

Katholieke HOGESCHOOL Mechelen

**KHLEUVEN**  
KATHOLIEKE HOGESCHOOL LEUVEN

KATHOLIEKE UNIVERSITEIT **LEUVEN**



**GROEP T**  
HOGESCHOOL LEUVEN

**KATHO**  
Katholieke Hogeschool Zuid-West-Vlaanderen

HOGESCHOOL VOOR WETENSCHAP & KUNST



**KHBO**  
Katholieke Hogeschool Brugge-Oostende  
ASSOCIATIE K.U. LEUVEN




Katholieke Hogeschool Limburg

*Lessius*  
HOGESCHOOL



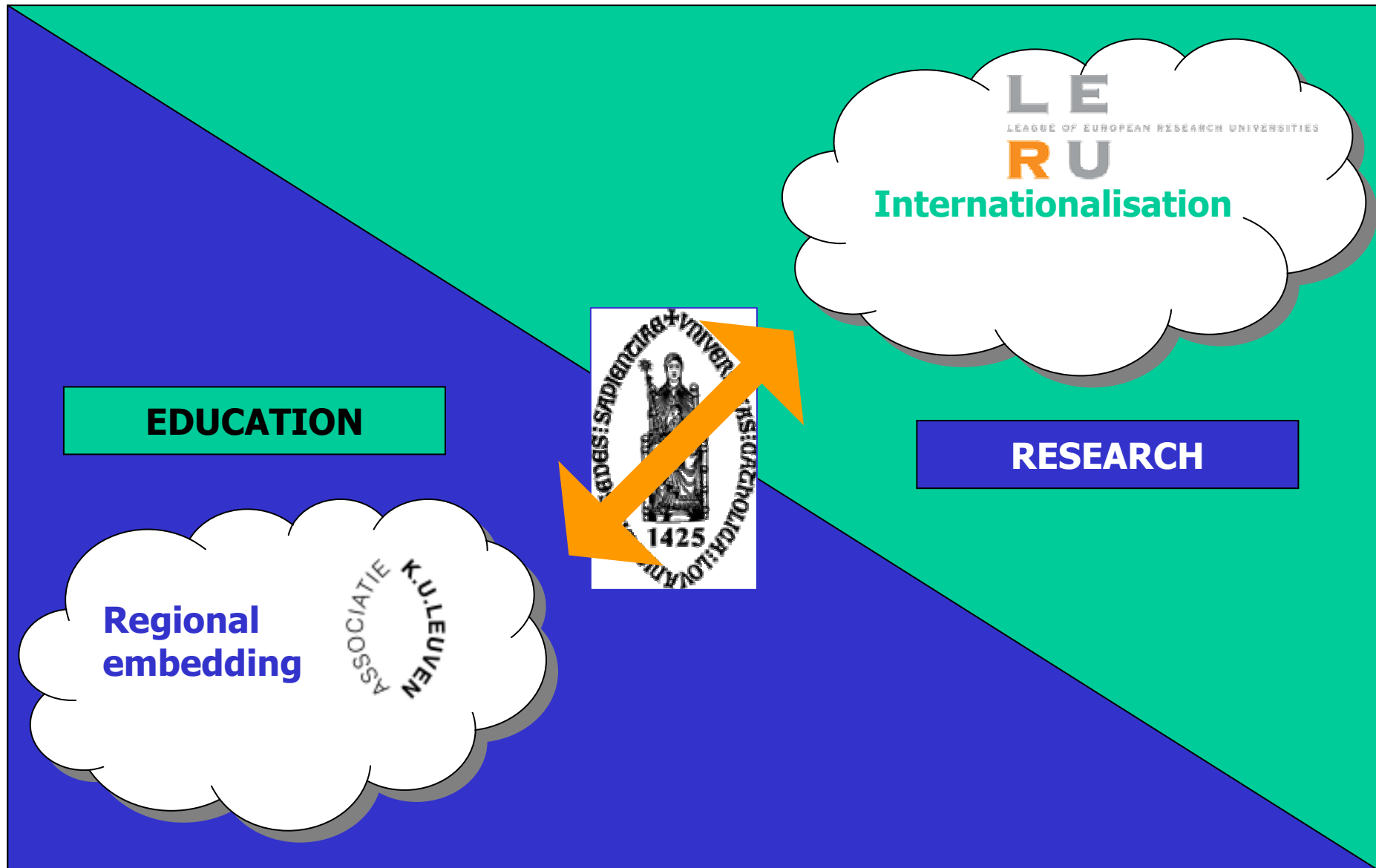
**SINT-LIEVEN** HOGESCHOOL



- ◆ Adapting to the knowledge economy
- ◆ ICT for university core activities
  - ▶ Research
  - ▶ **Scientific education**
  - ▶ Knowledge embedding & dissemination
- ◆ VLE as a flexible education management tool and beyond ...
- ◆ Integration of VLE's and ERP systems
- ◆ Multi-layered, open and modular architecture

