

# The ESUP-Portail project

# ESUP Portail

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## History

# ESUP Portail

How the project began, how it grew to its present size



# The very beginning

- **May 2002: 4 projects selected**
  - EEPUN (partner Microsoft)
  - Monte-Cristo (partner SCT)
  - ENCORA (partner Sun)
  - **ESUP-Portail**  
(no industrial partner, open-source based)
- **Funded by the French Ministry of Education**
  - about \$8M for the whole project
  - development and investment
- **Of the four, one is still operating: ours 😊**



# Our operational goals

- **Create an open-source portal for universities**
- **Adopt an existing solution or build a new one**
- **Distribute the final product**



# Our numerous other goals

- **Explore new technologies**
  - for providing access to digital resources and services
- **Encourage the use of IT**
  - by integrating IT technologies in a single environment
- **Enhance the cooperation between institutions**
  - by adopting common standards
- **Expand the ESUP program**
  - to reach a wider public



# Our numerous other goals (cont.)

- **Implement tools for independent learning**  
within the LMD (Licence, Master, Doctorat)  
framework
- **Propose up-to-date tools for a modernized pedagogy**
- **Soften the line between on-line education and traditional in-class education**
- **Develop new kinds of relationships**
  - between students and their professors
  - between students and the services proposed by their institution



# Our numerous other goals (cont.)

- **Promote mobility throughout Europe**  
via inter-institutional exchanges and/or internships
- **Provide organized and controllable access to institutional applications**
- **Simplify administrative procedures**
- **Improve information quality**
- **Organize new modes of communication for different university activities**



# Our strategy and targets

- **Strategy**
  - *Schéma Directeur des Environnements Numériques de Travail (SDET)*
    - *Architecture, authentication, interoperability*
- **Targets**
  - digital universities
  - regional digital universities
  - thematic digital universities





# Our preferences for implementation

- **Consideration of existing technologies**
- **Open-source software**
- **A solid, well-understood technological base and architecture**
  - J2EE, uPortal, CAS
- **A flexible, modular and evolving system**
  - adaptable to the institutional strategy
- **Respect of standards**
  - directory: SupAnn (French standard that extends eduPerson)
  - authentication, authorization and SSO: CAS & Shibboleth
  - interoperability: XML, Web services, JSR-168 (portlets)

# Our preferences for implementation (cont.)

- **Specific components in addition to the usual portal tools**
  - e-learning platforms
  - pedagogical services
  - documentation modules
  - administrative Information System applications
  - system applications
- **The coherent deployment of services**

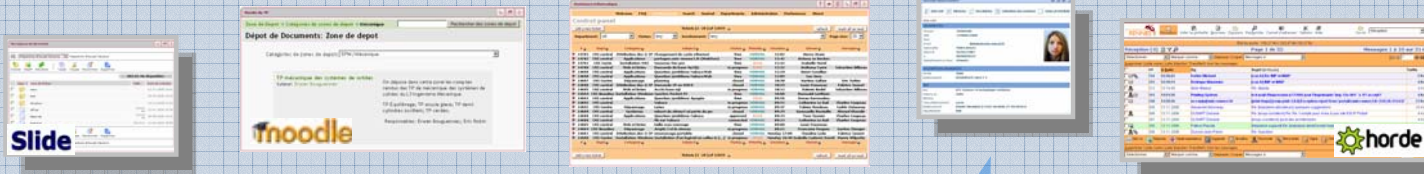


# Our path towards to the solution

- **Choosing a portal**
  - a “home-made” solution was planned
  - uPortal was finally chosen
- **Choosing an SSO**
  - several solutions were evaluated
  - CAS was quickly selected for its
    - permanence
    - security
    - portability
    - ease of uPortal integration
- **Adding services**

