SIGMA

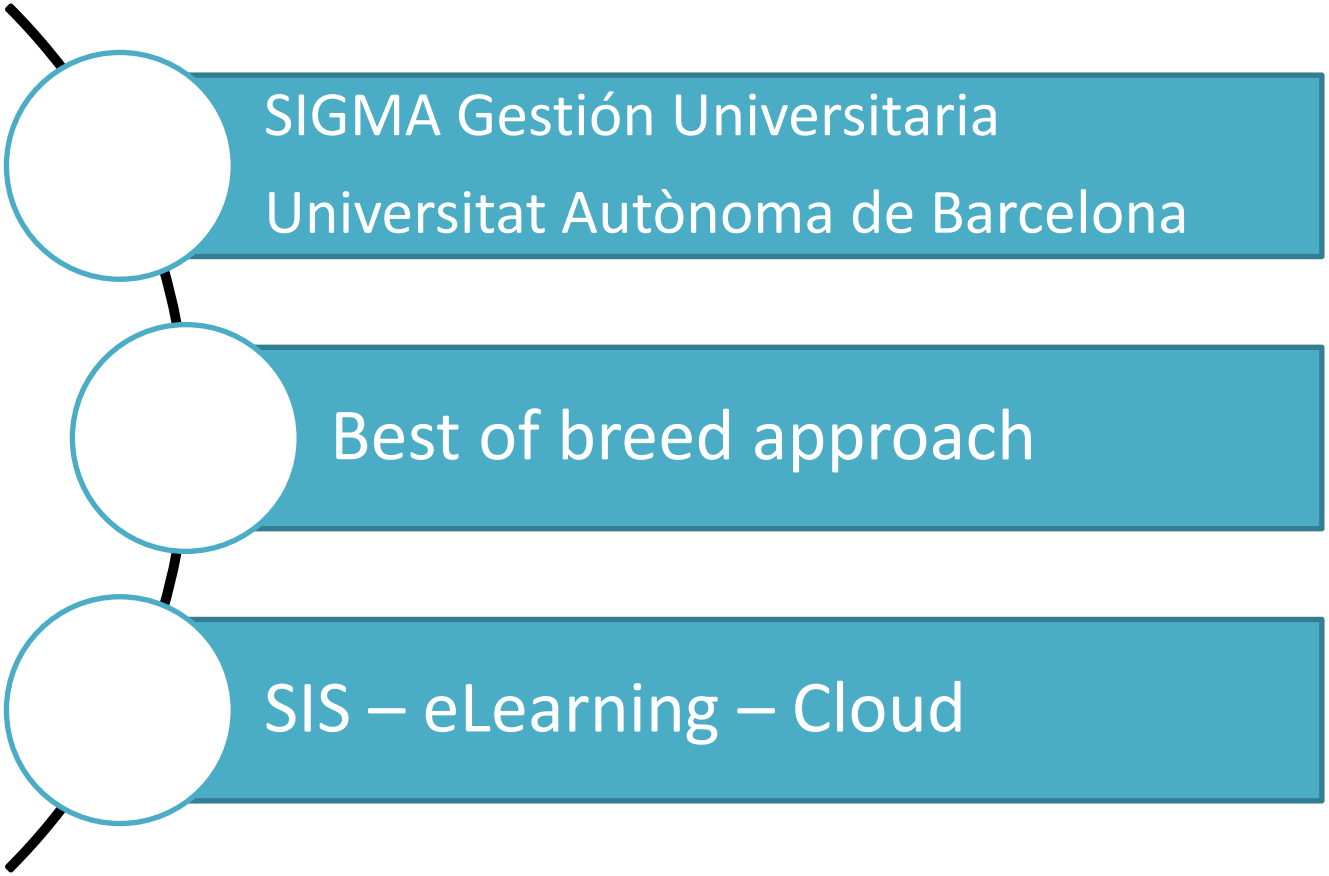
technological innovation
for universities