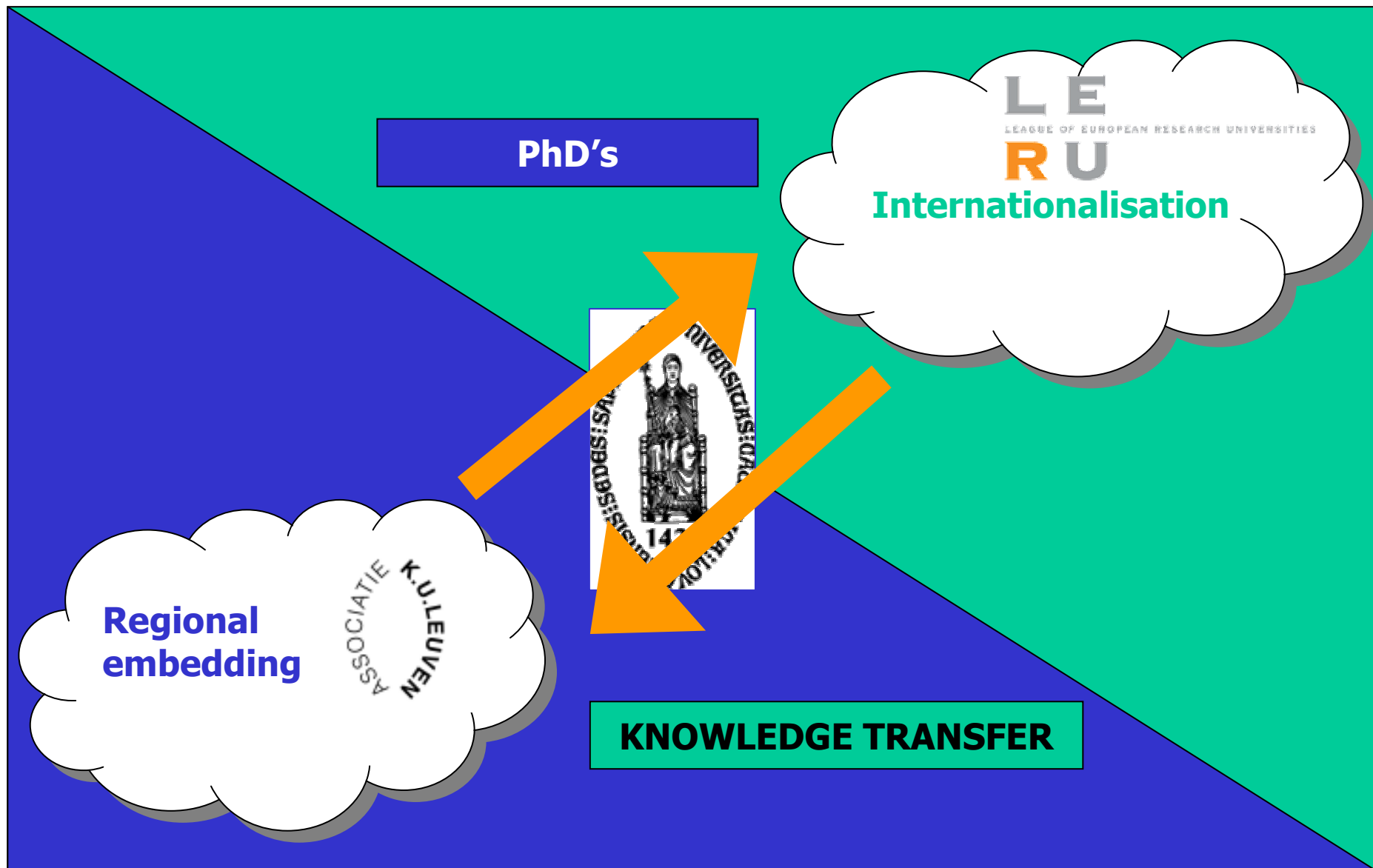


# University value chain



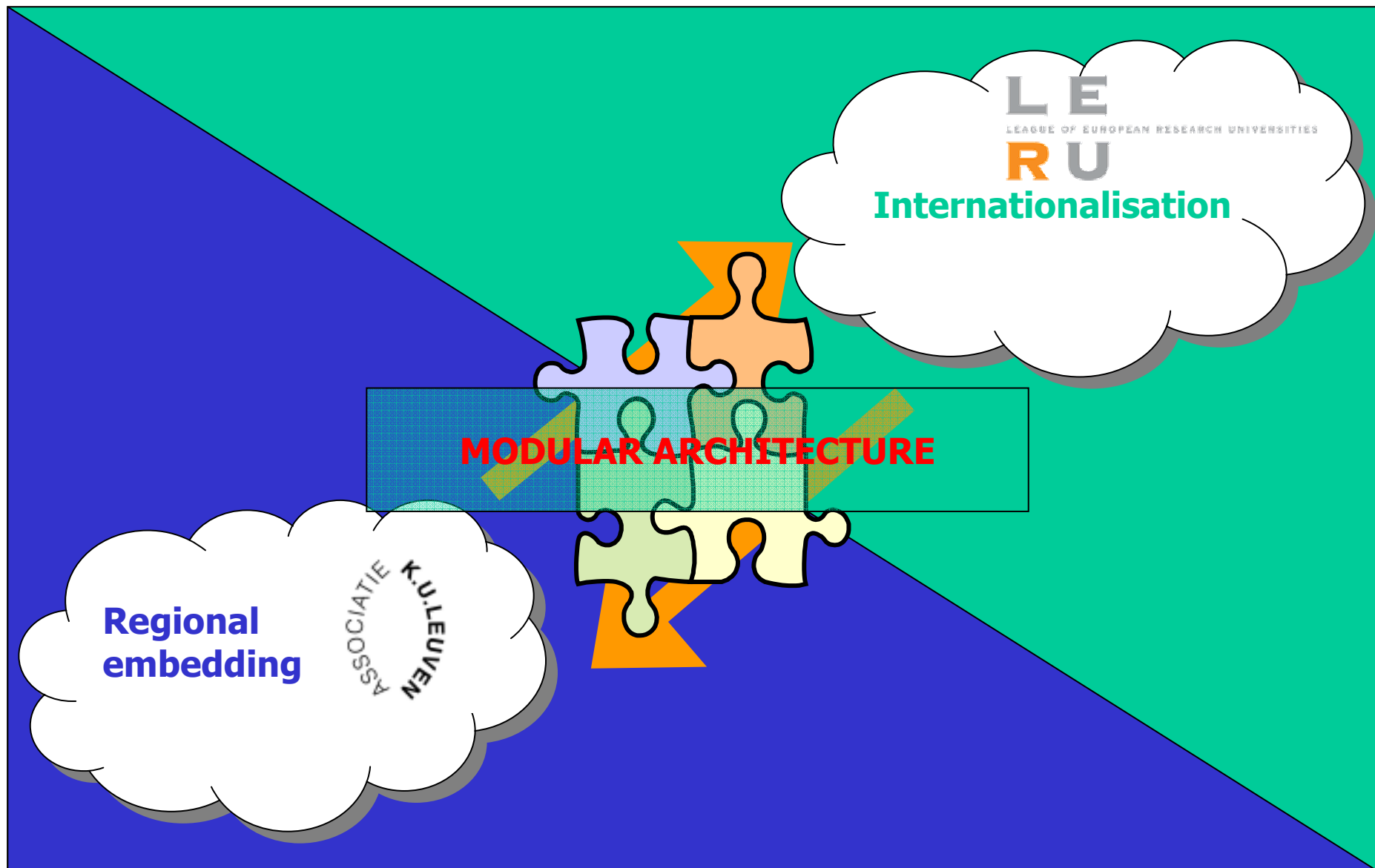


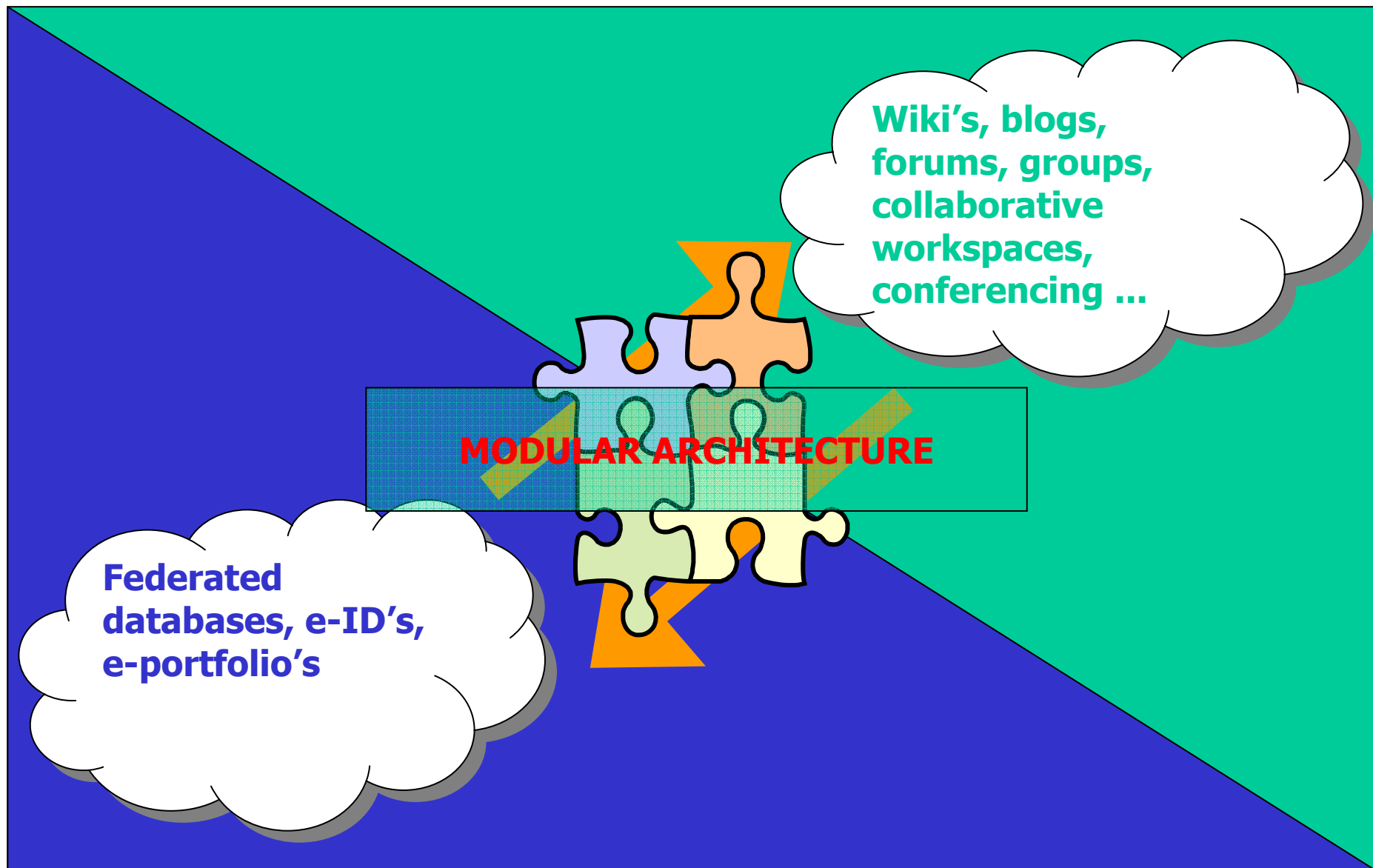
