DSpace-CRIS: An Open-Source Solution for Research

Andrea Bollini • Michele Mennielli
Today you are #makinghistory
Cineca in a nutshell

The Research Area

DSpace-CRIS: an open source solution
Cineca Consortium

Not For Profit

Founded in 1969

HPC
FERMI: TOP500
EURORA: TOPGREEN500

75 Members:
70 Universities
4 Research Institutes
Ministry of Education

700 applications
All Italian Universities
Ministry of Higher Ed

>900 employees
Bologna
Milan
Rome
The role of Cineca in Italy

National Processes

Planning & Promoting Education
National Research Assessment Exercise
National Research Grants Delivery
Financial Control On Univ
Annual Public Funds Delivery

Key Performance Indicators and Dashboards

Monitoring of Academic courses (OFF.F)
Monitoring of Students trends (ANS)
Monitoring of Research Production
Assessment of Research Production (ANVUR-VQR)
National Research Grants Delivery (PRIN-FIRB)
HR & Financial Data Analysis (Personnel)

The Italian Academic System

Dashboards & KPIs - University Data Warehouse

Student & Learning Management
Research Management
Financial Management
HR Management
Governance Control

Local Processes

Student Management
Course Management
Research Management
The role of Cineca in Italy

National Processes

- Planning & Promoting Education
- National Research Assessment Exercise
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- Annual Public Funds Delivery

Key Performance Indicators and Dashboards

- Monitoring of Academic courses (OFF.F)
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- Monitoring of Research Production
- Assessment of Research Production (ANVUR-VQR)
- National Research Grants Delivery (PRIN-FIRB)
- HR & Financial Data Analysis (Personnel)

Dashboards & KPIs - University Data Warehouse

- Student & Learning Management
- Research Management
- Financial Management
- HR Management

Local Processes

- Student Management
- Course Management
- Research Management
- Governance Control
Opennes

Why not

Tell us who is going to use

We have it only on paper

Terrorists will use it

There's no commercial value

What if we want to sell it later

People may misinterpret the data

We need money

It's our data

No time / no resources
Italy

Cineca and the bottom-up approach

What We Had
- Members of Consortium
- Consortium = Research
- Between Ministry and Universities

What We’ve Done
- Anticipate policies (OA)
- Interoperability
- Promotion of Standards
- Open Source

High Maturity Level
Italy
Cineca’s Technological support

National Level

/ **AePIC**: advanced electronic publishing solutions (Northern Italy - 2003-2012);

/ **Open Access@CASPUR**: providing technical solutions and services (Central and Southern Italy - 2005-2012)

/ **PLEIADI**: national platform for scientific publications archived in Italian OA repositories and journals (>1M items since 2004)

Local Level

/ Consultancy

/ **DSpace** installations in over 65 universities

/ **OJS** platform in over 10 institutions

/ **Hosting** of OA Repositories & Journals

/ **IRIS**: from a repository to a CRIS
Italy
Cineca for OA policy and promotion

**National Level**

/ National initiatives and Working Groups

- Declaration of Messina (2004) in support of Berlin Declaration (over 70 Italian universities)
- CRUI Working Group on Open Access (since 2004)
- Promoting events during the International OA week since 2009
- Member of the national group of experts to support the National Point of Reference (since 2013)

/ Hosting the [OA-wiki](#) (the Italian OA portal)

/ National Open Access Desk – OpenAIRE

**Local Level**

/ Supporting OA mandate policies (CRUI policy guidelines, MedOAnet Guidelines)
/ Implementing EU FP7 OA requirements
/ Support project coordinators for the OpenAIRE portal
Italy
State of the art

**Technology**

- 74 OA repositories registered in OpenDOAR
  - 25 fully operational and populated | 13 are OpenAire compliant
- 100,000 full OA publications out of over 1M OA indexed in PLEIADI
- 65 installations of IRIS (based on DSpace)
- Release of a cloud service Research-Link
  - copyright policy & Authors right | enriching metadata | Linked data
- Research data storage, preservation and data analytics

**Policy & Promotion**

- Implementation of mandatory policies
  - Institutional | private | Doctoral Thesis
- Open Access Law (October 7, 2013 n. 112):
  - Mandate for green OA for research output at least 50% publicly funded
- MIUR – grant funding for young scientists (2014)
  - OA mandate for research results
International collaborations for Research

Sharing our experience

- Steering Committee
- 2 DSpace Committers
- DSpace-CRIS
- DSpace Registered Service Provider

- / Board Member
- / CERIF TG
- / Architecture TG
- / DRIS-Best Practice TG

- NOAD
- Open Access in Europe
- Advisory Board
- Open Source BI solution
Cineca in a nutshell

The Research Area

DSpace-CRIS: an open source solution
What is Research?

"In the broadest sense of the word, the definition of research includes any gathering of data, information and facts for the advancement of knowledge”

- Martyn Shuttleworth

“Each of them by himself may not be of good quality; but when they all come together it is possible that they may surpass - collectively and as a body, although not individually - the quality of the few best”

- Aristotile
Research includes any **collaborative** environment that aims at the gathering of **data**, **information** and facts for the advancement of **knowledge**. The more results are **shared** and **accessible**, the stronger its impact on **Collective Intelligence**.