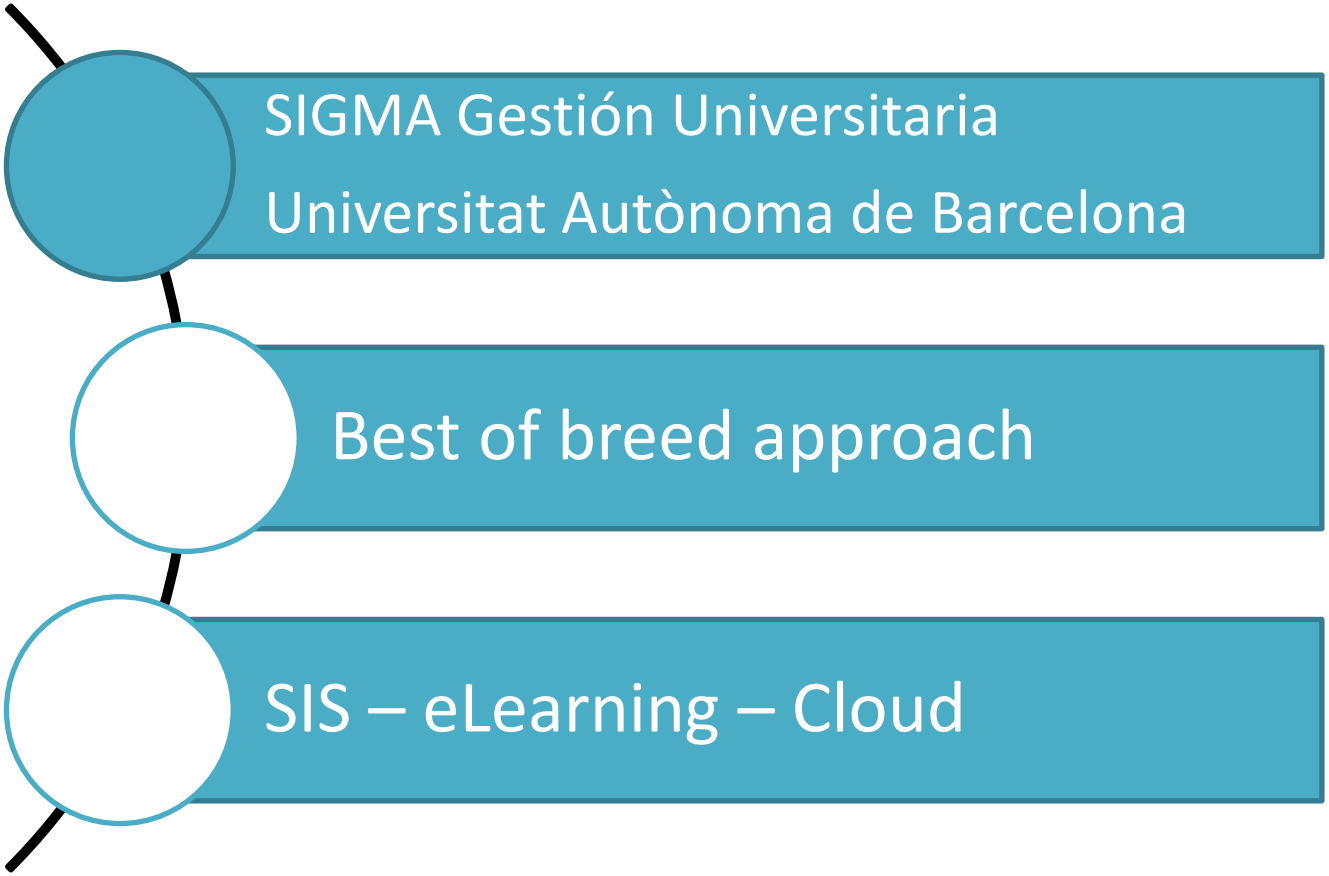
Universitat Autònoma de Barcelona

SIGMA
technological innovation for universities

Integrating SIS with the Cloud

Paper 60 Topic ICT for Teaching and Learning Enhancement


SIGMA Gestión Universitaria
Universitat Autònoma de Barcelona
Best of breed approach
SIS – eLearning – Cloud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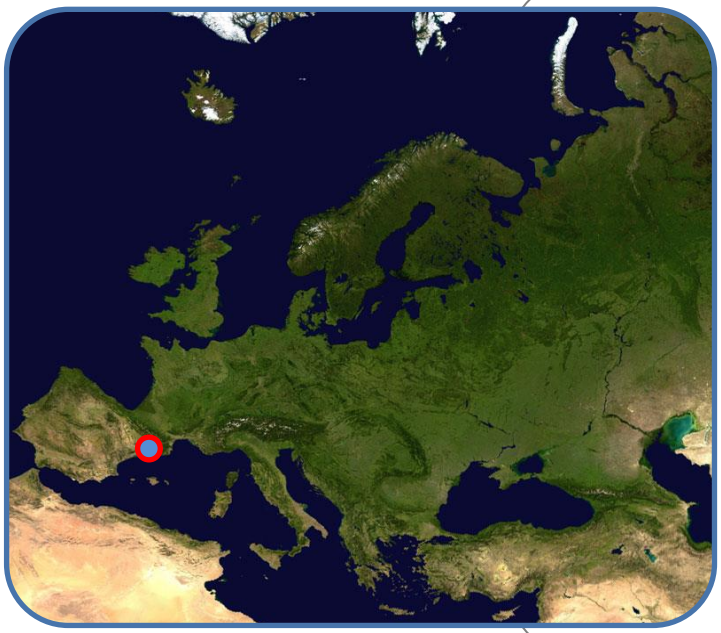


SIGMA is a **non-for-profit consortium** established in 1996, and owned by 8 top level **Spanish Public Universities,** to provide **technological solutions** for students, learning and research management processes.

SIGMA focuses the development and support of two main best of breed suites of solutions:

SIGMA Student Information System

ARGOS Research Information System

Our community

Owners

Universitat Autònoma de Barcelona

Universidad Autónoma de Madrid

Universidad Carlos III de Madrid

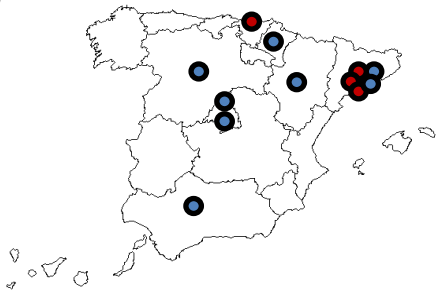
Universidad de Córdoba

Universitat Pompeu Fabra Barcelona

Universidad de Valladolid

Universidad Zaragoza

upna Universidad Pública de Navarra – Nafarroako Unibertsitate Publikoa



SIGMA represents the **20% of the students in the Spanish Public university system**, with institutions all across the country

Customers

IQS Persona Ciencia Empresa – Universitat Ramon Llull

Fundació Pere Tarrés – Universitat Ramon Llull – Facultat d'Educació Social i Treball Social

Universidad del País Vasco – Euskal Herriko Unibertsitatea

ESCI Universitat Pompeu Fabra Barcelona

Escola Universitària del Maresme – Escola Superior de Ciències de la Salut

TecnoCampus Mataró-Maresme

Fundació BCN Formació Professional

Universitat Autònoma de Barcelona

Founded in **1968** it's a young and dynamic university based on 4 principles of **autonomy**:

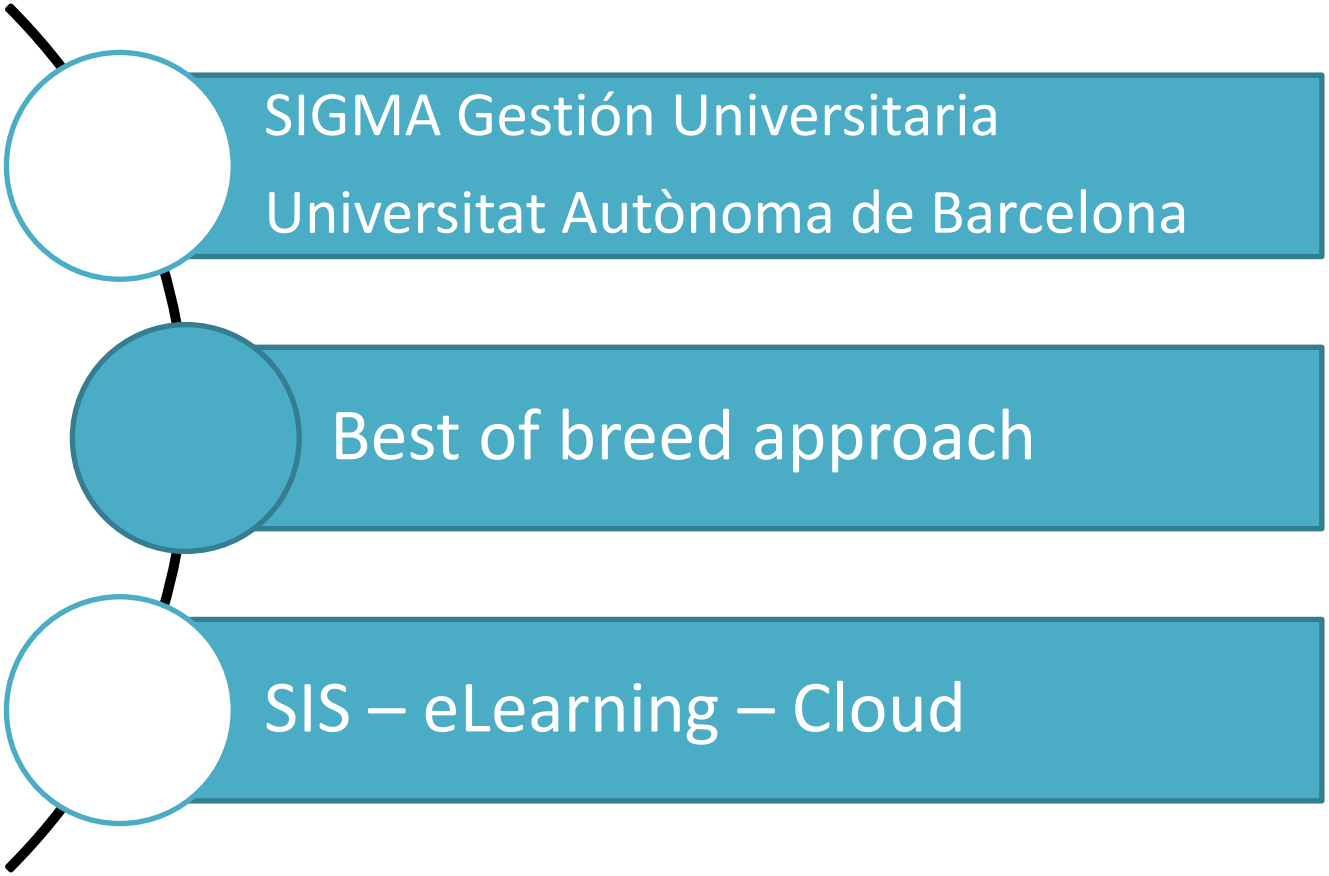
- To select **teaching** staff
- To make available the admission to all **students**
- To create its own **syllabus**
- To administrate the University's **capital**