# University value chain





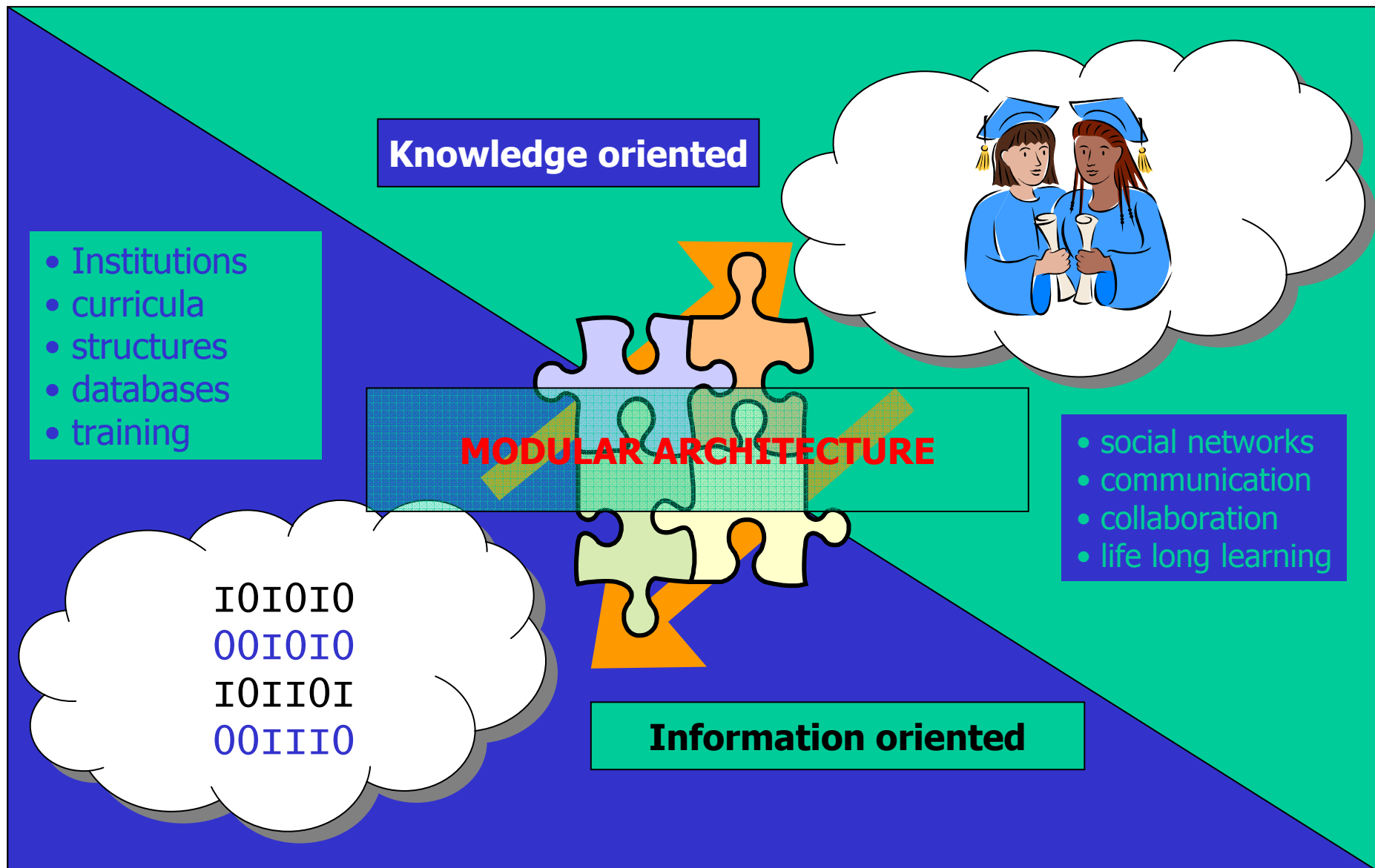
# University in the value chain







# From