# Integrating and Leveraging Metadata in a Shared Environment: the University of Macau Library Experience

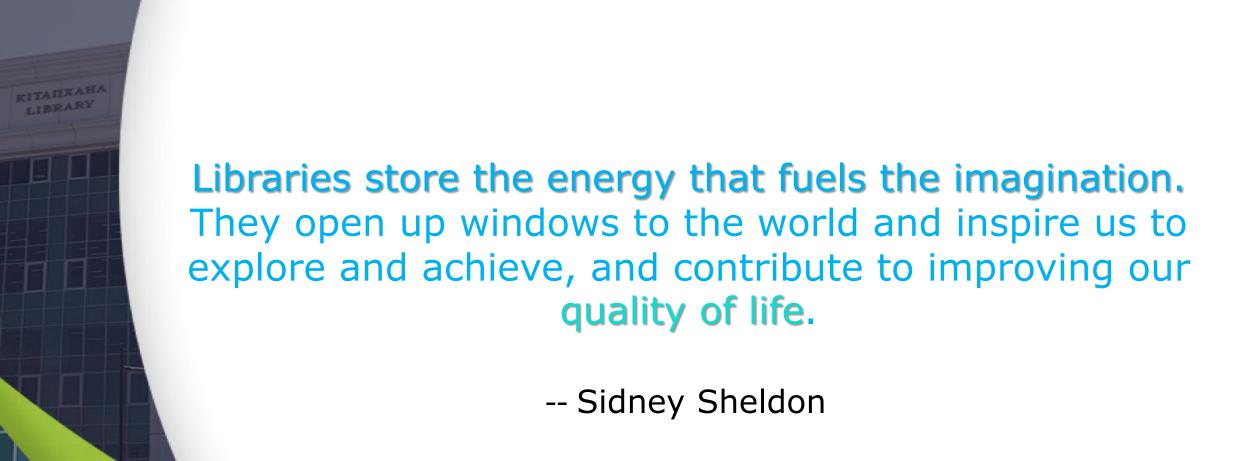






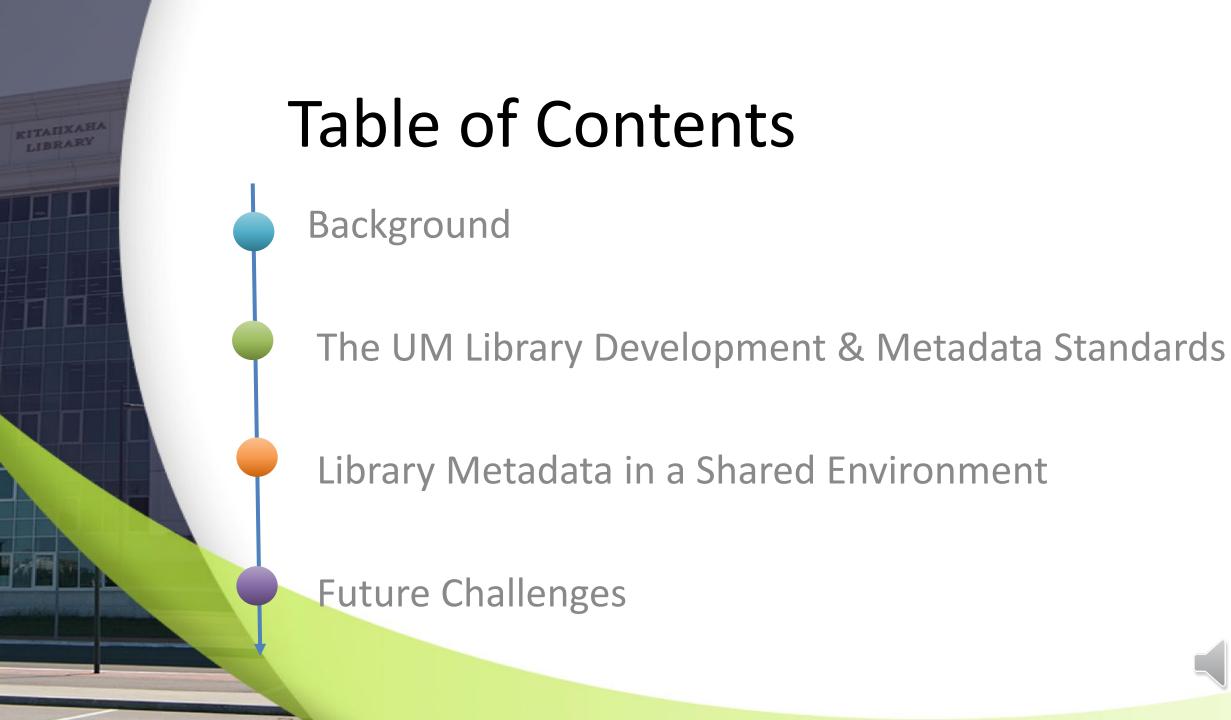
29 June 2021





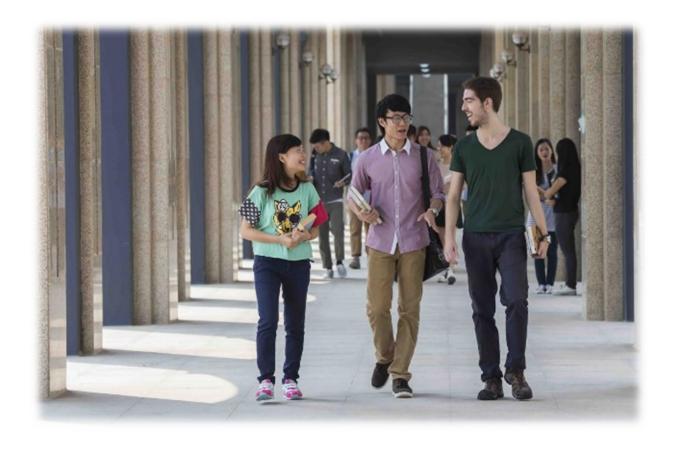
(1917-2007 American writer and producer)







# Background







# Macao Special Administrative Region



Area: ~33 km<sup>2</sup>

Population: 682,500

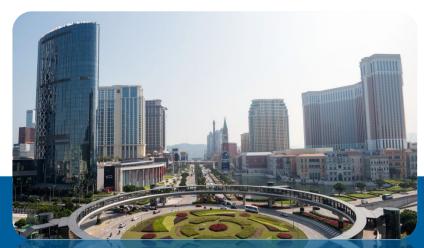
Density: 21,000 ppl/km<sup>2</sup>