UAB at a glance (2011 - 2012)

85 degree courses	**130** official masters	**79** PhD programmes	**771** continuing education programmes (2010-2011)
29.018 degree students	**2.280** official masters students	**3.578** PhD students	**10.791** continuing education students (2010-2011)
4.677 degree graduates (2010-2011)	**1.577** official masters graduates (2009-2010)	**4.505** degree international students	**1.914** postgraduate international students
71,5 millions of Euros for research	**2.239** articles published in indexed journals (2011, WOK-ISI)	**522** PhD theses (2010-2011)	**57** spin-off companies
57 European research projects (2011)	**337** national research projects (2011)	**383** research agreements (2011)	
3.615 research and teaching staff	**796** research staff in training	**2.503** administration and services staff	**339,5** millions of Euros budget for 2012

QS World University Rankings 2012/2103

Spain	**1**
Europe	**76**
World	**176**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S
SIGMA
technological innovation for universities
SIGMA
student information system
SIGMA
A
SIGMA
technological innovation for universities
SIGMA
ARGOS
current research information system

Suite SIGMA SIS & L3

Students Information System

Students

Academic Student life cycle

Degree Master Doctorate

- Syllabus
- Recruitment
- Enrollment
- Grants
- Fees and Financials Integration
- Gradebook
- Mobility
- Degrees
- Mobile Apps

Resources

Resource Planning

- Courses
- Teachers
- Spaces
- Timetables
- Allocations
- Learning Groups
- eLearning Virtual Campus
- Quality Surveys
- HR Integration

Life long Learning

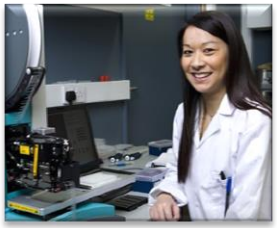
Specific Academic Student life cycle

Institution non official Postgraduate Programs

Suite CRIS ARGOS

Research Information System

Management



- Calls and applications management
- Research grants
- Agreements and renewals
- Contracts & Patents
- R&D Projects
- Master data management

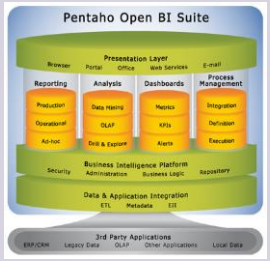
Production

- Scientific production activity
  - Friendly Researcher front end
  - Back office Validation
- Curriculum management

Promotion

- Scientific production activity Portal
  - Powerful search engine
  - Annual Reporting
    - Institution
    - Groups & Departments
    - Researchers
    - Keywords
  - Integration with Libraries and other repositories (WOK, Scopus, …)

Institution Open Analytics



Business Intelligence

Data Quality

Plan Control

Reports for **decision making**
Implement Official **KPIs** checking

KPIs

Create Datamarts for specific areas reporting
Generate accurate reports for Official Institutions

Official Statistics

Added value reporting & services from an ODS avoiding access to SIGMA Transactional DB
Historical and trending information

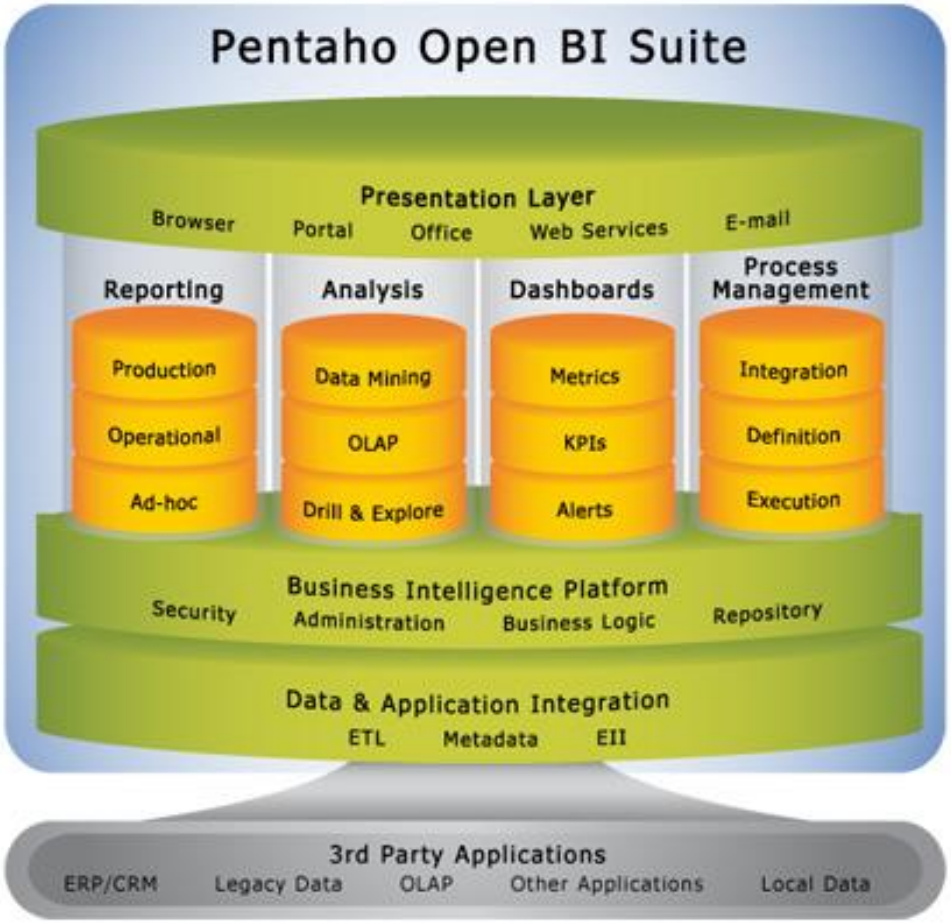
Operational Data Store (DWH)