information systems to knowledge enablers



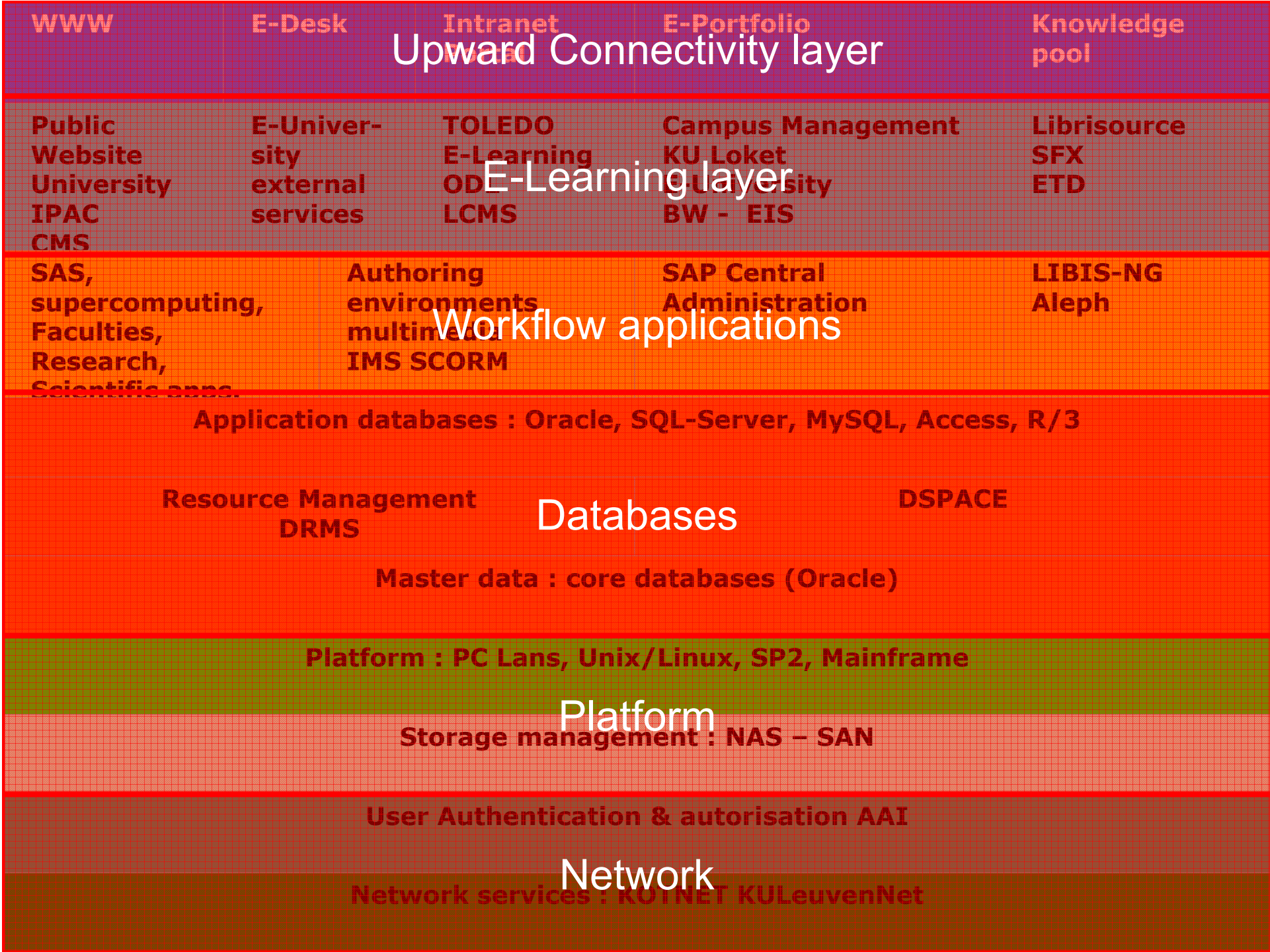
**Platform : PC Lans, Unix/Linux, SP2, Mainframe**