# The architecture

services

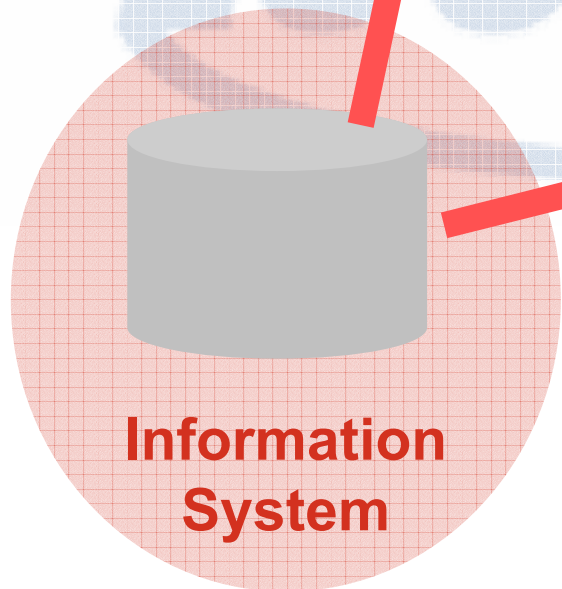


from the administrator's point of view,  
**Information System-centered**

from the user's point of view,  
**user-centered**

portal

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**Information System**

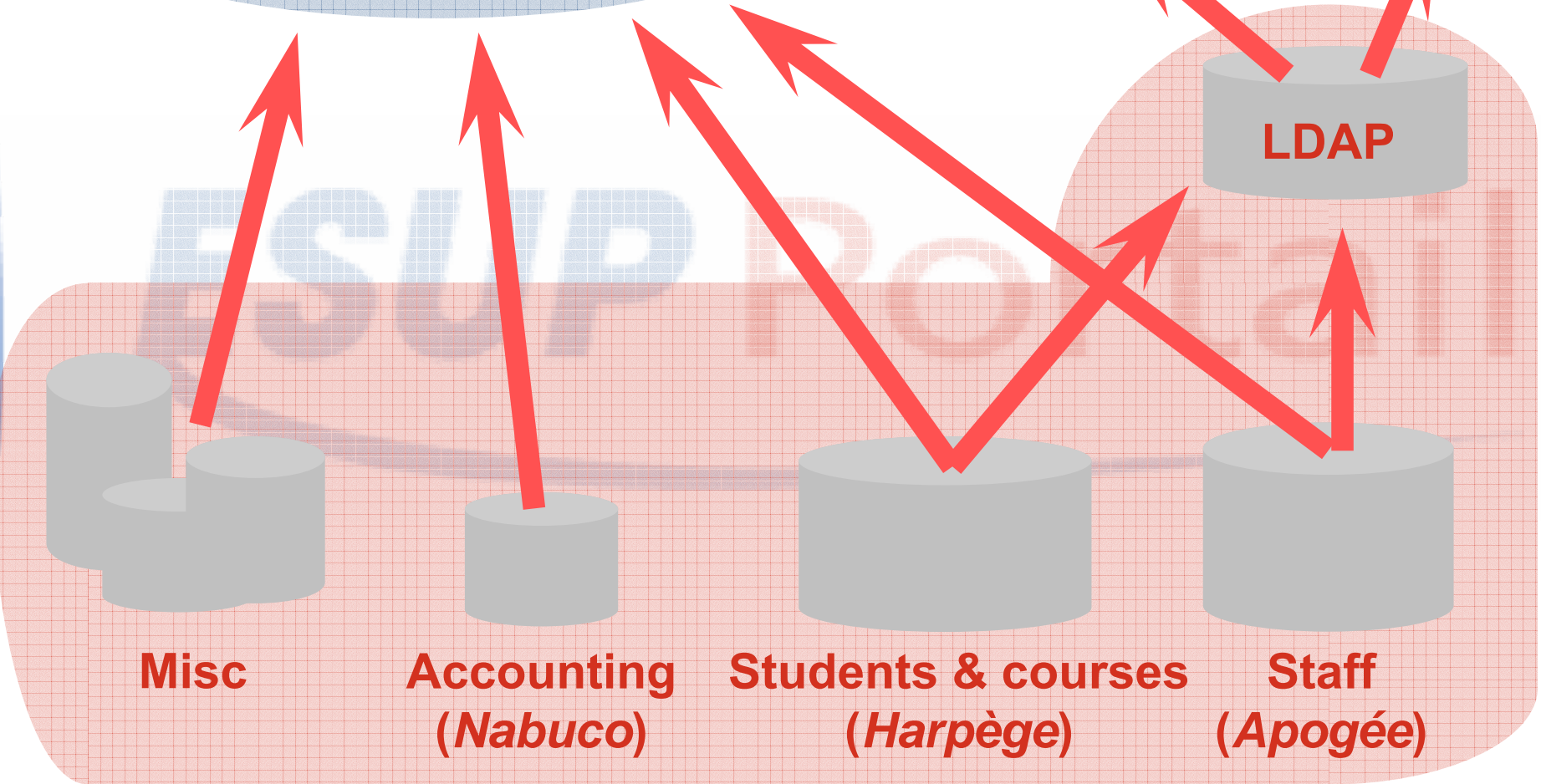
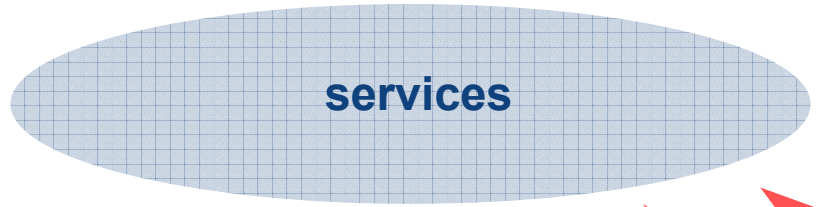


