

EuroCRIS 2026 · Ponta Delgada, Azores

Sameness Where It Matters, Uniqueness Where It Counts

A CRIS Perspective on Community, Architecture and Sustainability

Malgorzata Paszkowska

PCG Academia · DSpace Leadership Group





THE CHALLENGE

The Open CRIS Dilemma

Interoperability

Common standards, shared data models, API contracts — the ecosystem requires alignment.

Sustainability

Shared maintenance, security patches, upgrade paths — institutions cannot do it alone.

Differentiation

Local identity, workflows, UX — each institution has unique needs that matter.



OUR APPROACH

Cross-institutional evidence

from a cohort of DSpace-CRIS deployments supported by PCG Academia

Community as the mechanism

that decides where sameness ends and uniqueness begins

Barcelona Declaration

as the policy anchor for open, interoperable research information



EVIDENCE BASE

How We Know What We Know

01

Code diff analysis

Git diffs of backend (Java/Spring) and frontend (Angular) for 9 Polish institutions vs. upstream baseline.

Each changed file classified by architectural layer.

02

Architecture review

Extension points and modularization analysis.

Where do sites actually diverge from the upstream core?

03

Expert assessment

Practitioner knowledge: institutional maturity, community engagement, and RIM governance capacity.



DSPACE

NOTE: Cross-institutional patterns rather than a single case study — findings are broadly transferable.



WHAT THE DATA TELLS US

Key Findings in Plain Language

01 ARCHITECTURE

Hands off the core.

- 83% of changes sit in safe layers
- Only 17% touch upstream core
- Those who did paid the upgrade price

02 REUSE

Patterns are measurable.

- 78 files identical across 7+ deployments
- Bulk export, CSL fix, autocomplete
- Community-curated, reused at scale

03 EXCEPTIONS TELL A STORY

High core% can be justified.

- **Jagiellonian (38.6%)** — innovation vanguard
- **Main Med. Library (25.9%)** — medical mandates
- Both intentional — not failures

04 THE BOTTOM LINE

Sameness + uniqueness coexist.

- Local identity does not break shared base
- Community knows what to share
- Knowledge — not just code — is the output



Key Findings - Where Customisation Actually Lives

~70%

UX & presentation layer

~25%

Adapter modules &
integrations

~5%

Core edits (risk zone)

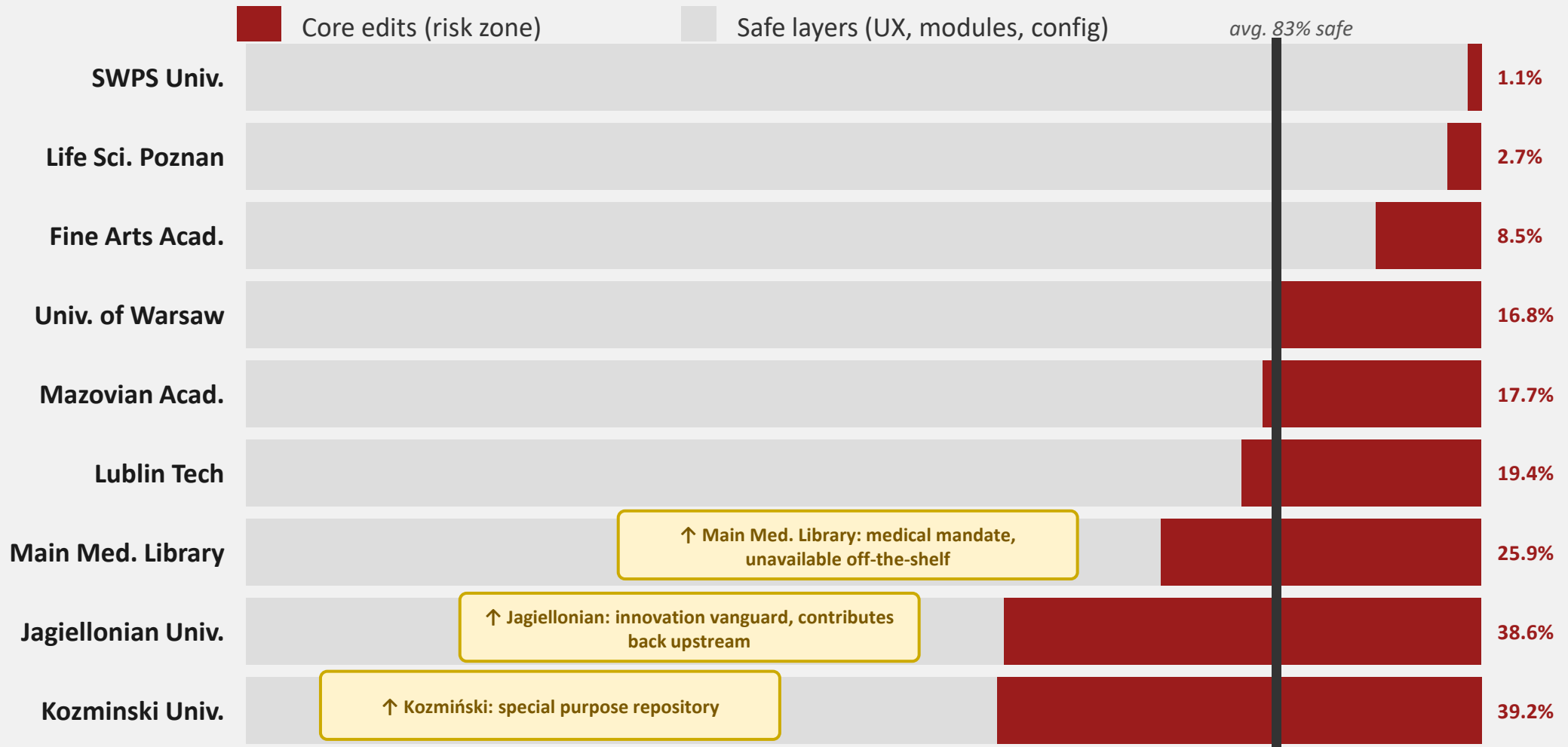
Institutions that stayed in the presentation layer maintained upgrade tractability. Those that touched the core pay the highest maintenance cost.