Day to Day reporting with Data Quality guaranteed in the bottom layer

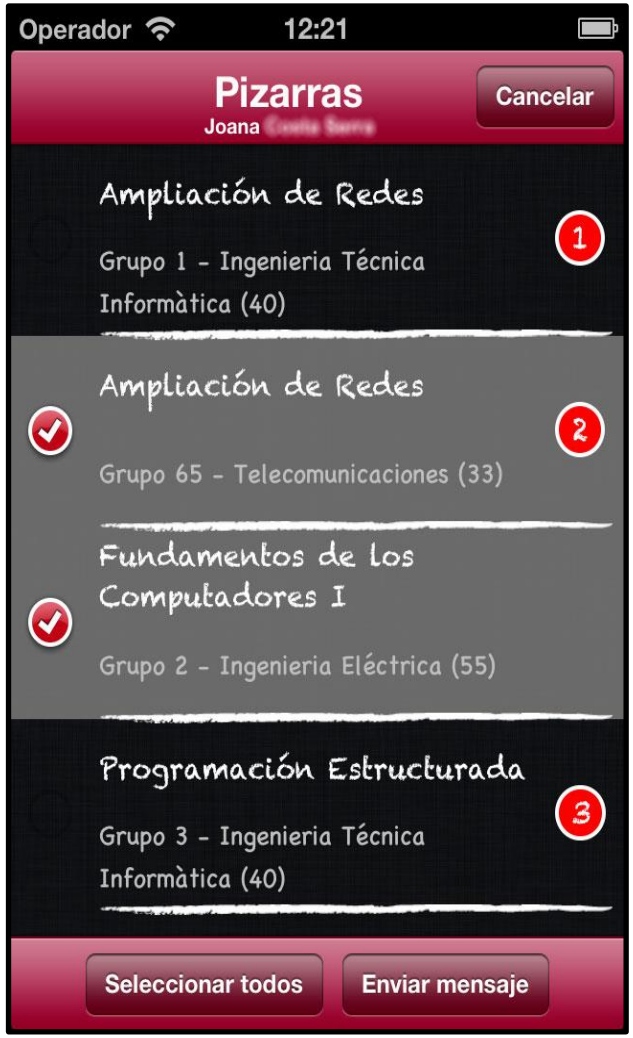
SIGMA (Transactional DB)

Normalization and aggregation of data

Institution Open Analytics

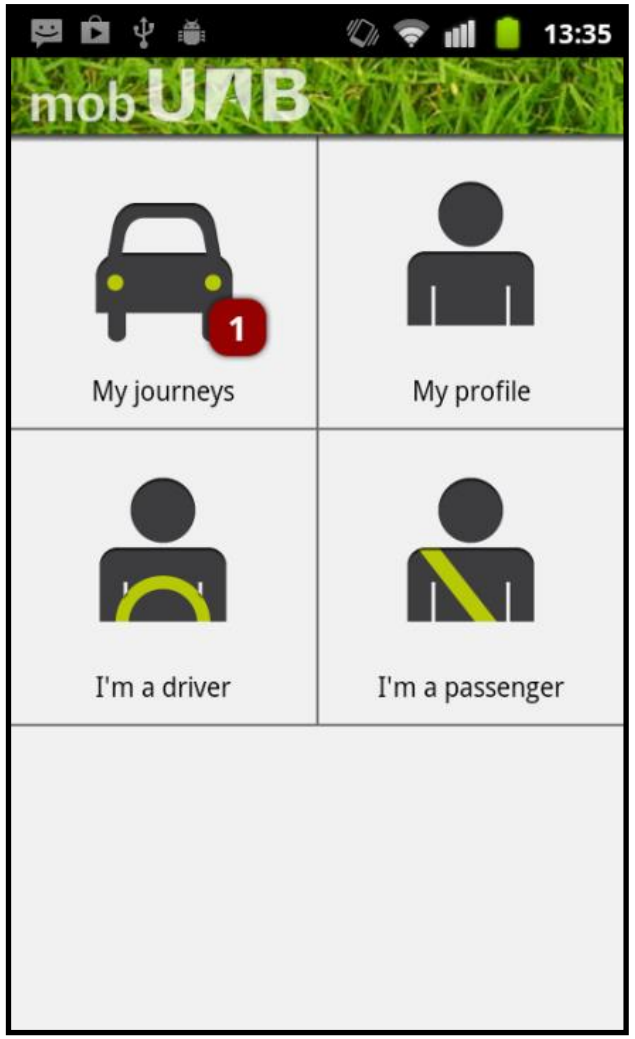


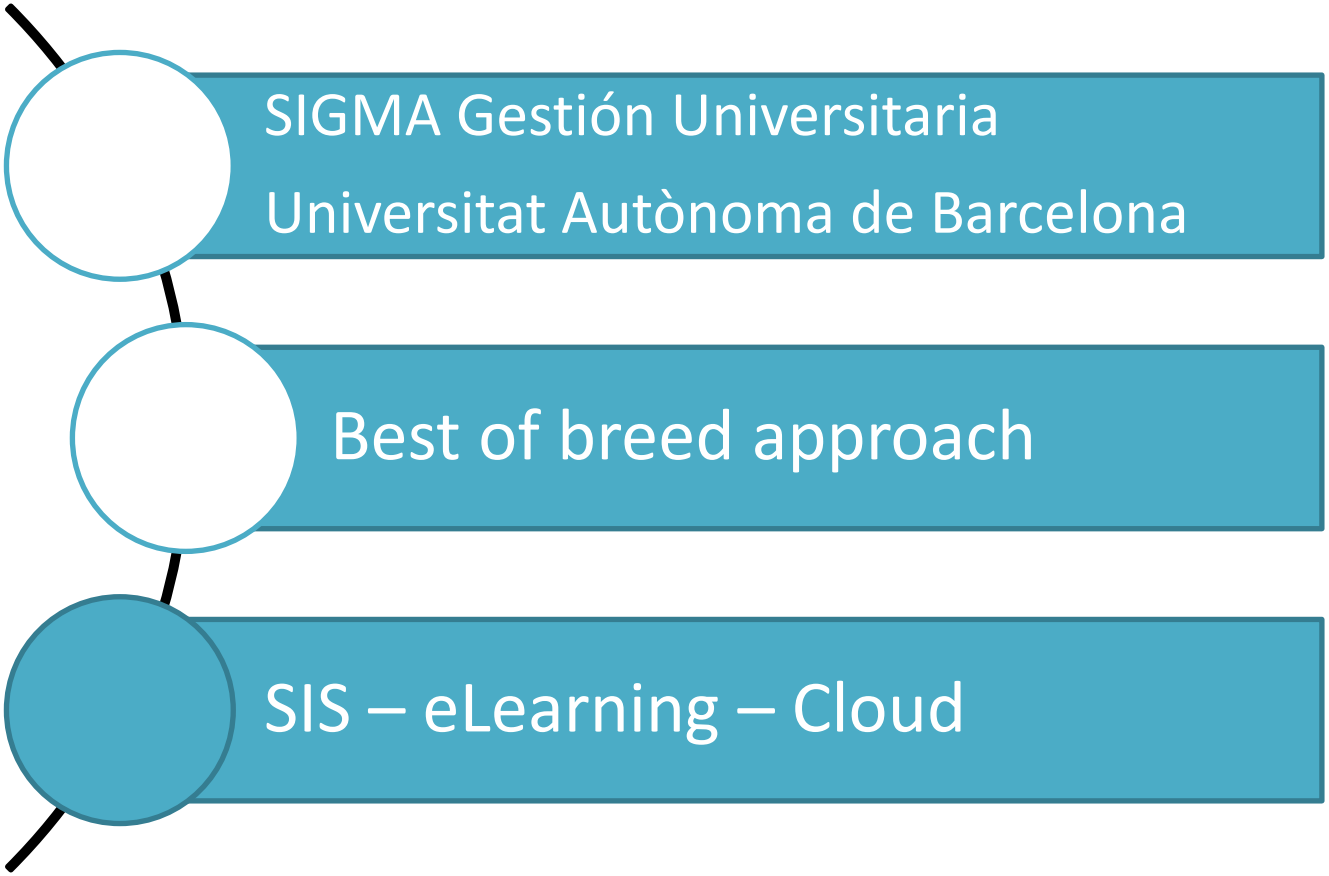
Mobile Social Apps



Transforming the students community into a social network, 13th June 12:00-12:30, ROOM 1