**Central Authentication Service**

**students and staff**



# A typical Information System for a French University



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# The ESUP-Portail community

# ESUP Portail

More than 1,000,000 users predicted by Dec 2007



# The initials members

- **5 universities**

- university of Valenciennes (coordinator)
- university of Nancy 1
- university of Nancy 2
- university of Rennes 1
- ENSEEIHT



- **Sept 2004: 72,000 users**

- **≈ 20 full-time developers (one year)**

- only a few Java developers



# Our deployment partners

- **A few test sites**
  - to validate the proposed portal prior to its widespread distribution

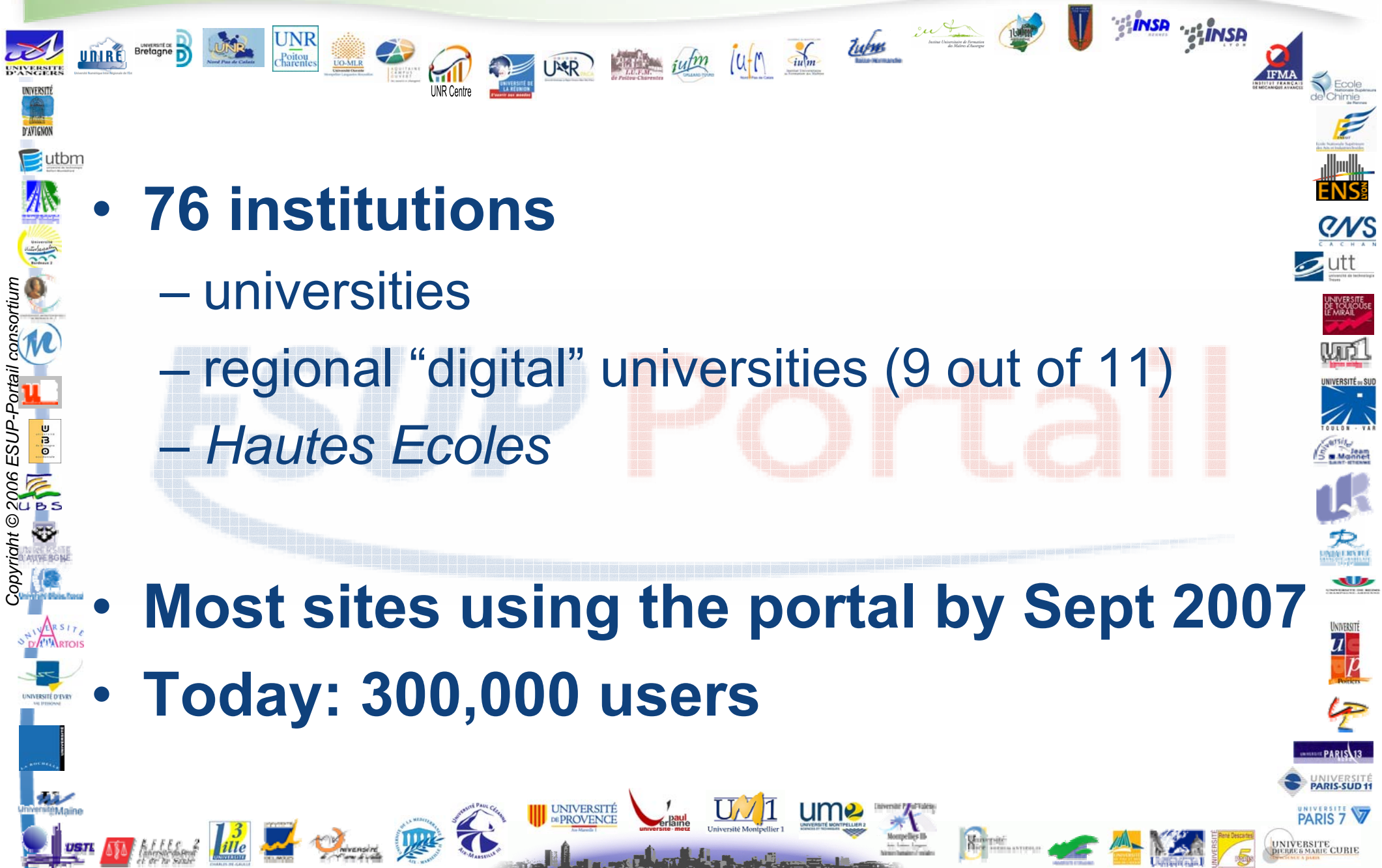


- **In 2004/2005, most of these sites use the solution in production**





# The official members



- **76 institutions**
  - universities
  - regional “digital” universities (9 out of 11)
  - *Hautes Ecoles*
- **Most sites using the portal by Sept 2007**
- **Today: 300,000 users**

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# Our organization

- **An operational coordinating committee**  
composed of the project leaders in the original member institutions
  - communication
  - strategy
  - meeting organization
- **A technical coordinating committee**  
composed of the engineers responsible for the main sub-projects
  - technologies
  - frameworks
  - integration
  - QA



# International relations

- **Study of or participation in international projects**
  - JA-SIG
  - Sakai
  - Mille (Canada)
  - university of Geneva
  - Slide
- **We are not native English speakers... ☹**



# The role of the consortium today

- **Supporting the community**  
through mailing lists ( $\approx 30$ )
- **Developing new applications**
- **Integrating contributions**
- **Documenting the project**
- **Publicizing project activities**



# Communications

- **ESUP-Days**