**Storage management : NAS – SAN**

**User Authentication & autorisation AAI**

**Network services : KOTNET KULEuvenNet**







- ◆ Assisted self-study
- ◆ Virtual campus: integration of ODL techniques in standard curricular teaching
- ◆ Organisation and validation of scientific content throughout association institutions
- ◆ Diversity of teaching methods
- ◆ Mixed international virtual classes

*“Net-centric E-Learning”*



- ◆ Industrial partnerships
  - ▶ Oracle databases
  - ▶ SAP ERP system
  - ▶ Campus management SAP
  - ▶ Blackboard
  - ▶ QuestionMark Perception
- ◆ Open source:
  - ▶ Ariadne Knowledge Pool
  - ▶ Shibboleth AAI
- ◆ Open standards: SCORM, IMS
- ◆ Open architecture: Intermediate layer  
Java/Perl, IMS-compliant XML

ORACLE

SAP

Bb

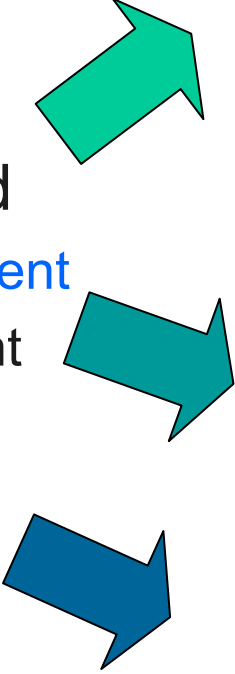
Blackboard



Questionmark



## Organisational choices: mixed management groups

- ◆ ICTS board
    - ▶ ICT management
  - ◆ ICTO advisory board
    - ▶ Education Management
    - ▶ General management
    - ▶ Teaching staff and experts
  - ◆ TOLEDO
    - ▶ DUO/ICTO educational support service
    - ▶ LUDIT ICT support
    - ▶ Teaching staff
    - ▶ Educational support staff
  - ◆ CDLP
    - ▶ Institutions management
    - ▶ Toledo representatives
  - ◆ Internationalisation
    - ▶ Think Tank
- 



### ◆ In support for education

- ▶ Different institutes want to offer bridges to other e-learning systems, e.g. QMP, FirstClass,...
- ▶ Different educational needs
  - competence based education
  - guided independent learning

### ◆ In system management

- ▶ Different Academic agendas, when do we have time for upgrades?
- ▶ 70,000 students, 20,000 courses, millions of enrolments



1. 10 institutions; 23 campuses
  - ▶ Extensive user of portal functionalities
2. 10 directory servers
  - ▶ Adapted logon procedure
3. 10 administrative systems
  - ▶ Standardize on IMS for data integration
4. Different disciplines; educational concepts
  - ▶ Opening the environment for domain specific solutions
5. + 55,000 users
  - ▶ Load balanced system



# The educational portal



## Every CDLP user has personalized educational portal

KATHOLIEKE UNIVERSITEIT  
**LEUVEN**

Home Help Logout

My Toledo Admin System Admin Help

Lessius  
HOOGESCHOOL

Home Help Logout

My Toledo Lessius Admin Help

 Katholieke Hogeschool Kempen

Home Help Logout

My Toledo KH Kempen Admin Help

HOOGESCHOOL VOOR WETENSCHAP & KUNST

Home Help Logout

My Toledo W&K Admin Help



Blockboard Learning System™ (Release 6) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: https://demb.cc.kuleuven.ac.be/webapps/portals/travel.jsp

LEUVEN

My Toledo Admin Help

Tools

- Calendar
- Tasks

**Welcome, Marijke**

**Student Tip**

**TOLEDO TIP: CURSUSSEN ONZICHTBAAR MAKEN**

Je kan cursussen die je niet meer wil zien (bijv. van vorig semester) verborgen wa het portaaltoon. Announcements niet laten verschijnen in de 'My Courses' kader is eveneens mogelijk.

Klik [hier](#) voor meer informatie.

**TOLEDO TIP: MAKING COURSES INVISIBLE**

You can hide courses you don't want to see anymore (for example courses of the past semester) using the pencil icon. It is also possible to hide the announcements in the 'My Courses' frame.

Click [here](#) for more information.

