

MLIS02 • LIBRARY TECHNOLOGY

APPLICATIONS OF CMS IN LIBRARIES

Transforming Static Web Pages into Dynamic Digital Library Portals

CREATE

ORGANIZE

REVIEW

PUBLISH

ACCESS

UPDATE

What Is a Content Management System (CMS)?

FOUNDATIONS

Core concept and primary functions in information centers

i Definition: A platform that manages digital content without requiring extensive coding knowledge. It separates raw content management from visual presentation layers.

Web & Document Management

- ✓ **Create & Edit Pages:** WYSIWYG visual drafting.
- ✓ **Organize Assets:** Systematize PDFs, images, and audio.

Publishing & Control

- ✓ **Review & Approve:** Editorial authorization controls.
- ✓ **Scheduled Publishing:** Instant or timed rollout.

CMS vs. ILMS: Distinct Roles

Understanding how CMS and ILMS complement each other

ARCHITECTURE

CMS (Content Management)

FOCUS: Public Gateway & Web Presence

- **Webpages & Media:** Publishes news and blogs.
- **Subject Guides:** Hosts tutorials and policies.
- **Discovery Gateway:** Embeds search portals and OPAC.

ILMS (Library Operations)

FOCUS: Internal Collections & Transactions

- **Circulation Desk:** Handles loans, returns, and fines.
- **Technical Processing:** Acquisitions and cataloguing.
- **Patron Database:** Tracks member records and OPAC.

 CMS communicates library services • ILMS manages physical & digital collections

1 • Library Website & Web Portal

Centralized single online gateway to all information and services

USE CASE 01

Central Information Hub

-  **Opening Hours & Contacts:** Timely updates.
-  **Membership Rules:** Borrowing limits and policies.
-  **Branch Details:** Location maps and facilities.
-  **Direct Portals:** Links to OPAC and subscription databases.



Zero HTML Barriers

Authorised library staff can update schedule changes, announcements, and policy edits instantly without coding.

2 • News and Announcements Hub

USE CASE 02

Publishing timely operational information from one official platform



New Arrivals

Showcase fresh additions to physical & digital holdings.



Database Trials

Promote trial access to e-journal collections.



Service Alerts

Holiday hours, maintenance, and emergency notices.

 **Automated Scheduling:** Draft content in advance and set future publication or expiry dates automatically.

3 • Research and Subject Guides

USE CASE 03

Curated pathways connecting academic discipline topics with authoritative sources

Curated Academic Portals

- ✓ **Core Literature:** Recommended books & top journals.
- ✓ **Subject Databases:** Direct links to discipline archives.
- ✓ **Search Strategies:** Keyword suggestions & boolean rules.
- ✓ **Citation Guidance:** APA, MLA, and Chicago reference styles.

PRACTICAL EXAMPLE

Cybersecurity Research Guide

A single CMS-built page bundling IEEE databases, recommended encryption textbooks, citation templates, and contact info for the liaison librarian.

4 • Digital Collections & Online Exhibitions

USE CASE 04

Presenting rare manuscripts, historical archives, and multimedia online

Supported Media Types

 **Rare Manuscripts:** High-resolution page scans.

 **Historical Maps & Photos:** Visual archive galleries.

 **Oral Histories:** Streaming audio & transcriptions.

 **Virtual Exhibitions:** Curated thematic galleries.

Preservation & Access

Digital presentation drastically increases discovery while protecting fragile physical originals from handling wear. Structured metadata ensures every item remains searchable.

5 • Institutional Repository (IR) Integration

USE CASE 05

Showcasing and preserving university research outputs for global access

Research Content Types

-  Theses and dissertations (ETDs)
-  Faculty journal publications & preprints
-  Conference papers & presentation decks
-  Open research datasets and reports

CMS Display Embeds

-  Integrated repository search bar
-  Recent submissions & featured research widgets
-  Departmental author profile showcases
-  Submission guidelines & licence agreements

6 • Events, Workshops and Online Forms

USE CASE 06

Streamlining publicity, event registration, and service requests

Event Management

- **Interactive Calendars:** Upcoming workshops.
- **Program Outlines:** Venue maps & virtual links.
- **Registration Portals:** Automated attendance limits.
- **Post-Event Assets:** Slides & recording links.

Interactive Online Forms

- **Membership Registration:** Online application forms.
- **Book Recommendations:** Patron acquisition requests.
- **ILL & Reference:** Interlibrary loan request queues.
- **Feedback Surveys:** Service quality questionnaires.

7 • Virtual Reference & E-Resource Gateway

USE CASE 07

Extending librarian assistance and digital subscriptions beyond physical walls

Virtual Reference Hub

-  **Live Chat Widgets:** Real-time librarian help.
-  **Consultation Bookings:** 1-on-1 research slots.
-  **Chatbots & FAQs:** Instant routine answers.