  - 2 meetings a year
  - 2-days conference, 220 participants in last June
  - on technical and logistical aspects
  - to obtain feedback
- **Papers and conference presentations**
  - in France: JRES
  - in Europe: EUNIS, TERENA



# Papers and presentations

- **In English**

- EUNIS2006 – ESUP-Portail helpdesk: user support at establishment-level
- EUNIS2006 – Open-source Identity Federation with Shibboleth
- EUNIS2004 – ESUP-Portail: open source Single Sign-On with CAS
- EUNIS2004 – ESUP-Portail: a pure WebDAV-based Network Attached Storage

- **In French**

- ESUP-Days 1 & 2
- TutoJRES2006 – Distribuer un developement (in French)
- CSIESR2006 – inJAC ESUP et OAI-PMH – Le CMS ESUP-Portail
- JRES2005 – ESUP-Portail Helpdesk : le suivi des demandes des utilisateurs à l'échelle d'un établissement
- JRES2005 – Utilisation de WebDAV dans ESUP-Portail
- CSIESR 2005 – le socle de l'ENT ESUP-Portail
- CSIESR2005 – Expérience sur la mise en place d'un ENT (démarche)
- CSIESR2005 – Authentification SSO, CAS
- CSIESR2005 – Connecteur entre socle et briques applicatives
- CSIESR2005 - Problématique notion de « profils »
- JRES2003 – Les Espaces Numériques de Travail
- JRES2003 – ESUP Portail, un ENT universitaire
- JRES2003 – Single Sign-On open-source avec CAS
- JRES2003 – INJAC



# Training

- **20 training programs already organized to**
  - bring teams up to standard
    - XML, XSLT, Java, ...
  - show local administrators how to deploy
    - uPortal (-esup)
    - CAS
    - some applications (helpdesk, ...)
  - show developers how to write channels



# In the future

- **More than 1,000,000 users**  
but very few contributions... ☹
- **Constitution of a legal entity for the Consortium in order to allow**
  - funds to be collected from members
  - the consortium to become a well-known interlocutor (Ministry of Education, JA-SIG...)
  - the project to continue in the future