..it’s in the details
Collect institutional research output for evaluation and assessment purposes

Measure research results for **benchmarking**

Disseminate data to enhance **impact and visibility**

Preserve ICT **investments** and maximize **ROI**
What to manage

Research Governance: business processes, management, reporting, integration

Institutional Repository: Publications and Research Data

CRIS: people, units, projects, interactions, reputation, cooperation, dissemination
Cineca’s Vision

WHAT IRIS ADDS

- Reports & Analytics
- Workflows mapping business processes
- System Integration (legacy, national, ...)

DSpace extended to the CERIF entities
(People | Units | Projects | etc.)

Institutional Repository

To better support:
Interactions
Reputation
Dissemination
Cineca’s Vision

WHAT IRIS ADDS

Reports & Analytics
Workflows mapping business processes
System Integration (legacy, national, ...)

Open Source

Dspace extended to the CERIF entities
(People | Units | Projects | etc.)

Institutional Repository

To better support:
Interactions
Reputation
Dissemination
IRIS: Cineca’s CRIS Solution

- 65 Italian Universities
- > 5 Million Research Publications
- Open Access
- The core is Open Source
- > 10 International Institutions
How IRIS works

IR (Institutional Repository)

HR System

RM (Resource Management)

Accounting System

AP (Activities & Projects)

ER (Evaluation & Review)

ES (Expertise & Skills)

Scopus

PubMed

EDRA

crossref

OA/Pub

vQr

OAuth

DataCite

IRIS

Web of Science

OpenAIRE

depositolegale.it

Evaluation of Research Quality
Cineca in a nutshell

The Research Area

DSpace-CRIS: an open source solution
DSpace-CRIS Data Model

**Approach**
- Dynamic
- Flexible
- Not hardcoded

**UIs**
- Define any aspects

**Entities**
-Few predefined

**Attributes**
-Few predefined

**Standard DSpace** --> publications & dataset

**DSpace-CRIS** --> other CERIF entities:
- /ResearcherPage
- /Project
- /OrgUnit
- /2nd Level Dynamic Object
The History of DSpace-CRIS

CINECA is a registered service provider at DuraSpace

Long-term collaboration with DSpace community (Committer Group)

Hong Kong University: from DSpace IR to CRIS (2009) – the HUB

Nov. 2012
First release: DSpace 1.8.2

June 2013
Second release: DSpace 1.8.2
- Fix Release 1.8.2

Aug. 2013
Upgrade release:
- DSpace 1.8.3
- Security fix

Sept. 2013
First release (beta):
- DSpace 3.2

Jan. 2014
Technical documentation

June 2014
Release DSpace 4.1

Nov 2014
Final release DSpace 4.2
DSpace-CRIS latest releases

It is possible to (public API):
• Login through ORCID;
• Claim profile through ORCID;
• Register/Associate an ORCID to your own DSpace-CRIS profile

It is possible to (membership API):
• **Push** publications, projects & biography data to ORCID
• **Pull** extended information from ORCID (automatically with ORCID Premium)

DSpace-CRIS 5.3.0 Release (PUSH)
August 25th, 2015

DSpace-CRIS 5.3.1 Release (PULL & upgrade to ORCID API v2.0)
December, 2015
IRIS & ORCID: the I.R.ID.E. HUB

Italian Researcher IDentifier for Evaluation

CRIS

I.R.ID.E. HUB

(or)

orcid.org
The Virtuous Circle
Tracking external authors
DSpace-CRIS around the World

>20 Installations (the 5 Continents, euroCRIS & the World Health Organisation)
Support of all DSpace versions accepted by the Community
Free download available at: github.com/Cineca/dspace-cris/
Lets see…

… some functionalities
Case Study #1: HKU Scholars HUB

The HKU Scholars Hub is the current research information system of The University of Hong Kong. As a key vehicle of HKU’s Knowledge Exchange Initiative, The Hub aims to enhance the visibility of HKU authors and their research, and to foster opportunities for collaboration.

Quick Search of The Hub for:

- Publications
- Research Collaborators
- Thesis Supervisors
- Media Commentators

Search for Publications...

Featured Scholar

Dr Li, Xu
- Associate Professor
- Research Interests
  - Disclosures impact on cost of capital
  - Insider trading and information asymmetry
  - Corporate governance related issues
  - Capital markets reaction

Hub News

- Apr 2015: Updated to DSpace 4.1, added mobile responsiveness.
- Oct 2014: Created Quick Searches on different types of researchers.
- Jun 2014: Created pages for faculties, depts & centres cumulating research and statistics to each one
- May 2014: Created ORCID accounts for all HKU Professoriate staff.