E-Resource Gateway

-  **Database Index:** A-Z access portal.
-  **E-Book Portals:** Direct publisher links.
-  **Off-Campus Authentication:** Proxy & EZproxy hooks.

8 • Help Pages, Policies and Guidelines

USE CASE 08

Maintaining authoritative operational guidance and official documentation

User Help Content

- ✓ **Borrowing & Renewal Rules:** Overdue fine terms.
- ✓ **Remote Access Setup:** VPN and Proxy instructions.
- ✓ **IT Facilities:** Printing, scanning, and Wi-Fi connection.

Official Governance

- ✓ **Institutional Policies:** Copyright, IP, and Privacy.
- ✓ **Annual Reports:** Strategic planning documents.
- ✓ **Version History:** Audit and restore past policy edits.

9 • Staff Intranet & Multi-Branch Management

USE CASE 09

Centralizing internal communication while controlling multi-location updates

Staff Intranet (Internal)

-  Manuals, SOPs & cataloguing guidelines
-  Staff duty rosters & training schedules
-  Committee meeting minutes & internal forms

Multi-Branch Network

-  Branch-specific operating hours
-  Local library events & notices
-  Centralized brand & template control

10 • Accessible, Multilingual & Mobile Services

USE CASE 10

Ensuring inclusive access across diverse communities, languages, and devices



ACCESSIBLE

WCAG compliance: Screen reader headings, alt text for images, high contrast modes, and keyboard navigation.



MULTILINGUAL

Unicode standards & translation switchers catering to regional languages and international students.



RESPONSIVE

Adaptive layouts scaling perfectly across desktop screens, tablets, smartphones, and OPAC kiosks.

11 • Promotion and Community Engagement

USE CASE 11

Transforming the static website into an active, two-way communication channel

ENGAGE PATRONS

- ✓ New book highlights & reading challenges
- ✓ Staff reading recommendations & blogs
- ✓ Newsletter distribution & social media embeds

LISTEN & ADAPT

- ✓ Online survey tools & rating forms
- ✓ Digital suggestion boxes & poll modules
- ✓ Post-workshop evaluation forms

12 • Search & Content Taxonomy

USE CASE 12

Metadata structures enabling patrons to pinpoint web pages and resources fast



🔖 Strategic Tagging Applications

- ✓ Policy pages & operational guidelines
- ✓ Research guides, workshops, and news items
- ✓ Scanned archival documents and multimedia assets

13 • Omnichannel and Headless CMS

USE CASE 13

Enter content once, broadcast seamlessly across every digital endpoint



CENTRAL HUB

Single Source of Truth

Update Opening Hours or Service Alerts **ONCE**



Library Main Website



Mobile Campus App



Building Digital Signage



Touchscreen Kiosks

Library CMS Publishing Lifecycle

A controlled editorial pipeline maintains content accuracy and accountability

WORKFLOW

CREATE

>

EDIT

>

REVIEW

>

APPROVE

>

PUBLISH

>

UPDATE

>

ARCHIVE



Governance Mandate

Every published page must have a named owner, an assigned reviewer, and a mandatory scheduled review date to prevent stale content.

Essential Library CMS Features

Key technical functionality required for modern library platforms

CAPABILITIES

 **Visual Editor:**
WYSIWYG rich text controls.

 **Roles & Permissions:**
Admin vs Editor rights.

 **Version Control:**
One-click rollback to old versions.

 **Taxonomy Tools:**
Categories, tags, and metadata.

 **Plug-ins & Extensions:**
Expand features modularly.

 **ILMS Integrations:**
OPAC & Discovery hooks.

Governance, Security & Risk Precautions

Continuous management strategies to protect digital library infrastructure

SECURITY

⚠️ Operational Risks

- ✗ Outdated or inaccurate service hours
- ✗ Weak passwords & unauthorized staff edits
- ✗ Insecure CMS plug-ins & malware attacks
- ✗ Broken external links & duplicated assets

Preventive Measures

- ✓ Named page owners & regular content audits
- ✓ Multi-factor authentication & strict roles
- ✓ Automated database backups & recovery plans
- ✓ Accessibility & copyright compliance checks

Summary: Value for Staff & Library Users

SUMMARY

Connecting people with institutional information seamlessly

FOR LIBRARY STAFF

- ✓ Faster routine updates without coders
- ✓ Collaborative publishing & audit logs
- ✓ Consistent, branded portal templates

FOR LIBRARY USERS

- ✓ Current operational news & alerts
- ✓ Single gateway to all physical & e-services
- ✓ 24/7 mobile access & virtual assistance

ILMS manages physical resources • CMS manages digital content and online engagement