Language: Chinese (96%),

Portuguese (2%),

English

Economy: Tourism





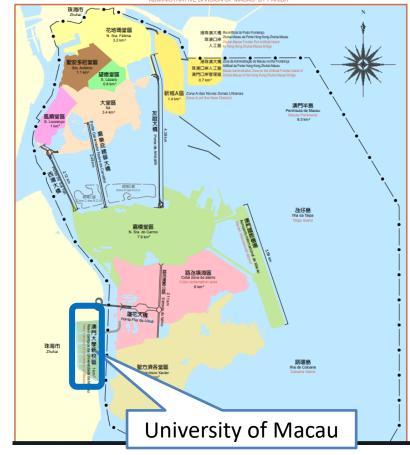


## 澳門堂區劃分 DIVISÃO DO TERRITÓRIO DE MACAU, POR FREGUESIA ADMINISTRATIVE DIVISION OF MACAO, RV PARISH

# University of Macau

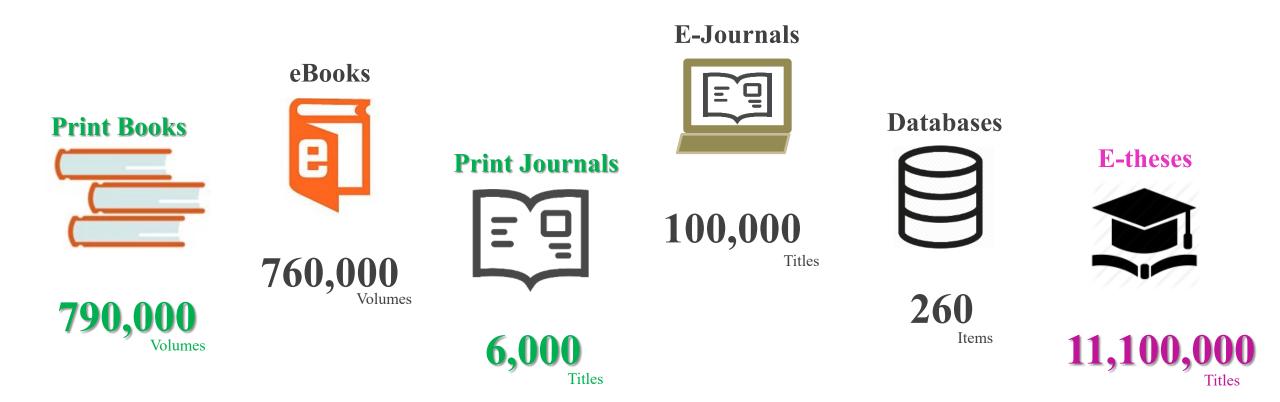
- The only internationalized public comprehensive university in Macao
- Main medium of instruction:
   English; Some programs in Chinese or Portuguese
- 80% of its faculty members from outside Macao