# The ESUP-Portail sub-projects

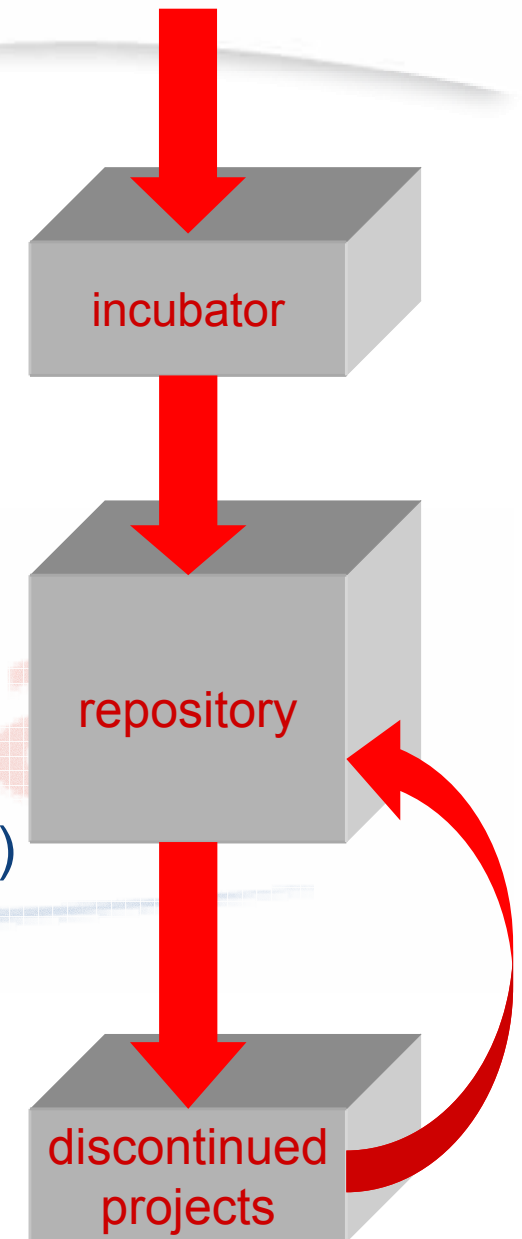
# **ESUP** Portail

The services offered by the ESUP-Portail environment



# The ESUP-Portail sub-projects

- **Incubator**
  - immature projects
  - no guarantees
- **Repository**
  - completed projects
  - guarantees
    - system integrity: security fixes
    - permanence: functional fixes
    - coherence with the other projects (lib conflicts)
- **Moving from the incubator to the repository requires that the project**
  - attain the right scale
  - be in operation for one year in two establishments or two years in one



# Developments around JA-SIG products



- uPortal-esup: a pre-configured portal for the French university community
- uPortal-quick-start



- client libraries: **phpCAS**, perlCAS (CRU), pam\_cas-esup, mod\_cas-esup
- v2 utilities: CAS Generic Handler, CAS quick-start
- v3 French translation

# Services for all users

- **Communication tools**
  - *Horde IMP* webmail, *Sympa* Mailing list manager
  - calendar, planning
  - helpdesk
  - announcements, phpBB forums, intranet
- **Data storage**
  - *Slide*-based WebDAV repository
  - storage quotas information
- **Documentation**
  - online publications
  - access to outside libraries
- **User tools**
  - bookmarks, online help, LDAP searches
- **System tools**
  - printing quotas information
  - network status information



# Services for students

- **Course offerings**
- **Homework uploads (*Moodle*)**
- **Administrative files access**
  - grades
  - exam dates



# Services for faculty and staff

- **Faculty**
  - course offering data entry forms
  - homework downloads (*Moodle*)
- **Administrative staff**
  - printing credits management
  - storage quotas management
  - helpdesk
- **Faculty and staff**
  - administrative files access
    - Career status, traveling expenses refunds



# The uPortal-esup package

- **A pre-configured uPortal installation**
- **Easy configuration**
  - by setting properties
  - by running ant tasks
- **A pre-filled database**
  - restrictions on group permissions
- **WAI effort**
  - integratedModes.xsl, siteMap.xsl, ...
- **French translations**
- **Full-page channels (from project Mille)**
- **Automatic generation of statistics**
  - user connections
  - channel usage



# uPortal-esup add-ons

- **Automatic user creation from LDAP requests**
- **Group and permission management with XML files**
- **Esup-monitor**
  - to see how blades are used in a cluster
- **Esup-cas-test**
  - to test CAS authentication and PGT retrieval
- **Esup-group-ids**
  - to make the correspondance between group names and ids easily
- **Esup-portal-ws**