Finding: Modular architecture enables low-friction divergence. Sites achieve strong local differentiation while keeping upstream upgrades tractable when customisation concentrates at the presentation layer and in well-defined adapters.

Reuse rates for publicly shared modules grow when the community maintains a discoverable registry with clear submission and review processes.



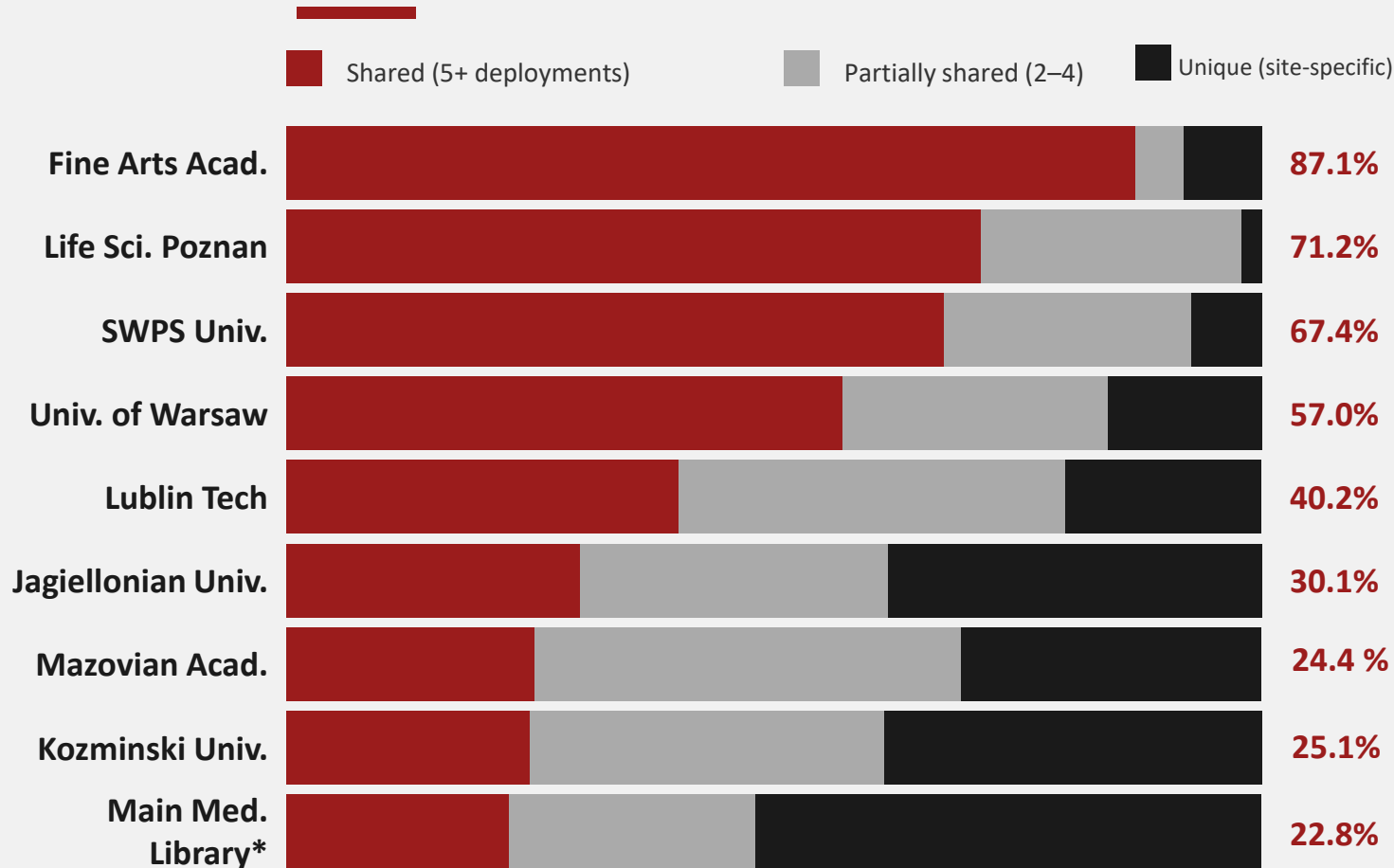
Safe Layers vs Core Edits — 9 Institutions



⚠ Highlighted institutions are intentional outliers — context-justified, understood by the community, and do not indicate governance failure.