Mobile Social Apps

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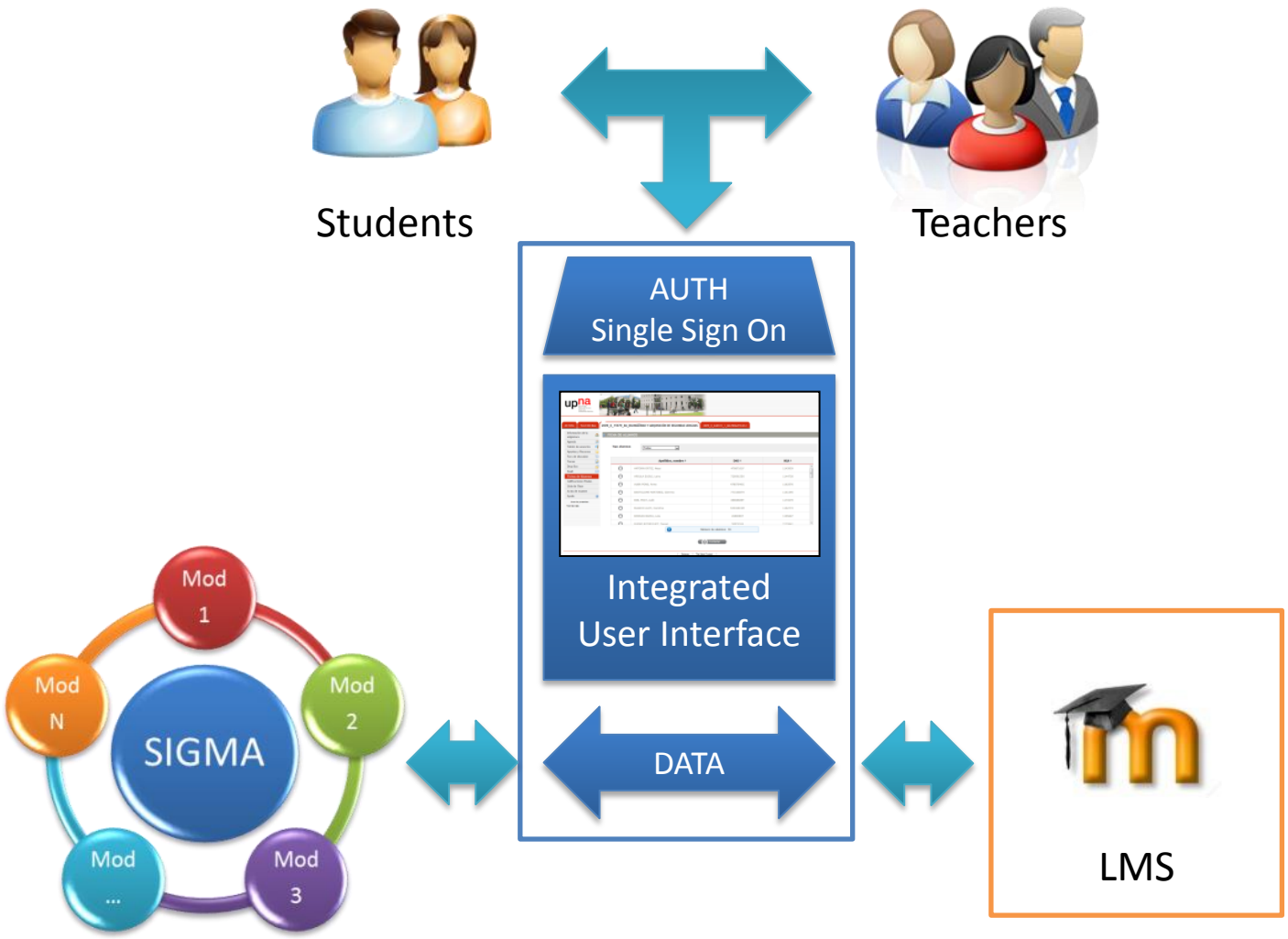
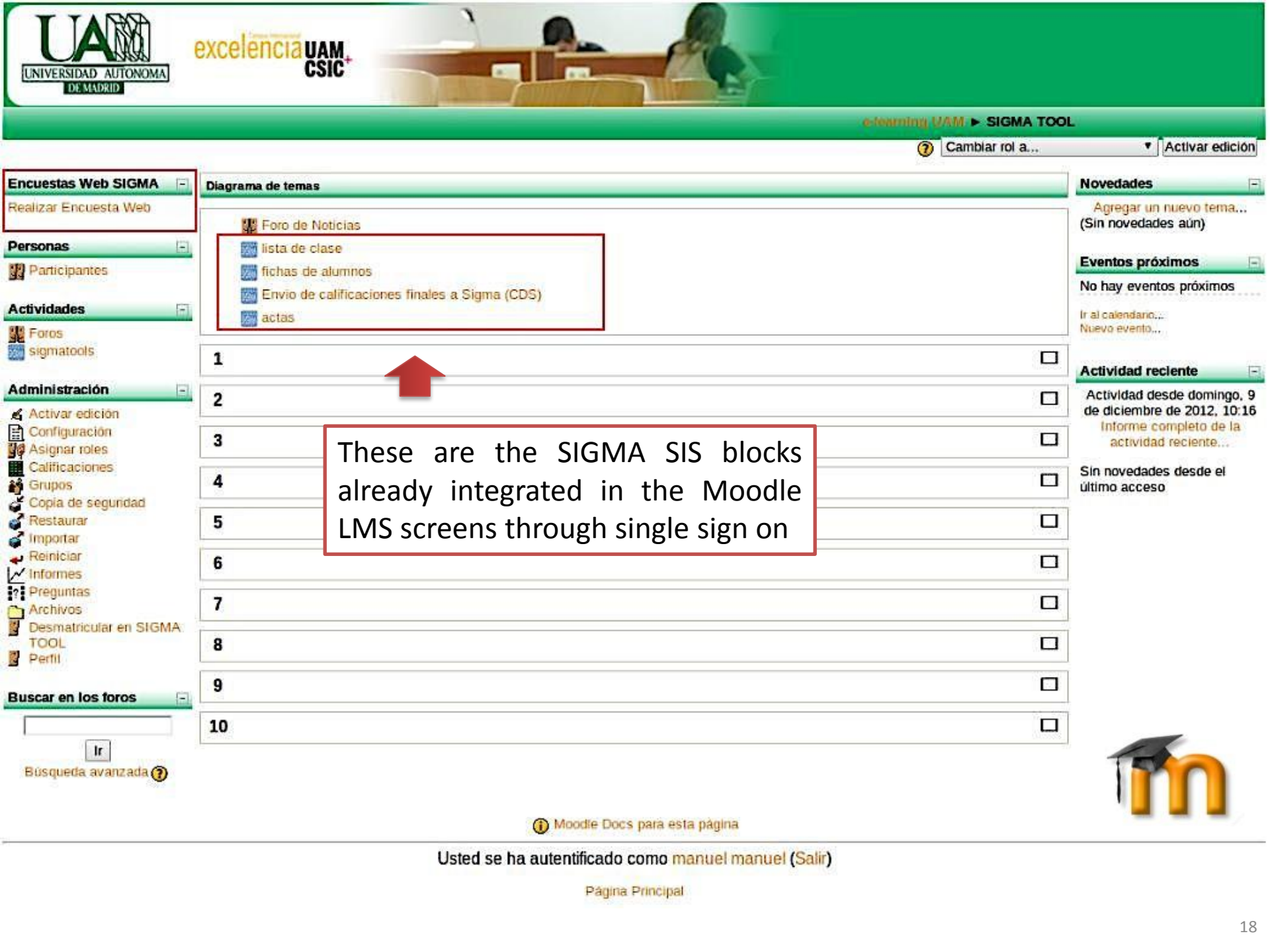
Integrating SIS with LMS