**My Announcements**

ive been posted today.

teelische revalidatie bij patiënten met musculoskeletale aandoeningen ter m, deel 2

**Eindwerk 2004**

- [Eindeurhandeling 2004-2005](#)

**Stage ReKI - 2de licentie**

- [stageroeping periode 10](#)
- [Seminaries ReKI](#)
- [Logboek](#)
- [Formulier Evaluatie Stageplaats](#)

**My Organizations**

Organizations in which you are participating:

- [Eindwerk 2004](#)
- [Stage ReKI - 2de licentie](#)

**K.U.Leuven - Mail**

You have 6 new message(s), 6 unread messages. [ [Webmail](#) ]

**Unavailable Courses**

Cursussen waarvoor u bent ingeschreven, maar die niet beschikbaar zijn voor studenten.

Courses in which you are enrolled, but which are not available to students.

**My Courses**

Courses in which you are enrolled:

- [L8937a | Ziekteleer en motorische revalidatie bij patiënten met musculoskeletale aandoeningen ter leegte van de wervelkolom, deel 2](#)

**Announcements**

- [welkom](#)

No Announcements

- [L8939a | Informatie- en communicatiemedia in de revalidatiewetenschappen](#)
- [L8943a | Stages in de motorische revalidatie, deel 2](#)
- [L8945a | Geavanceerde musculoskeletale revalidatie m.i.v. practicum, Deel 1:](#)
- [L8945b | Geavanceerde musculoskeletale revalidatie m.i.v. practicum, Deel 1:](#)
- [L8946a | Geavanceerde musculoskeletale revalidatie m.i.v. practicum, Deel 2: onderste kwadrant](#)
- [L8946b | Geavanceerde musculoskeletale revalidatie m.i.v. practicum, Deel 2: onderste kwadrant](#)

**Campus Management**

- [Mijn studenten dossier](#)

**All students**

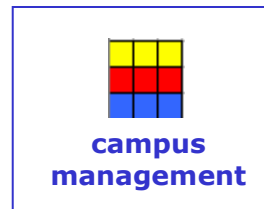
**Students of K.U.Leuven**

# Data integration

## LEGACY DATA

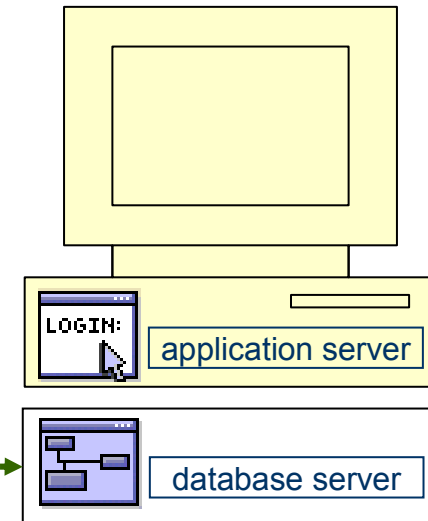


## ? Challenge



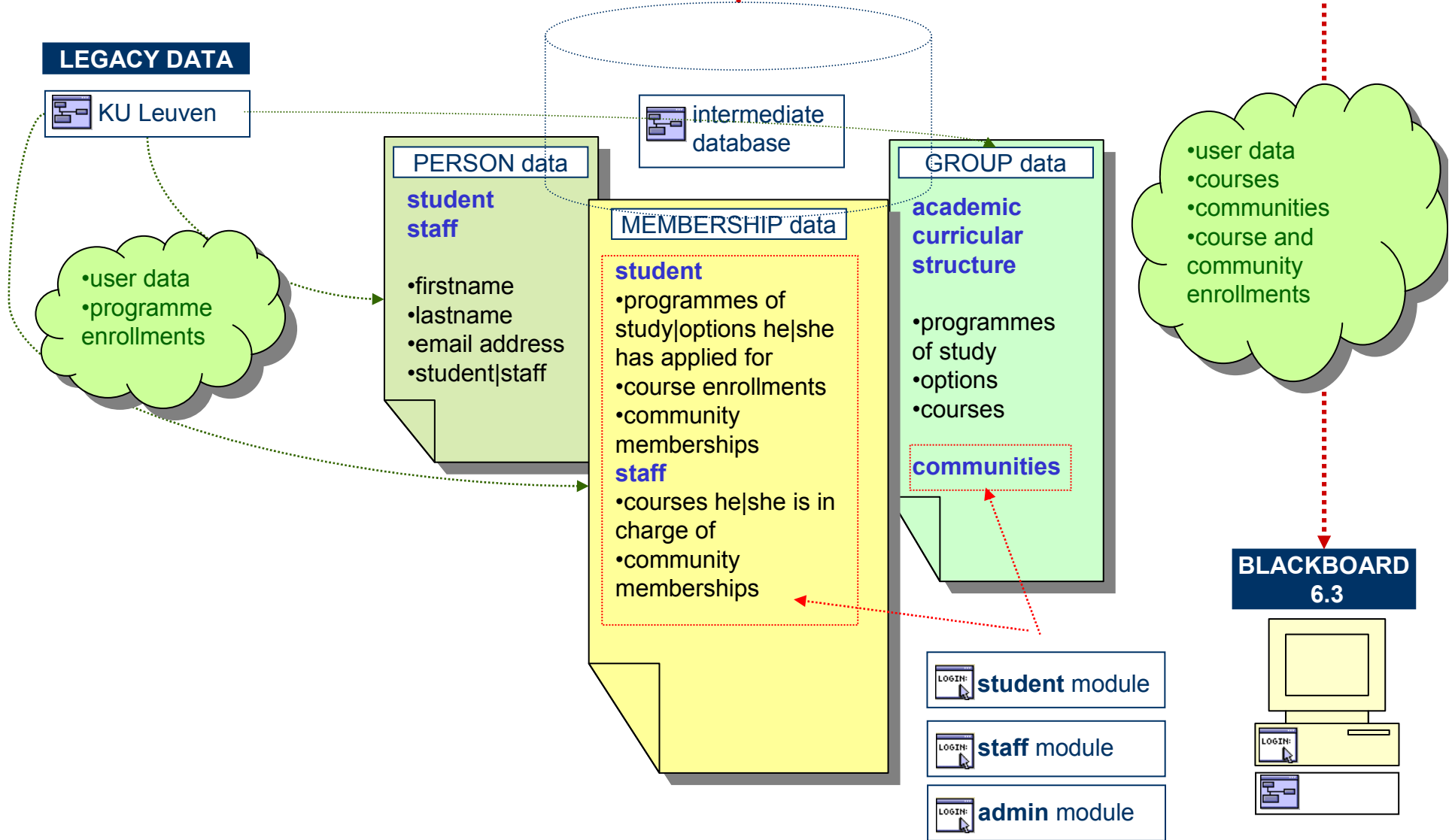
1. users
2. courses
3. enrolments – memberships