How Much Code is Shared Across the Cohort?



* Main Med. Library: high unique% reflects domain-specific medical mandate. Justified exception.

WHAT THIS MEANS

Top sites reuse decisions, not just code.

- ASP & Life Sci. Poznan: disciplined reuse, achievable for small teams
- GBL low shared% = genuine domain uniqueness, not disengagement

78

files identical in 7+ deployments

1 326

unique files; 31% shared in 2+ sites



Institutions Across the Maturity Spectrum

Assessment based on practitioner knowledge: community engagement intensity, governance maturity, RIM capacity.

High maturity — active community contributors

University of Warsaw, Jagiellonian University, Main Medical Library

Modular builds · Contribute upstream · Strong RIM governance

Growing — engaged consumers of community output

Adam Mickiewicz University, Lublin Tech, SWPS University
Reuse community modules · Attend Lab Days · Building RIM capacity

Key correlation: Institutions that actively participate in community exchanges demonstrate higher reuse rates and lower duplication of effort. Technical sustainability is strongly correlated with structured community involvement.



STANDARDS & LOCK-IN

Standards as Operational Safeguards

BARCELONA DECLARATION

*Open, interoperable
research information as
public infrastructure*

Policy calls for measures to avoid vendor lock-in and enable reuse. Our work translates declaration into operational indicators.

CERIF-compatible data model

Canonical data interchange — your data is portable by design

Published export formats

CERIF XML/JSON, Dublin Core, standard APIs with conformance testing

Procurement safeguards

Contractual export rights, contribution obligations, IP/licensing terms, source-code escrow, handover process — socio-technical shield against lock-in

PART II

Community as the Core Mechanism

Not a peripheral add-on - the social process that determines where sameness ends and uniqueness begins



How Participating in the Community Sets the Boundary

Shared roadmaps

Collective decisions on what must remain common — data models, APIs, upgrade paths

Working groups

Structured forums for design discussions — where UX and workflows can reflect institutional identity

Documentation platforms

Community-maintained patterns, shared examples, discoverable registry of reusable modules

Community stewards

Visible contribution processes correlate with faster uptake of reusable UX components and lower per-site overhead

THE FOUR PIECES FIT TOGETHER

Community is not a peripheral add-on. It is the mechanism.

Each piece is necessary. Without shared roadmaps, there is no common core. Without working groups, uniqueness accumulates uncontrolled. Without documentation, knowledge stays tacit. Without stewards, the commons erodes.



DSpace POLAND USER GROUP

A Community Initiative in Practice

KNOWLEDGE SHARING

DSpace Lab Days

A recurring webinar series where Polish institutions share implementations, challenges and good practices around DSpace-CRIS and open science.

Audience: mostly Polish + a growing number of listeners from other European countries and beyond.



PCG Academia





GLOBAL COMMUNITY

The Polish Group at The Big Migration

THE EVENT

The Big Migration

Warsaw · May 2026

Global DSpace
community conference



Polish representatives attended and presented

Represented and engaged in global
discussions

Cross-group meeting: sharing experience

National user groups exchanged
implementation experiences — a
live community benchmark

Case studies: upgrades, new features

Each DSpace-CRIS could compare
with another





PRACTICAL RECOMMENDATIONS

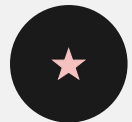
An Actionable Checklist



01 Architectural discipline — strict upstream/local separation; theme- and module-based customisation



02 Standards-first governance — CERIF-compatible models; API contracts; conformance testing



03 Community investment — working groups, Lab Days, functionality labs, stewards: strategic, not optional



04 Procurement safeguards — export rights, IP terms, source-code escrow, handover process



05 Measure and publish — module proportion, reuse rates, upstream contributions — inform governance cycles

FOR WHOM

RIM / CRIS
practitioners
Repository
engineers
Service providers
Policy stakeholders
Funders



CONCLUSIONS

Sameness + Uniqueness: A Solvable Challenge

Modular architecture

enables local innovation without breaking upgrades

CERIF-aligned exportability

ensures institutional freedom and interoperability

Community governance

continuously recalibrates the sameness/uniqueness boundary

Procurement safeguards

make the socio-technical shield durable

THE CENTRAL INSIGHT

Sustainable open CRIS depends as much on people, leadership and community processes as it does on code.

Community investment → measurable reuse, lower duplication, stronger stewardship.

***“Community is not a peripheral add-on.
It is the mechanism.”***

Thank you. Questions welcome.

Malgorzata Paszkowska

PCG Academia · DSpace Leadership Group

malgorzata.paszkowska@pcgacademia.pl · orcid.org/0000-0002-5583-4833