| Mainland<br>China | Portugal | U.S.A. | Canada | Australia | Singapore | Others |
|-------------------|----------|--------|--------|-----------|-----------|--------|
| 60.8%             | 15.2%    | 8.2%   | 3.2%   | 2.0%      | 1.5%      | 9.1%   |





# UM Library resources at a Glance



Total stocks of 12.6 million items/vols

**Open Access Resources** 





# The UM Library Developme nt

& Metadata
Standards
m澳大





# Transition of Libraries as Enterprises

Prior to 1990

Early & Middle 1990s

Late 1990s to Early 2000

Early 2000 --

Information management focused **Enterprises** on stand-alone isolated functions

Individual solutions for common problems

**Business Process** Reengineering focused on improving processes within functions or business units

Cross-functional process integration, but the organizational boundaries were firm

Cross-functional process integration

- Dependencies
- Inter-relationship
- Information system formally linked to cross-functional process

Cloud-based Enterprise Resource Planning (ERP) began in 1998

Cloud ERP develops and collects real time data, with Al enhancements, to empower better decision-making



Early 1990

Computerized Catalog adoption



Integrated and automated library systems



**Early 2000** Mid 1990s



- Formally Integrated Library Systems (ILSs)
- User-oriented electronic libraries
- Abundant electronic resources and ICT technology enhanced

Cloud-based Library Services Platforms (LSPs) in 2010s, commercial or open source

The next generation of library management systems that has beyond all inbuilt features of an ILS, built on multi-tenant SaaS platform, taking advantage of cloud computing, web technologies and discovery service to provide capabilities to manage physical. digital & electronic materials, and other services in a single unified system.

Traditional

Libraries

Smart

## Transition of the UM Library in 5 Phases

Early & Middle 1990s Phase 2 In 1993, adoped Dynix as its initial automatic library system. 2010s--Prior to 1990 In 1994, connected to the 2004 - 2010sInternet and started to surf 2010s - current Phase 4 websites. In 2004, adopted Phase 5 Started to access the **Early 2000** Adopted Discovery Service Innovative Millennium, a bibliographic data from libraries in EDS 2013-2019 highly integrated library Hong Kong. Primo(VE) 2019- current system, which made an ate 1990s to Early 2000 one-stop-search hybrid Phase 3 In 2020, migrated to the LSP library for UM. Early 1990 Alma. During late 1990s, the Mid 1990s Integrated and redesigned Phase 1 Internet, search engines, the business processes of paperless prediction, etc. In 1982, equipped with Bibliographic data of a acquisition and cataloging. a mainframe computer In 1996, introduced CDlibrary's collection is the and converted most of ROM tower. Then its English card catalog legacy of a library commenced subscribing Macau Academic into computerized data, to e-journals on CD-ROM Library Alliance which is the first and web-based (MALA) computeriezed library resources. since 2014 catalog in Macao. Growth Growth Growth Growth Growth Growth **Through Through Through Through Through** Through **Alliances** Creativity Direction **Delegation** Coordination Collaboration

4M1E Analysis

- Related emerging technologies: 5G, 6G, AI, Extended Reality (XR), big data, semantic web, knowledge graphs, linked data, & etc.
- International and local concerns and influences

Staff professional knowledge and workplace training

- Staff work attitude, adaptability, shared values
- Work motivation and job engagement

Machine

Organizational culture and ways of communication

Man

**User Demand-Oriented** 

**Environment** 

Library
Metadata
Creation,
Integration and
Management

 Library Services Platforms (commercial vs open sources; flexible vs lock-ins)

 LSPs to integrate with other cataloging platforms, cataloging data sources, data processing software and tools, etc.