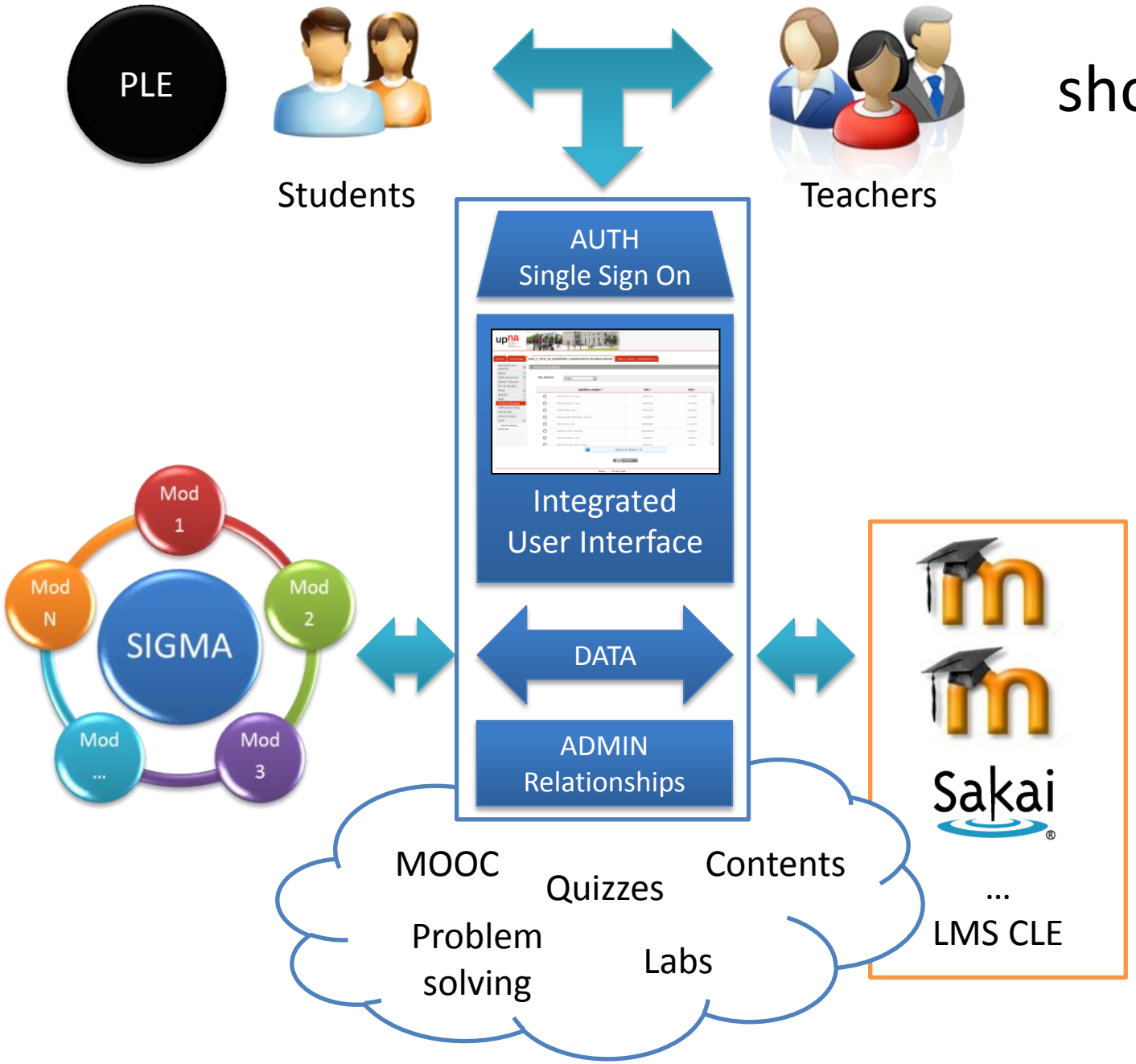
What we have now …





These are the SIGMA SIS blocks already integrated in the Moodle LMS screens through single sign on