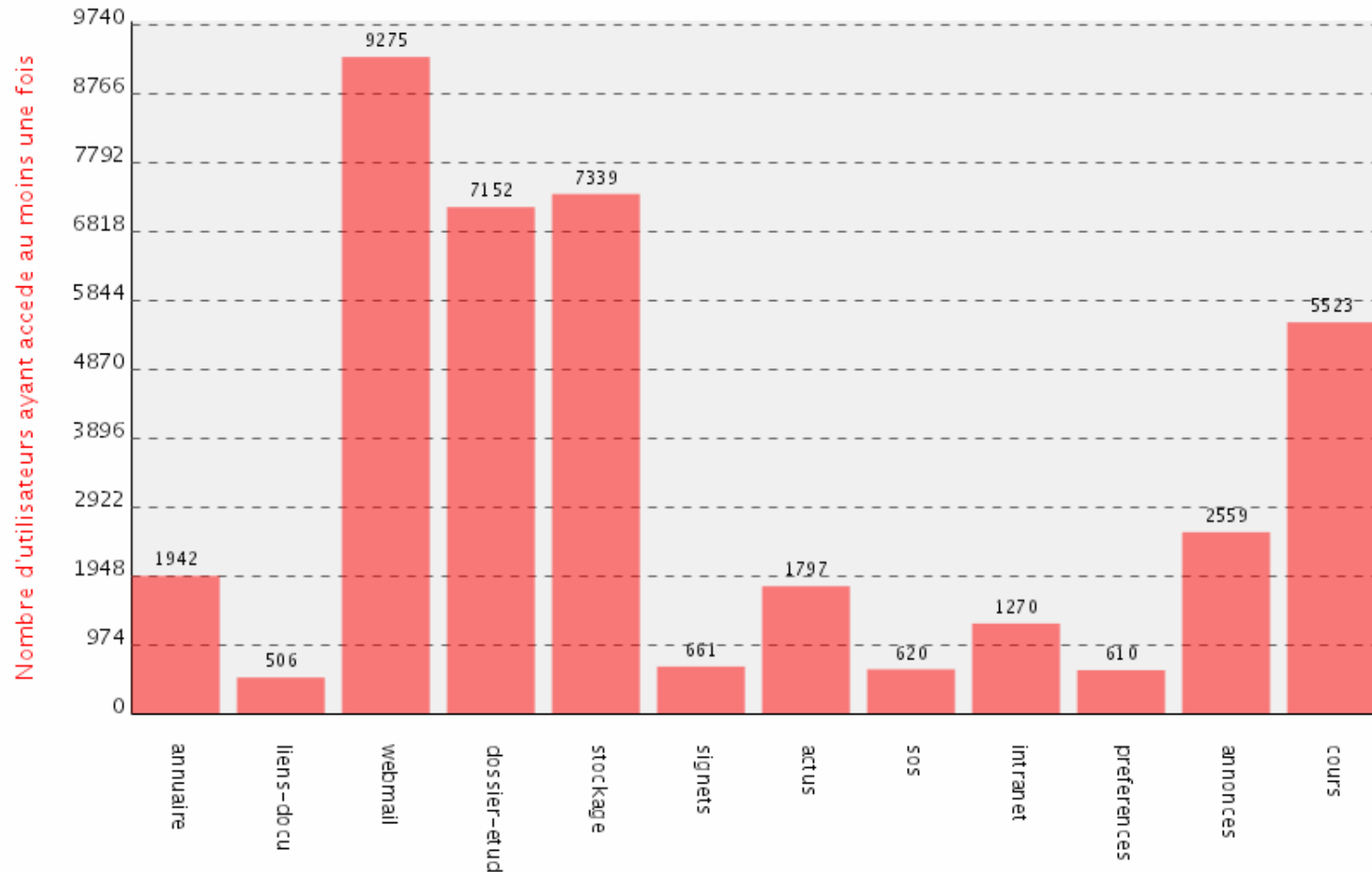


# uPortal-esup statistics

Graphique mensuel (NB utilisateurs par service par mois)

[Détails](#)

Statistiques de services Université Nancy 2 - 2006-11  
Nombre d'utilisateurs ayant accede au moins une fois/Services



# uPortal-esup patches (1)

- **Add Deep linking for guest users**
- **Add LDAP redundancy**
  - LdapServerImpl , LdapServices (UP-713)
- **Add support for LDAP groups in PAGs**
  - LdapGroupPersonAttributeDaoImpl
- **Remove unnecessary (and numerous) LDAP requests when a user is not found in the LDAP directory**
  - CachingPersonAttributeDaoImpl
- **Add read permission to everyone in the group hierarchy**
  - GroupsManagerDefaultPermissions



## uPortal-esup patches (2)

- **Solve problems when calling the group manager in servant mode**
  - CGroupsManagerServantFactory
- **Hide unauthorized channels, hide exceptions on logout**
  - AggregatedUserLayoutStore, UP-1354
- **Hide exceptions when users are not in the LDAP directory**
  - PersonAttributesGroupStore , UP-1596
- **Create a column automatically when creating a tab, hide columns for Mille navigation**
  - AggregatedLayoutManager

# Internationalized developments

- **Not very many...**
  - phpCAS
  - CAS Generic Handler and CAS quick-start
  - Slide-based WebDAV server
    - Quotas handling
  - CAS-ified Horde IMP
  - Esup-helpdesk
  - Esup-print
  - Esup-diskquota
- **Maybe more in the future**  
(see esup-commons)