 Apply international standards and guidelines, best practices, shared experiences, etc.

- Workflows optimization and cost-effectiveness
- Collaboration within and beyond the organization (library)

Interactive UX

Method

Material

- Library cataloging data sources (OCLC, regional union catalogs, identity management records, etc.)
- Metadata from commercial or non-commercial digital content providers, including OER/OA resources
- Local and in-house metadata
- International and local cataloging standards documents and guidelines





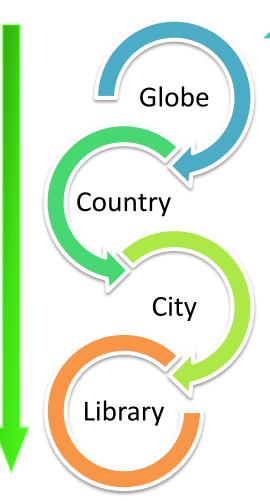
# Think Globally, Act Locally



Global/country
development, standards
and policies to be
translated into policies
and practices at the
city/library levels.

UM Library's Cataloging Policies and Procedures

https://library.um.edu.mo/lib\_services/catalog/cat\_procedures\_en





Country/city/library level projects and initiatives to drive development and policy changes at the city/country/global levels.



Names of Persons

https://www.ifla.org/node/4953

The IFLA Cataloguing Section has published a list including conventions for 105 countries in 1996. Work to update the *Names of Persons* document has been carried out in 2009 and 2010.





**CONTACT US** HOME INFORMATION RESOURCES **SERVICES BOYA FORMS** CATALOGING POLICIES AND PROCEDURES SERVICES / CATALOGING SERVICES / CATALOGING POLICIES AND PROCEDURES

## Services Acquisition Services

Circulation Services

Electronic Theses & Dissertations Services (Intranet ONLY)

Interlibrary Loan Services

Library Facilities and Services for People with Disabilities

Library I.T. Services

Library Instruction

## CATALOGING POLICIES AND PROCEDURES

- Classification Manual
- Manual for Classification K General Law: for European Union
- ▼ Table for History of Macau DS 796 M3+
- ▶ Cataloging Manual
- Guideline for Evaluating & Selecting Internet Resources
- Guideline for Cataloging e-Books
- Guideline for Cataloging e-Journals
- Market Guideline for Cataloging Website
- NDA Basic Guideline for Copy Cataloger
- MARC21 Content Designators Material Type and Bibliographic Level
- Five Radicals Count Chinese Author Table (Copyright © 2010, Macao Library & Information Management Association)
- ∑ Chinese Romanization Spelling and Vocabulary (Liang Chin Nan, 1982)



### RDA BASIC GUIDELINE FOR COPY CATALOGING **UM Library**

Audience: people who copy catalog

Scope: primarily books; though most criteria are applicable to other formats as well

Last updated: 19 Feb 2016

#### Introduction:

Both AACR2 records and RDA records are acceptable in INNOPAC now. Full-level RDA records are always preferable whenever you do copy cataloging (see table below). Do NOT revise Full-level RDA records to AACR2 ones no matter what kind of languages they are. If no full-level records match, see the standards documents for cataloging AACR2 records (Except the case i.e. "Manual input for encoding levels that are less than full")

| AACR2 records RDA records |                      | Preferable cataloging decision      |  |  |
|---------------------------|----------------------|-------------------------------------|--|--|
| Full level available N/A  |                      | AACR2 records (Copy cataloging)     |  |  |
| N/A                       | Full level Available | RDA records (Copy cataloging)       |  |  |
| Full level Available      | Full level Available | RDA records (Copy cataloging)       |  |  |
| N/A                       | N/A                  | AACR2 records (Original cataloging) |  |  |

### Manual input for encoding levels that are less than full:

If the only information missing from a bibliographic record is the physical description (3XX fields), and you have been trained to make the changes in RDA to both the 040 and 3XX fields (see table below), then do add the physical description to the bib record. Otherwise, route it to a senior librarian.