What we should have



The New York Times

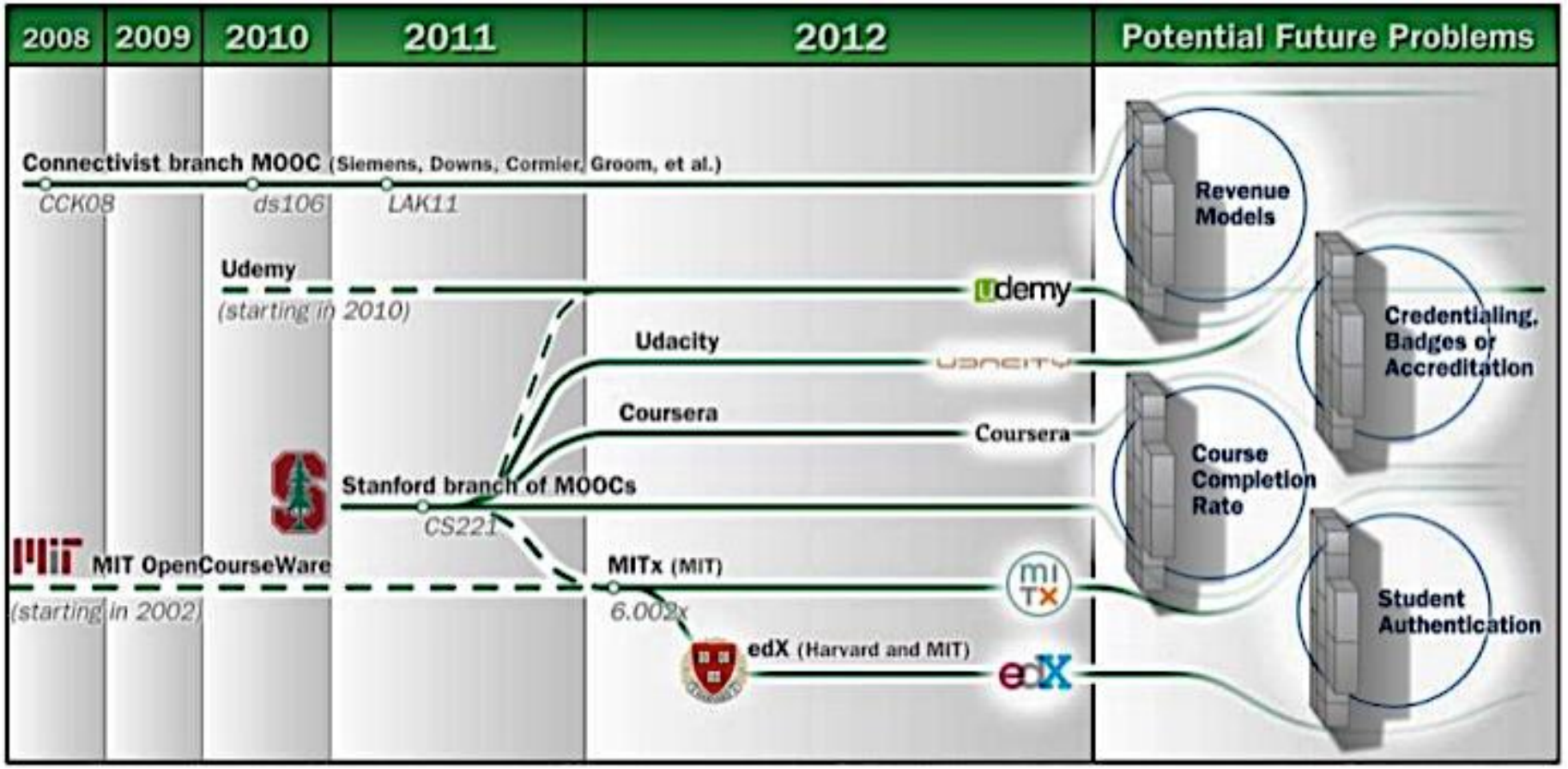
Education

Universities Reshaping Education on the Web

Ramin Rahimian for The New York Times

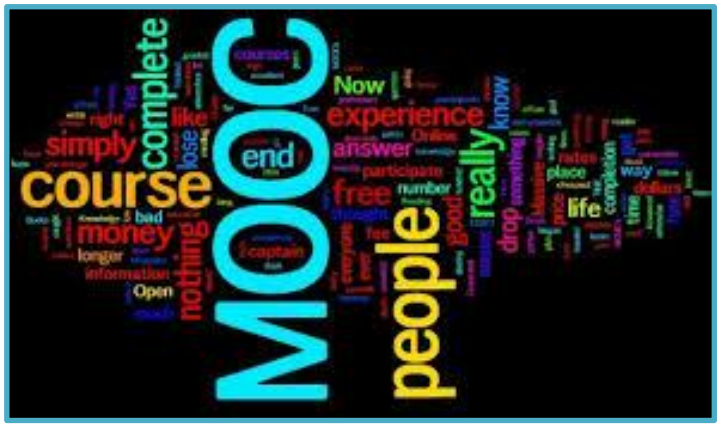
Daphne Koller and Andrew Ng of Stanford are adding 12 universities to Coursera, the online education venture they founded.

Evolution and Challenges



Phil Hill, 2012

¿ What do MOOC really change ?



Recognition of on line learning

Re-thinking the courses model

Re-thinking the university model (faculties, teachers … roles)

Strong investment in IT and specialized tools and platforms

Threat for publishers

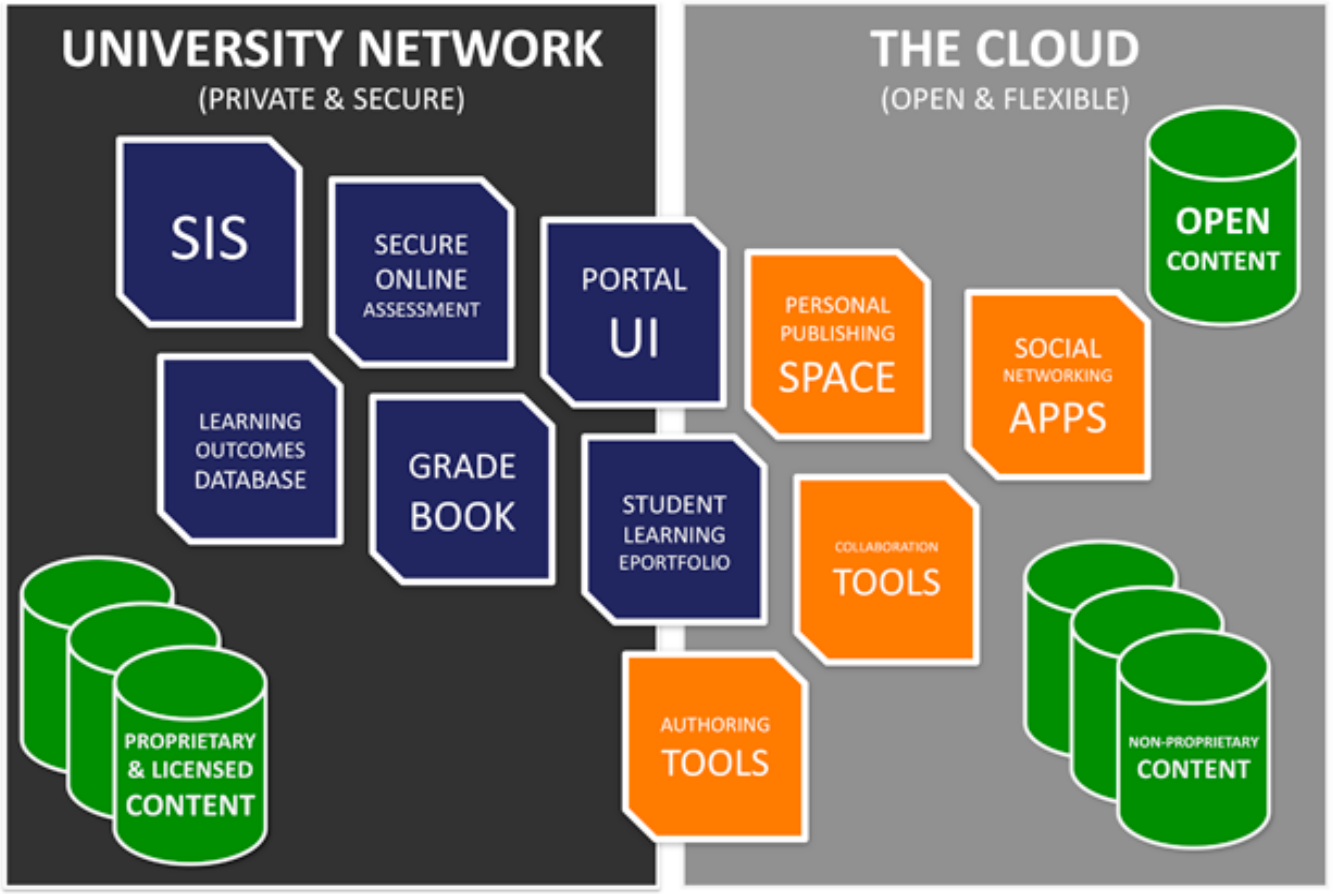
Technology trends in HE

- Performance support
- Cloud increasing
- Open the “Tin Can” → Integrating experiences
  - Formal or Informal
  - Structured or Social
  - In the classroom, in the work place, …

- “Social learning” emerging
- Removing the unnecessary (update and improve contents)
- “Content curation” (give value to the content)
- mLearning
  - Courses → Apps
    - Content → Experience
      - CAPS, Gamification, Simulators, …

Open Learning Network (OLN)