More

Relevant Links

- HKU’s Top 1%
- Open Access @HKU
- Usage Stats & Downloads
- HKU most cited articles in Scopus
- HKU research on Web of Science
- Research @HKU
HKU HUB: The Researcher

Bacon-Shone, J

Contact Information

Professor Bacon-Shone, John 白景崇

Title:
Professor
Director of SSRC
Associate Dean, Faculty of Social Sciences
Associate Director, Knowledge Exchange Office

Department:
Faculty of Social Sciences
Knowledge Exchange Office
Social Sciences Research Centre

Faculty:
Faculty of Social Sciences

Curriculum Vitae:
Download

Research Interests:(click to check for cognate researchers)
- Compositional data
- Gambling
- Telephone survey methodology
- Privacy policy
- Immigration and population policy

My URLs:
- http://orcid.org/0000-0002-9827-1815
- Biography
- Google Scholar Citations
- ResearchGate

Also Cited As:
Baconshone, J
Article: Longitudinal assessment of community psychobehavioral responses during and after the 2003 outbreak of severe acute respiratory syndrome in Hong Kong

Title: Longitudinal assessment of community psychobehavioral responses during and after the 2003 outbreak of severe acute respiratory syndrome in Hong Kong

Authors: Leung, GM
Ho, LM
Chan, SKK
Ho, SY
BaconShone, J
Choy, RYL
Hedley, AJ
Lam, TH
Fielding, R

Issue Date: 2005

Publisher: Oxford University Press. The Journal's web site is located at http://www.oxfordjournals.org/our_journals/cid/

Citation: Clinical Infectious Diseases, 2005, v. 40 n. 12, p. 1713-1720 How to Cite?
DOI: http://dx.doi.org/10.1086/429923

Abstract: Background. In previous literature, the stability and temporal evolution of psychobehavioral responses to an outbreak remained undefined, because of the exclusively cross-sectional nature of such study designs. Methods. Using random-digit dialing, we sampled 4481 Hong Kong residents in 6
### Article

**Title**: The prevalence and correlates of severe social withdrawal (hikikomori) in Hong Kong: A cross-sectional telephone-based survey study

**Authors**: Wong, PWC; Li, TMH; Chan, KYM; Law, YW; Chau, MCL; Cheng, C; Fu, KW; Bacon-Shone, J; Yip, PSF

**Issue Date**: 2015

**Publisher**: Sage Publications Ltd. The journal's website is located at [http://www.sagepub.co.uk/journal.aspx?pid=105597](http://www.sagepub.co.uk/journal.aspx?pid=105597)

**Citation**: International Journal of Social Psychiatry, 2015, v. 61 n. 4, p. 330-342  
**DOI**: [http://dx.doi.org/10.1177/0020764014543711](http://dx.doi.org/10.1177/0020764014543711)

**Abstract**: BACKGROUND: Severe social withdrawal behaviors among young people have been a subject of public and clinical concerns. AIMS: This study aimed to explore the prevalence of social withdrawal behaviors among young people aged 12-29 years in Hong Kong. METHODS: A cross-sectional telephone-based survey was conducted with 1,010 young individuals. Social withdrawal behaviors were measured with the proposed research diagnostic criteria for hikikomori and were categorized according to the (a)
HKU HUB: The Network
HKU HUB: The Network

1. The Open Access Advantage Revisited
   Increase Your Impact - How to make your research more visible
2. and have more impact through placing your papers in Open Access
   and optimizing your pages in The HKU Scholars Hub
3. The Open Access Advantage
4. Open Access@HKU: Developments to Date
Case Study #2: euroCRIS

Welcome to the euroCRIS DSpace CRIS digital repository

The euroCRIS DSpace CRIS is the digital portal where outputs from all euroCRIS discussion and dissemination activities are stored and offered free access from. These include among others euroCRIS membership meetings, strategic seminars and CRIS Conferences, together with the outputs of the different euroCRIS Task Group activities.

The underlying open source DSpace CRIS platform combines the agile open access content management provided by DSpace with additional CERIF-compliant CRIS features (CRIS: Current Research Information System) built on top.
Highlight CRIS database macro areas
euroCRIS: new functions

Platform upgraded! News DSpace-CRIS 4.2.0

Following the move of the system to the Cineca servers, we are delighted to announce the upgrade of the system to the new version of DSpace-CRIS 4.2.0. Among other technical improvements, this version includes a full revised

- Look & Feel
- ORCID integration
- Ability to claim profiles
- CERIF Semantics
- DRIS and members directories.

The new version will be presented this week at the Strategic euroCRIS Meeting in Amsterdam. Enjoy!

Tweets

- Nikos Houssos: euroCRIS membership meeting at Amsterdam starting today. Great programme, record attendance. [link]

- Pablo de Castro: at #DANS Den Haag this morning for the @euroCRIS_Org Board meeting ahead of the Adam event tomorrow. [link]

- Kudos: Looking forward to attending our first @euroCRIS_Org meeting and learning more about Current Research Information Systems.
euroCRIS: Interoperability

Allow end-user interaction
Log In to DSpace

New user? Click here to register.

Please enter your e-mail address and password into the form below.

E-mail Address: [input]
Password: [input]

Have you forgotten your password? [link] Log In

Use your ORCiD or create a new one

ORCiD provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.

Click on the ORCiD logo to sign in with your existing record or create a new one.
euroCRIS: Interoperability
Allow end-user interaction
euroCRIS: Interoperability
Thank you for your attention

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