#### Distinctive features of RDA:

- Distinctive elements RDA records contain in the 040 field \$e rda, and the fields 336, 337, and 338
- Capitalization Information may now be capitalized exactly as it is on the preferred source of information
- Brackets [] each subfield containing missing information is bracketed individually
- Abbreviations abbreviations are generally not used in RDA
- Transcribe what you see transcribe as found on the source, transcription fields





## Names of Persons

Names of Persons - Arabic names (2018)

Names of Persons - Hebrew names (2018)

Names of Persons - Chinese names (2020)

Countries files:

Names of Persons - Albania (2016)

Names of Persons - Argentina (2010)

Names of Persons - Armenia (1977)

Names of Persons - Australia (2015)

Names of Persons - Azerbaijan (1977)

Names of Persons - Belarus (1997)

Names of Persons - Belgium (1995)

Names of Persons - Bosnia and Hercegovina (19

Names of Persons - Brazil (2016)

Names of Persons - Bulgaria (2016)

Names of Persons - Canada (1994)

Names of Persons - Chile (2016)

Names of Persons - Croatia (2010)

Names of Persons - Cuba (1995)

Names of Persons - Czech Republic (2016)

Names of Persons - Denmark (2016)

Names of Persons - Estonia (2016)

Names of Persons - Finland (2016)

Names of Persons - France (2009)

Names of Persons - Georgia (1977)

Names of Persons - Germany (2016)

Names of Persons - Greece (2020)

Names of Persons - Hungary (2016)



IFLA Cataloguing Section

## Names of Persons - Chinese Names

Language in English: Chinese

Language name in official language(s

Last updated: August 2020

### Chinese Names in Mainland China

Modern Chinese names consist of a sur a given name, which is nearly alwa patrilineal, passed from father to ch surnames upon marriage, except in pla Kong.

Although there are currently over 6,000 expression for the Chinese people i Surnames" still makes up about 85% of

Liu (刘) and Chen (陈) are the top five words long. Among them, three charact account for 14.0%, four character nar account for 1.0%1. Most commonly character; however, about twenty doub

include Sima (司马), Zhuge (诸葛

O'Young, suggesting an Irish origin to are family names with three or more ch For example, Aixinjueluo (爱新觉罗 Aisin Gioro), was the family name of th



#### Chinese Names in the Hong Kong Special Administrative Region

This entry covers Chinese usage in Hong Kong where Cantonese dia Romanization of this dialect differs from Putonghua (普通話), also kr 語) which is spoken in Mainland China. Whilst Romanized names are there is a general practice to include, in one position or another, the n script as is done in the catalogues of many libraries in Hong Kong for written in Chinese. It is recommended that the names of personal Romanized in the form preferred by the author as is usually indicated title page of his or her works in a Western language. In cases of forms appearing in different works, reference sources should be conthe best known form. When a Cantonese Romanization is used, refere from the standard Pinyin Romanization, as well as any other varia sought. In case the Romanized form of an author's name is not available Romanize the name in Pinvin.

#### NAME ELEMENTS

### Elements normally forming part of a name

| Element        | Туре                        | Names in Chinese | Re  |
|----------------|-----------------------------|------------------|-----|
| 1. Family name | Simple, usually one Chinese | 陳                | Cł  |
|                | character                   | 黎                | La  |
|                |                             | 林                | Lar |
|                |                             | 黃                | Wo  |
|                | Compound, usually two       | 歐陽               | Au  |



#### Chinese Names in the Macao Special Administrative Region

This entry covers Chinese usage in Macao, where the Cantonese dialect is spoken. The Romanization of this dialect in Macao for names differs from the Mandarin (Romanized and pronounced by following Hanyu Pinyin) or the Cantonese in Hong Kong. In accordance with Macao local law Article 2 of DL No. 88/85/M dated 26 September 1985, the use of Romanization in official documents in Macao shall follow the The Syllabary Coding and Cantonese Romanization. Please refer to https://bo.io.gov.mo/bo/i/85/40/declei88 cn.asp#88 for details and the Syllabary. Some exceptions could be found, such as the Romanization "Wong" for the family name 黃 or

± in the Syllabary is actually used as "Vong" instead in most of the cases for people born in Macao.

Meanwhile, it is also recommended that the name of a person should be Romanized in the form preferred by the relevant person, as indicated in his/her predominant works published in the Western language. In some cases, Chinese names in Macao are Romanized by following the Wade-Giles Romanization or Hanyu Pinyin. Other variants may also be found in Macao.

Native-born Portuguese people (so called "Macanese") or people mixed Chinese and Portuguese in Macao usually has official names in both Chinese and Portuguese. For example: Henrique de Senna Fernandes (also named as 飛歷奇 in Chinese), Raimundo Arrais do Rosário (named also as 羅立文).