## BLACKBOARD 6.3



# IMS-compliant intermediate database

5 min





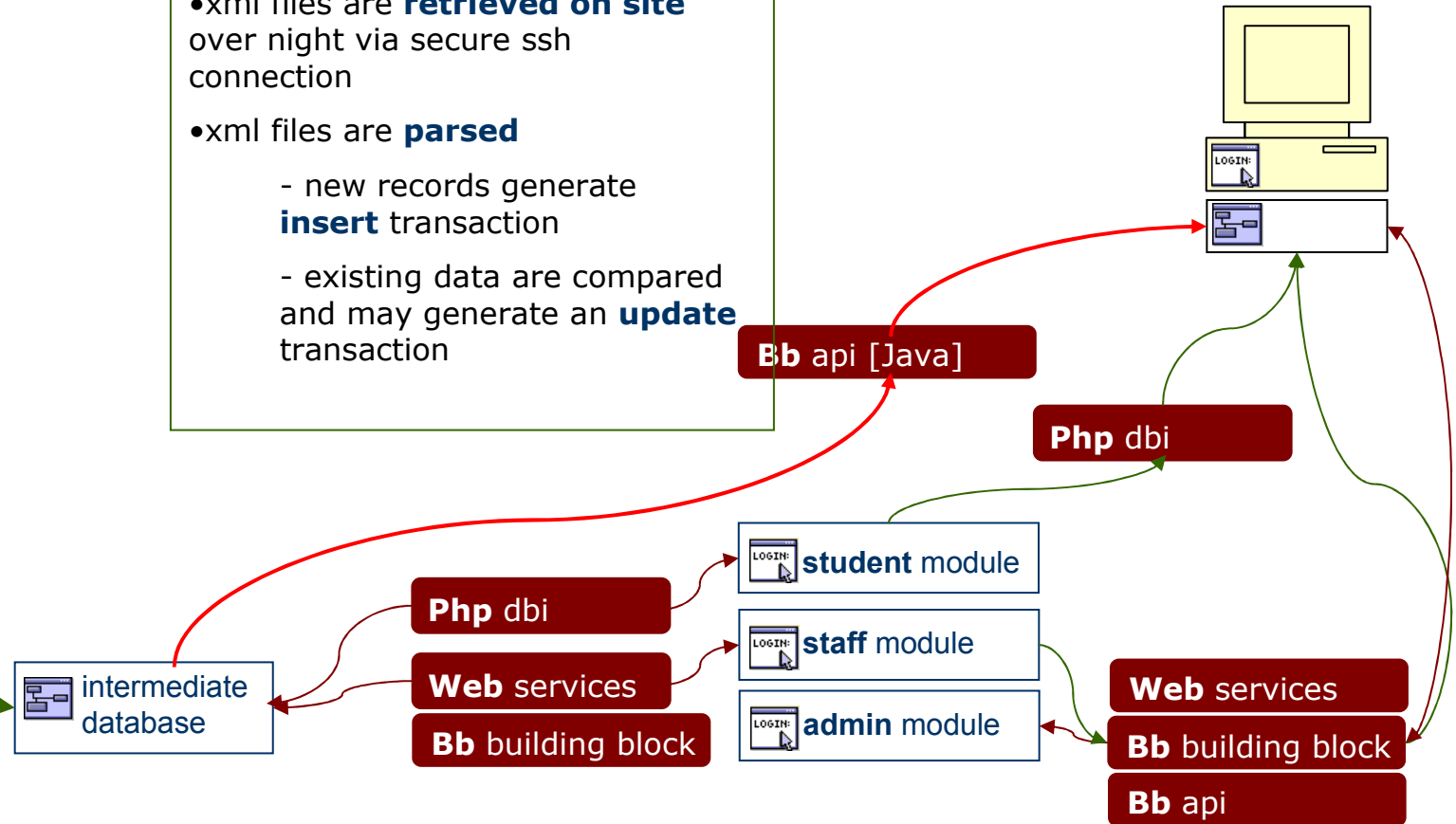
## LEGACY DATA

- institution A
- institution B
- institution C
- institution D
- institution E
- institution F

### ! Approach

- **perl scripts** passed to institutions
- scripts generate **ims enterprise** compliant xml wrapping of data ([www.imsglobal.org](http://www.imsglobal.org))
- xml files are **retrieved on site** over night via secure ssh connection
- xml files are **parsed**
  - new records generate **insert** transaction
  - existing data are compared and may generate an **update** transaction

## BLACKBOARD 6.3





# Extra tools and links

KATHOLIEKE UNIVERSITEIT  
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Home Help Logout