**esup-commons**

**ESUP Portail**

**A development framework for the ESUP-Portail project**



# Esup-commons in a few words

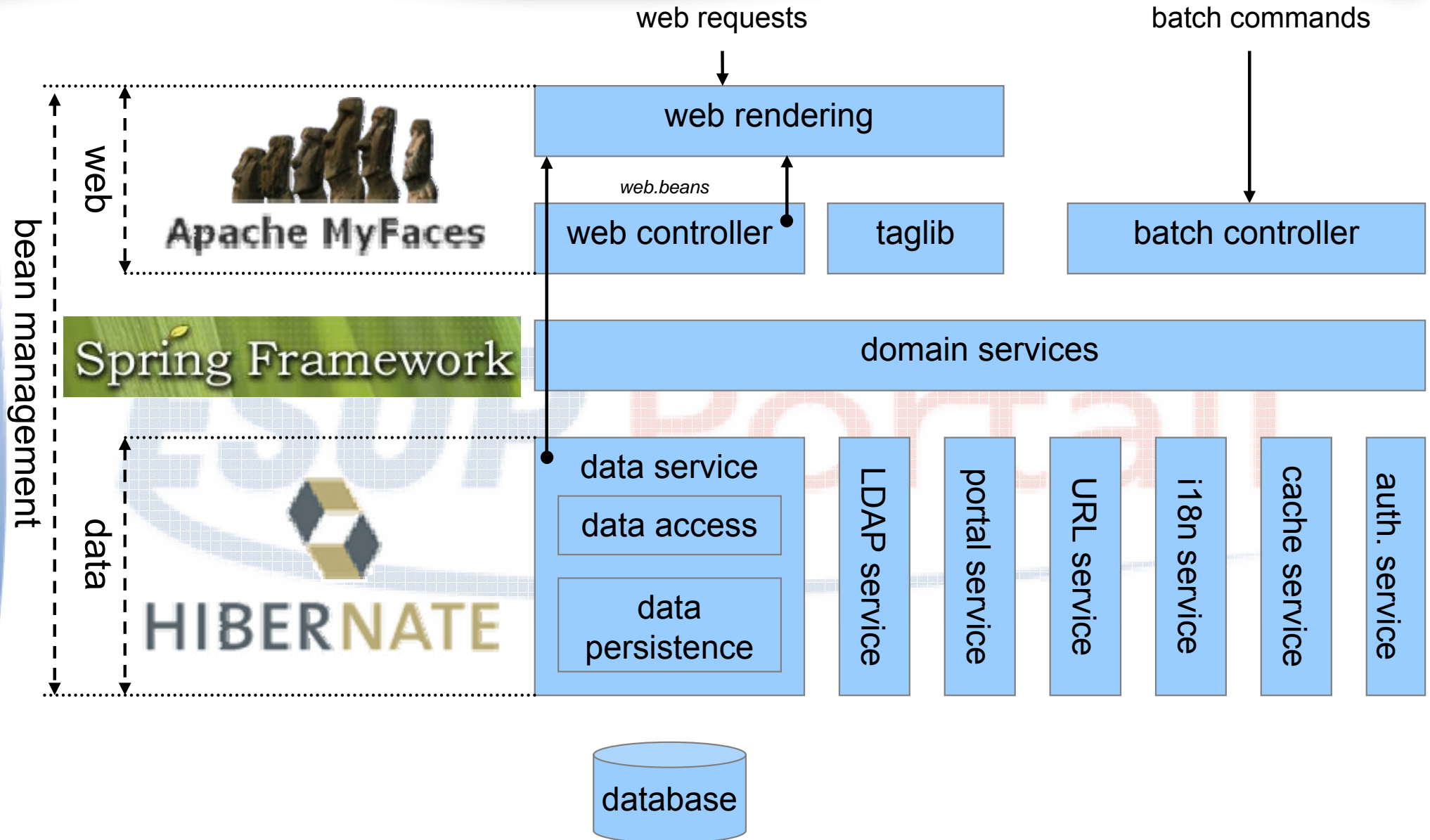
- **Open-source free software**
- **Based on standards only**
  - Spring, JSF, Hibernate, Xalan/Xerces, Lucene, Axis, ...
- **Portlets and servlets**
  - same code for both using the MyFaces MVC
  - choice of deployment type by setting properties
  - a less complicated development environment
  - stand-alone applications (quick-starts)
- **Native i18n support**
- **Integration with the Information System**
  - CAS authentication, LDAP searches, uPortal group and user attribute retrieval