#### NAME ELEMENTS

#### Elements normally forming part of a name

| Element        | Туре                          | Examples |                                   |
|----------------|-------------------------------|----------|-----------------------------------|
| 1. Family name | Simple, usually one character | 姚李梁潘王    | Iu<br>Lei<br>Leong<br>Pun<br>Vong |

-Yeung







## Names of Persons

#### Languagues files:

Names of Persons - Arabic names (2018)

Names of Persons - Hebrew names (2018)

Names of Persons - Chinese names (2020)

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Names of Persons - Belgium (1995)

Names of Persons - Bosnia and Hercegovina (1996)

Names of Persons - Brazil (2016)

Names of Persons - Bulgaria (2016)

Names of Persons - Canada (1994)

Names of Persons - Chile (2016)

Names of Persons - Croatia (2010)

Names of Persons - Cuba (1995)

Names of Persons - Czech Republic (2016)

Names of Persons - Denmark (2016)

Names of Persons - Estonia (2016)

Names of Persons - Finland (2016)

Names of Persons - France (2009)

Names of Persons - Georgia (1977)

Names of Persons - Germany (2016)

Names of Persons - Kazakhstan (1977)

Names of Persons - Kirgiziya (1977)

Names of Persons - Iceland (2010)

Names of Persons - Ireland (1996)

Names of Persons - Italy (2017)

Names of Persons - India (1996)

Names of Persons - Indonesia (2010)

Names of Persons - Japan (2016)

Names of Persons - Latvia (2016)

Names of Persons - Lithuania (2017)

Names of Persons - Mexico (2010)

Names of Persons - Moldova (1977)

Names of Persons - Netherlands (2016)

Names of Persons - New Zealand (2009)

Names of Persons - Nigeria (1995)

Names of Persons - Norway (2016)

Names of Persons - Peru (2010)

Names of Persons - Portugal (2009)

Names of Persons - Romania (2016)

Names of Persons - Russian Federation (2016)

Names of Persons - Scotland (2016)

Names of Persons - Serbia (1994)

# Consider to update the file for Kazakhstan?



## **Emerging Metadata Standards and Guidelines**



## **Current Action Plan of CATS Section**

The current action plan covers the span 2019-2021, with 4 focus areas:

- 1. Maintaining consistency between standards (Structural revision of ICP)
- 2. Identify key-competences for metadata librarians
- 3. Promoting section's key-documents in a international scale
- 4.A focus on authority control and ID management

Action Plan: <a href="https://www.ifla.org/cataloguing/action-plan">https://www.ifla.org/cataloguing/action-plan</a> (chaired by Vincent Boulet)

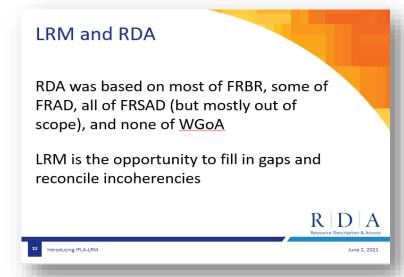
## **Recent Virtual Event:**

New horizons: emerging metadata standards and practices in the 21st century <a href="https://www.youtube.com/channel/UCUrrt nxhc4rYIDYfkO93-Q">https://www.youtube.com/channel/UCUrrt nxhc4rYIDYfkO93-Q</a>
Sponsored by the IFLA Bibliography, Cataloguing, and Subject Analysis & Access Sections.



# **Emerging Metadata Standards and Guidelines**

- ✓ Library Reference Model is IFLA's conceptual model/data model;
- ✓ ISBD is IFLA's content standard
- ✓ UNIMARC is IFLA's encoding format
  - --By Gordon Dunsire, Chair of RDA Steering Committee





IFLA generally uses the term '**standards**' to refer to the following types of documents:

- Conceptual models
- Rules for resource description
- Digital format codes
- Guidelines (documents consisting of instructions, advice and models of preferred practices)
- Best practice (documents consisting of procedures and techniques based on experience and research)

IFLA Standards: https://www.ifla.org/node/8750

# Library Metadata in a Shared **Environme**









# MALA Hub Project

A region-wide academic resource-sharing project initiated in 2019, with the sponsorship of Education and Youth Development Bureau, Macau SAR Government (merged with Higher Education Bureau in 2021)