My Toledo System Admin Admin Help

COURSES > INFOSESSIE BLACKBOARD > CONTROL PANEL

**INFOBB: Infosessie Blackboard - Leen Van Rentergem (Instructor)**

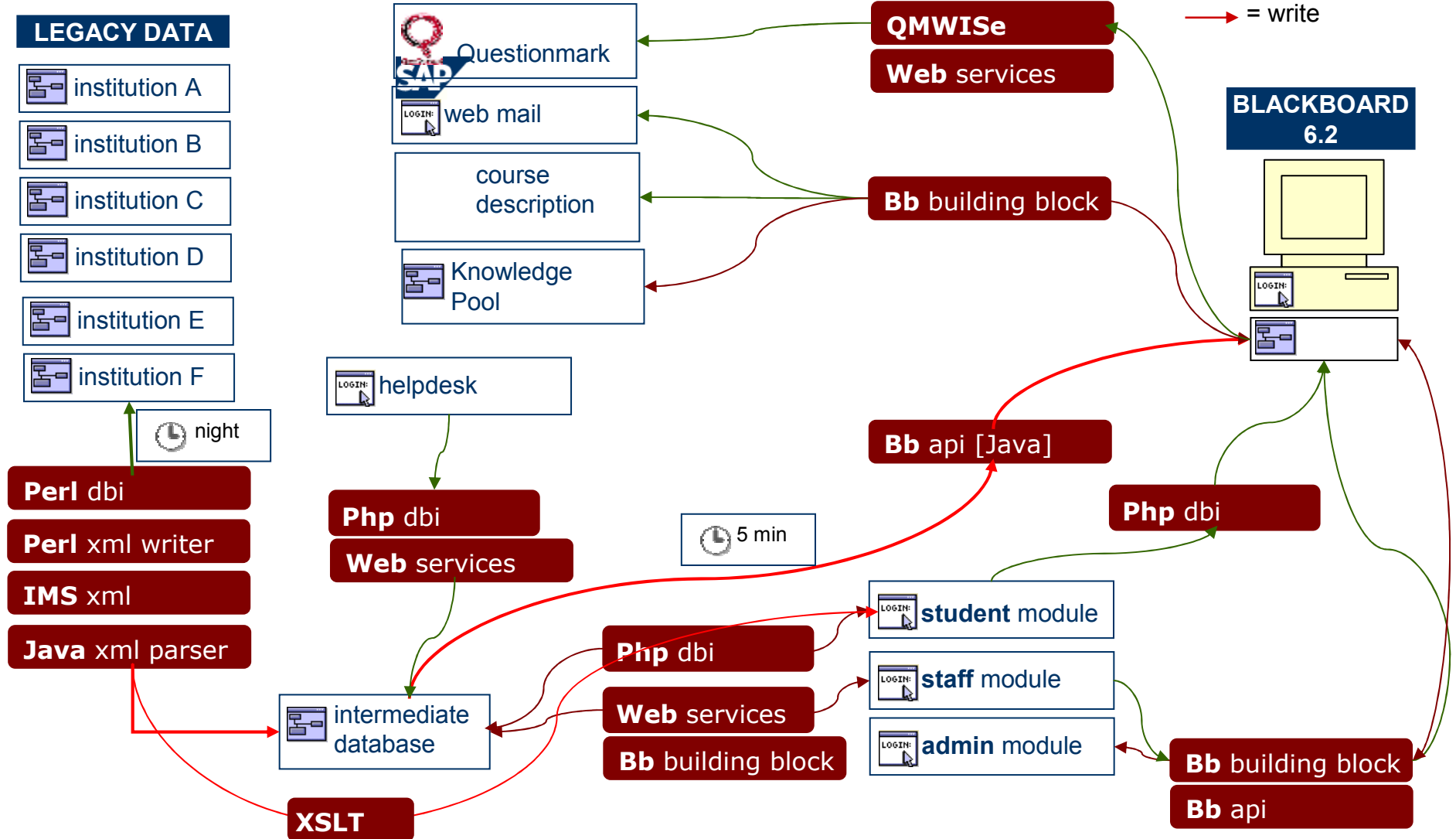
<b>Content Areas</b>		<b>User Management</b>	
<a href="#">Course Information</a>	<a href="#">Books</a>	<a href="#">List / Modify Users</a>	<a href="#">Remove Users from Course</a>
<a href="#">Course Documents</a>	<a href="#">External Links</a>	<a href="#">Enroll User</a>	<a href="#">Manage Groups</a>
<a href="#">Assignments</a>			
<b>Course Tools</b>		<b>Assessment</b>	
<a href="#">Announcements</a>	<a href="#">Advanced Groups Manager</a>	<a href="#">Test Manager</a>	<a href="#">Gradebook</a>
<a href="#">Course Calendar</a>	<a href="#">Batch Enroll Users</a>	<a href="#">Survey Manager</a>	<a href="#">Gradebook Views</a>
<a href="#">Staff Information</a>	<a href="#">List All Users</a>	<a href="#">Pool Manager</a>	<a href="#">Course Statistics</a>
<a href="#">Tasks</a>	<a href="#">Download All Users</a>		
<a href="#">Discussion Board</a>	<a href="#">Send Email - Toledo</a>		
<a href="#">Collaboration</a>	<a href="#">Mail Control</a>		
<a href="#">Manage Chalk Title</a>	<a href="#">Course Statistics - Toledo</a>		
<b>Course Options</b>			
<a href="#">Manage Course Menu</a>	<a href="#">Course Copy</a>		
<a href="#">Manage Tools</a>	<a href="#">Import Package</a>		
<a href="#">Settings</a>	<a href="#">Export Course</a>		
<a href="#">Recycle Course</a>	<a href="#">Archive Course</a>		

Toledo tools



# Links

↔ = read/write  
 → = read  
 → = write





## Toledo: blackboard production network