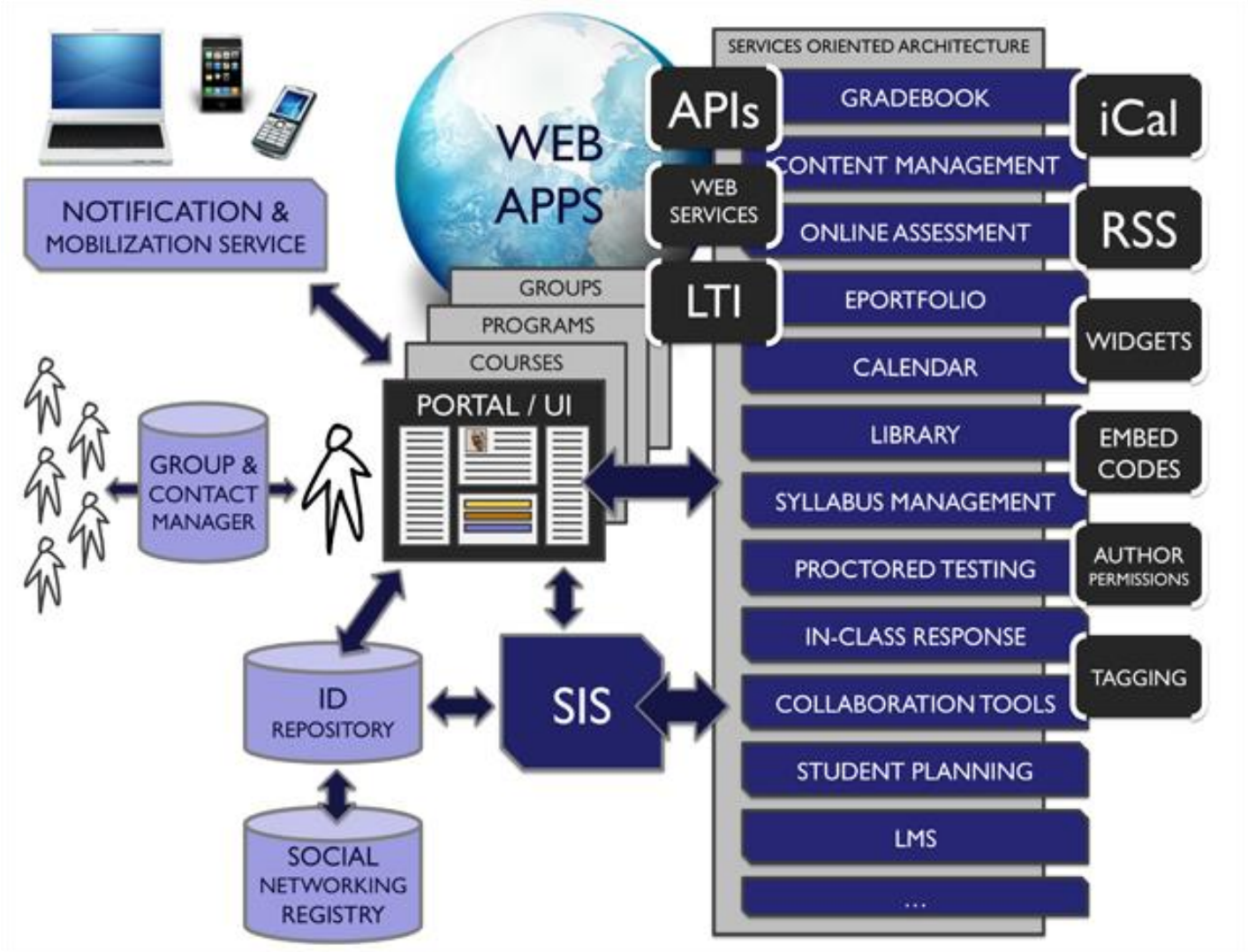
Approach



The OLN model connects private and secure corporate systems (Student Information System, Content Management, …) to open and flexible tools and applications in the cloud (blogs, social networks, contents, …) through a SOA

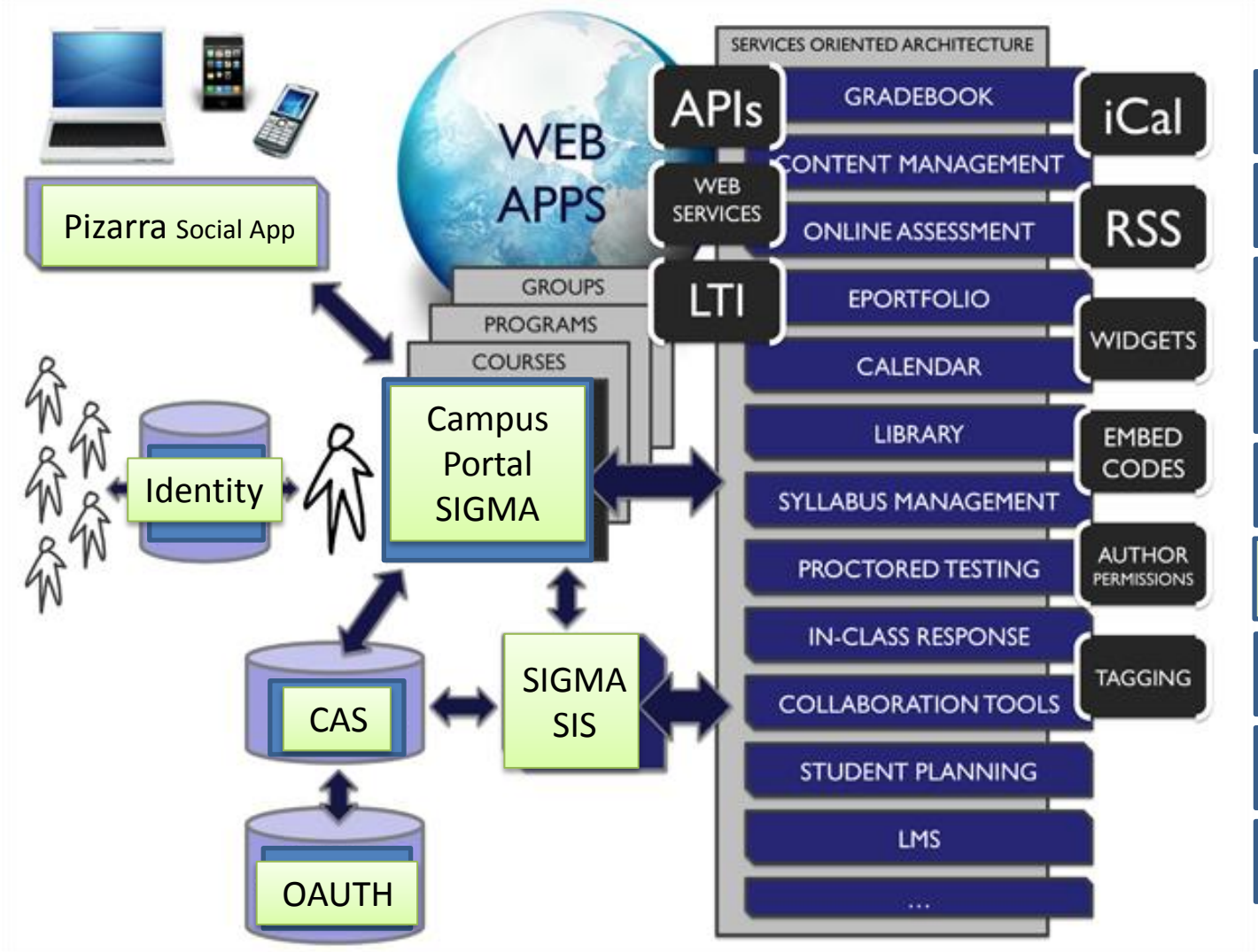
Open Learning Network (OLN)

Architecture



Open Learning Network (OLN)

UAB - SIGMA



- CBPS
- Mahara
- Google Apps
- Peer Assessment
- Quizzes
- Social tools
- Sakai
- Moodle
- MOOC

TFG

Open Learning Network (OLN)

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