## Benefits:

- ✓ Library resources sharing among members
- ✓ To promote the usage of library resources
  (by providing discovery platforms via this projects)
- ✓ To support and enhance teaching, learning and research activities at city level
- ✓ Increase collaborations among members



















# MALA Hub Project

MALA Hub (Central Portal) + 7 Discovery Portals for Individual Institutions + Subject Portals













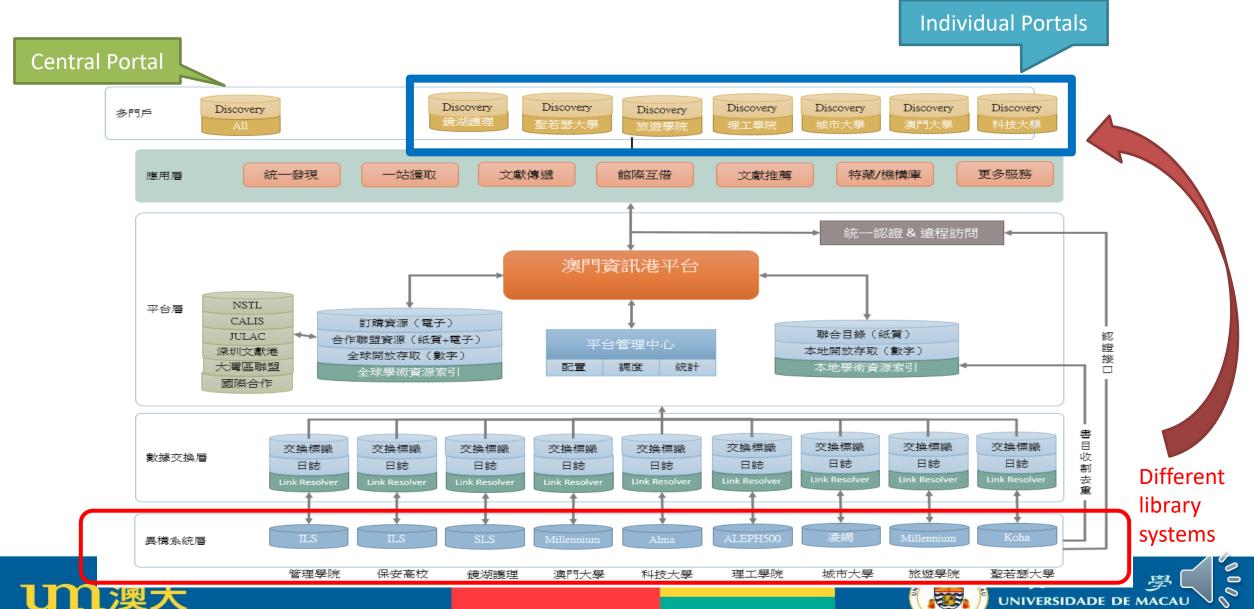








System Framework of MALA Hub Project



**UNIVERSITY OF MACAU** 

## MALA Hub as Central Portal

Central Portal of the 9 MALA members

❖ MALA Hub as a Union Catalog (completed Jan 2020)
MALA Hub as an ILL Platform (completed Jun 2020)
MALA Hub as Subject Portals