# Esup-commons in a few words (cont.)

- **Enhanced exception handling**
  - exception reports sent by email
- **A taglib to simplify JSF pages**
- **SMTP capabilities**
- **Version management**
  - insure that the versions of the database and the application are the same  
(especially important in clustered environments)
- **Deep link handling and URL generation**
- **Hibernate pagination**
- **esup-blank**
  - a blank application to show how to use esup-commons



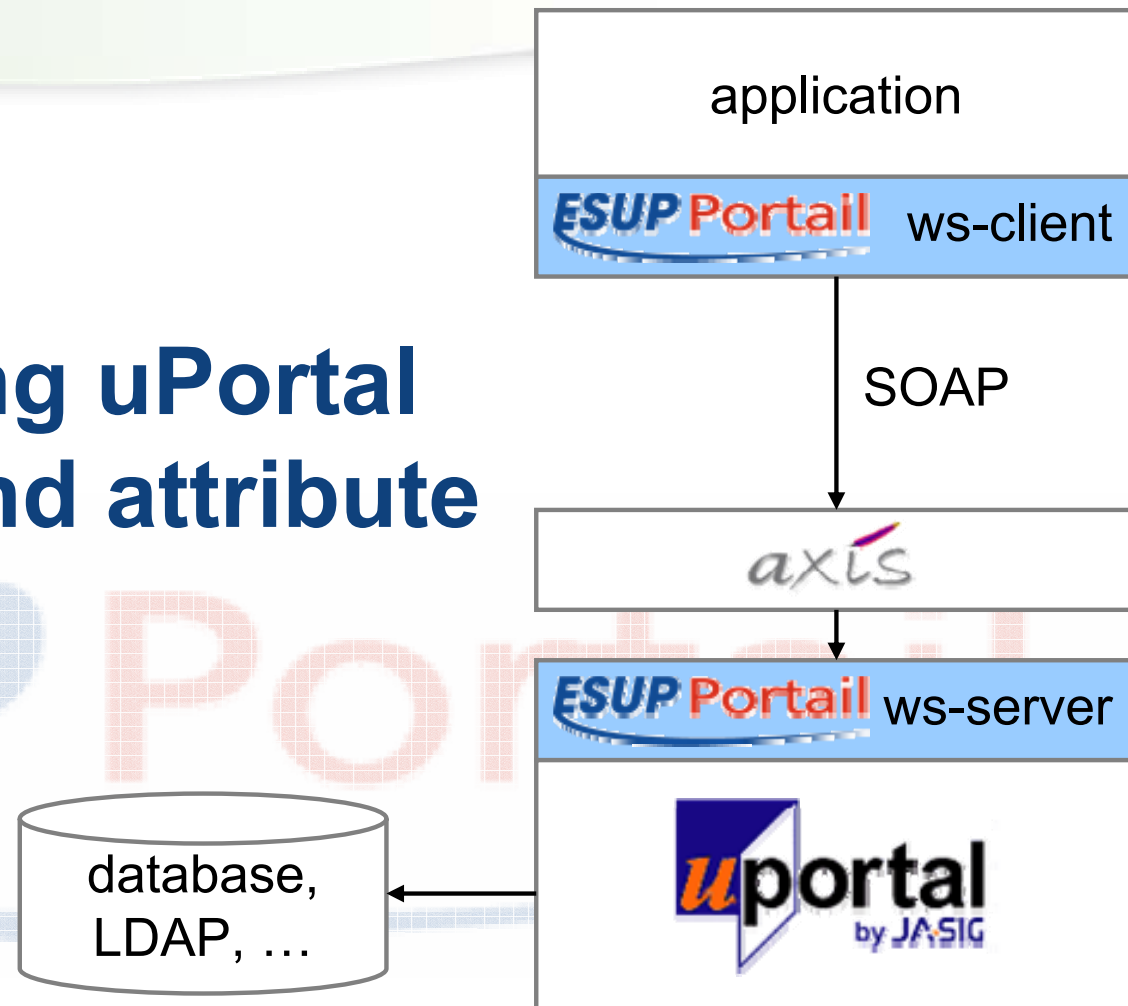
# The layers





# Esup-portal-ws

- A web service for interrogating uPortal about group and attribute information



```
PortalGroup group = portalService.getGroupById("local.10");  
List<String> values = portalService.getUserAttributeValues(  
    "paubry", "departmentNumber");
```



<http://www.esup-portail.org>

**ESUP Portail**

