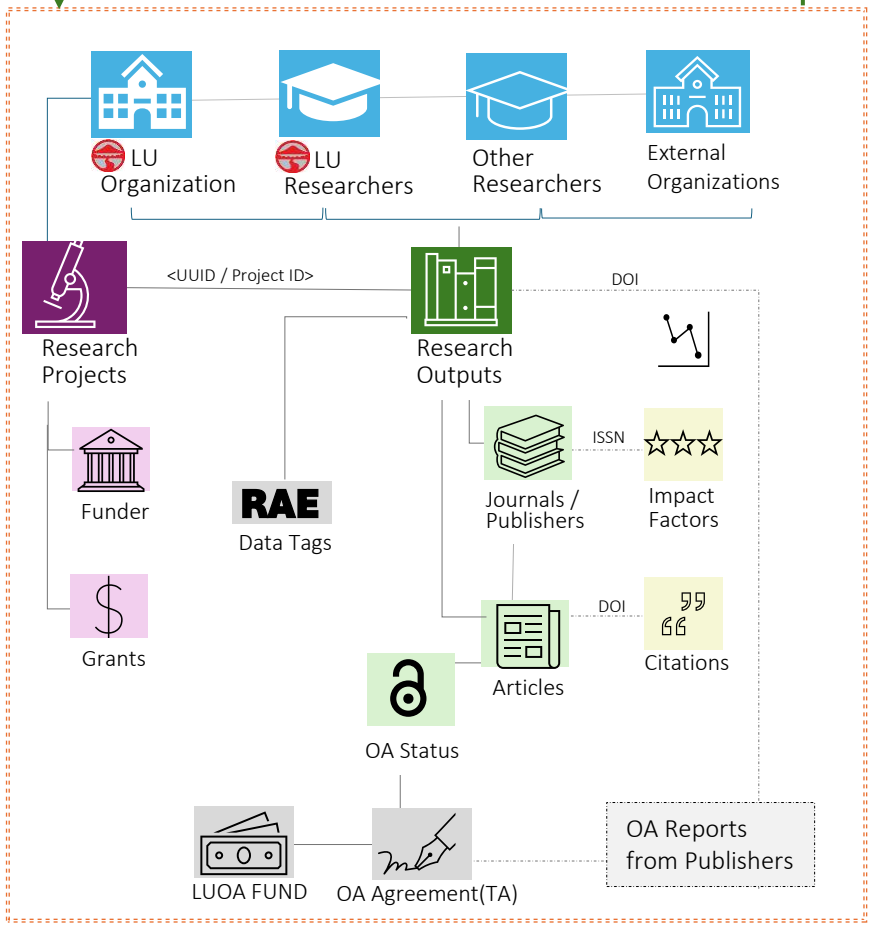
- </> XML
- { ; } JSON
- </> HTML
- , CSV
- ••• Others

Pipeline + Dataflow

OneLake

RIM-metadata @Lingnan | Ready-to-Use Tables

Power BI




**AUTONOMY**
Adopt Data Sources / Scope

**AUTOMATION**
Automate Data Transformation Workflow

**SUSTAINABILITY**
Dynamic Data Refresh (daily interval)

## UTILIZATION

Use Data to Address Questions / Concerns:

**Basic Figures:**
- No. of Scholarly Outputs by LU Authors?
- What / Where do LU Authors publish?
- Funding Sources of Articles
- OA Publications %

**Reporting Needs**
- CDCF Report (Table 61 & 61B)
- CDCF Weighting – Automated Calculation
- University Annual Report – Research Matrix

**Topical Analytics**
- SDG Contribution
- RAE2026
- RPG Students Publication Rate

**Other Ad-hoc Requests**
- RAE Data Comparison
- International / Interdisciplinary Collaboration
- Individual Researcher – Impact Highlight

Q&A

Lingnan 嶺南大學 University 香港 Hong Kong

Fong Sum Wood Library

2026 ULAC Libraries Forum
User-Centric Libraries: A Sustainable Future through
INNOVATION, TECHNOLOGY, and COLLABORATION

# From Data to Insights: Dashboards in Action

By leveraging RIM data via Microsoft Fabric, the Library has transformed raw RIM data into actionable insight, visualized across different University Stakeholders

## University-Wide Dashboard

**Master Dashboard Template:** to capture all data by default, with **Scalability** and **Granularity** to fit different stakeholders at different levels across campus.

**Role-Based Access:** Data visibility is **automatically** tailored to the stakeholder's **specific role and permissions**:

- University Level: Senior Management
- Faculty/Unit Level: Deans and Heads
- Individual Level: Academic Staff

## Tailored/Project-Based Dashboard

**Need-Based Customization**: Customized for specific **institutional/faculty data needs / questions**

**Cross-Campus Collaboration:** Partnered with **stakeholders across the university** to co-create data solutions that drive decision-making

Q&A

# Feedback

## Real Users Feedback

Thank you for sharing. I find it great - very informative and interactive...

I think the platform is a very useful tool for us to check our research impact and find potential collaborators...

This is extraordinary. Please, share my congratulations and my gratitude with the team. I will share it with my colleagues...

## Cross-campus Collaboration

Collaborated with **cross-campus administrative units** to build dashboards supporting recurring data reporting, such as Departmental Annual Report, CDCF Reporting, etc.

## Recognized Data Provider

Earn **Peer Recommendations** among Academic departments to approach Library for Data support

# Future Directions

Embracing **Technologies (Low-code; AI)** while Deepening **Analytical Skills**

From **Metadata Management** to **Insight Generation**

Positioning the **Library** as a campus **Data Partner**

Library's Role: Routine Data Maintenance → Data Analytics & Strategic Storytelling

Q&A

Lingnan University 嶺南大學 香港 Hong Kong

Fong Sum Wood Library

2026 ULAC Libraries Forum
User-Centric Libraries: A Sustainable Future through
INNOVATION, TECHNOLOGY, and COLLABORATION


**Lingnan University Library – Research Support Team**

Mandy TSE
Kammy CHAN
Derek CHANG
Sheila CHEUNG


# Thank You!

## Any questions?