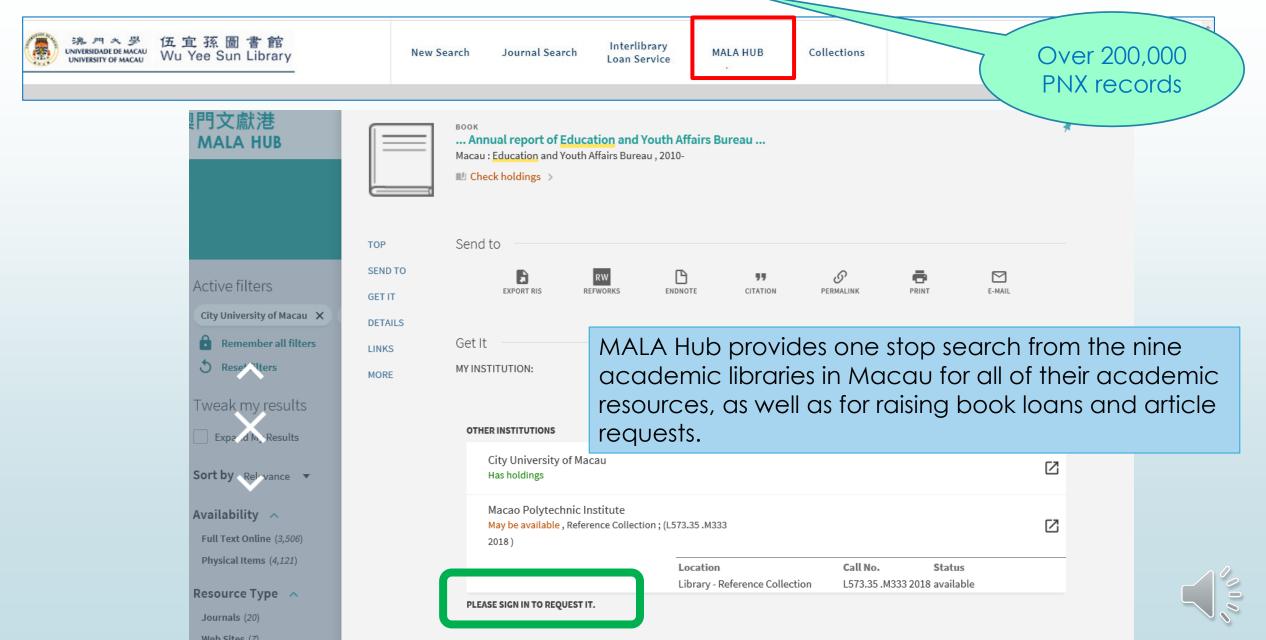








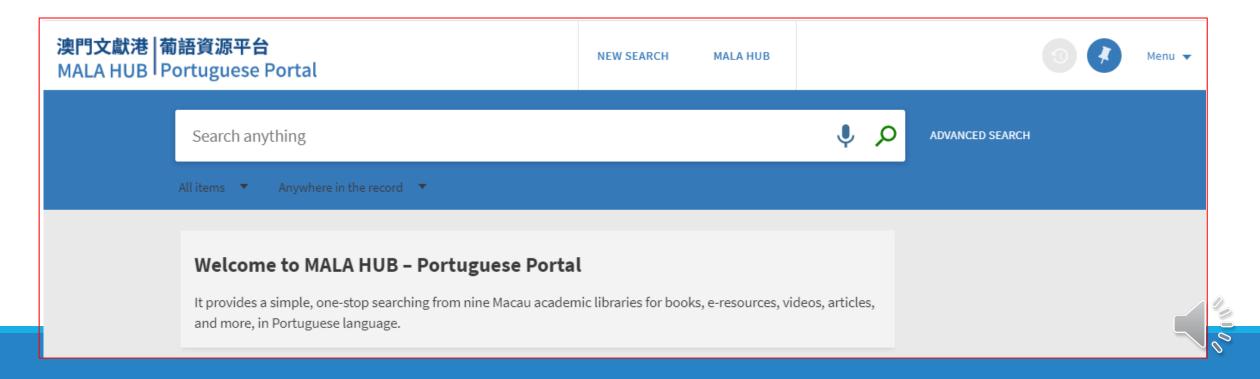
# 澳門文獻港 MALA Hub (Union Catalog + ILL Platform)



# MALA Hub – Portuguese Portal

Derived from the Hub, several topic-specific resource portals are suggested by the Government and the community.

The first topic-specific portal, Portuguese Portal, launched at the end of 2019.



## **UNESCO** and Sustainable Development Goals



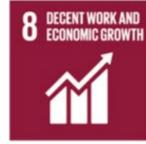








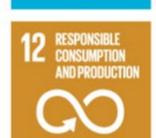




























# Future Challenges







# Future Challenges





Impact of emerging technologies on library metadata creation and management, data analytics, indexing and discovery, and so forth.



Changing roles of metadata librarians -- Identity Management, Research Information System, Open Data, etc.



Integrating across various sectors, such as archives, museums, cultural/memory projects, digital humanities projects, etc.



Do Curriculum designs and development of the library information schools meet the potential needs of libraries and users' growing expectations?



Continuing education and professional skill development for staff

– get ready to LEARN and CHANGE





















# Eurasian Academic Libraries Conference – 2021 "Contemporary Trends in Information Organization in the Academic Library Environment"

June 29-30, 2021

## THANK YOU FOR LISTENING!

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