



# *Introduction to LEARNING MANAGEMENT SYSTEMs (LMS)*

Sahid – Yogyakarta State University  
[sahidyk@gmail.com](mailto:sahidyk@gmail.com)



# *Objectives*

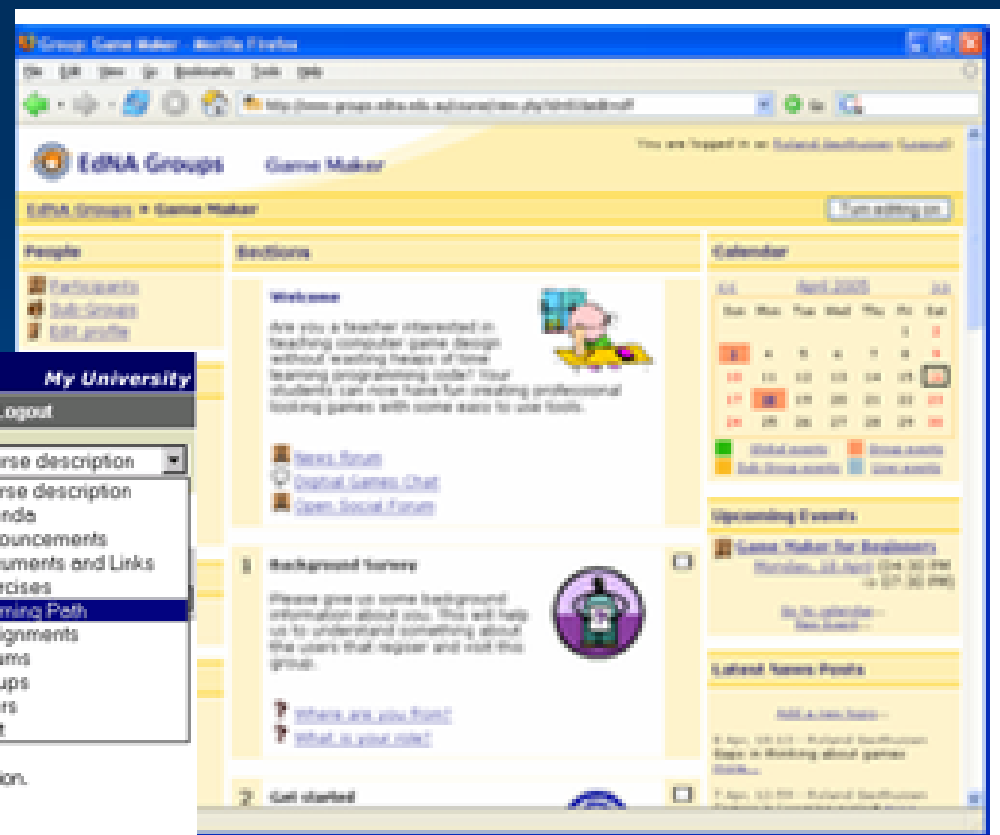
- To describe the notions of LMS, CMS, LCMS
- To explore the components and functions of an LMS
- To Identify the criteria of evaluating LMS
- To describe some open source LMSs
- To demonstrate some examples of LMS uses

# Pre-Survey

## How familiar are you with e-learning technology?

1. I have used a CMS like WebCT or Moodle.
2. I haven't used a CMS, but I am familiar with these tools.
3. I am somewhat familiar with these tools.
4. I do not know what a CMS is.

1. My institution already used web-based course.
2. My institution haven't used web-based course
3. My institution doesn't have website.
4. My institution doesn't have Internet connection.



**My Online Campus** My University

Hague Peeters : My course list | My agenda | Platform Administration | Modify my profile | Logout

**Claroline Crash Course**  
COURSE01 - Hague Peeters

My campus » COURSE01

- Course description
- Agenda
- Announcements
- Documents and Links
- Exercises
- Learning Path
- Assignments
- Forums
- Groups
- Users
- Chat

Course description

Tahoma 3 (12 pt) Normal

Welcome, you are on the home page of my online course. On this page, one can activate or deactivate tools (click on the 'Edit Tool list' button at bottom left), change course settings or view or view statistics.

Now let's start the course ! Consider the following equation.

$\lambda_1 = -1:$

$$\begin{pmatrix} 2 & 0 & 0 \\ 0 & 1 & 1 \\ 0 & 1 & 1 \end{pmatrix} \vec{x} = 0, \quad \vec{x} = (0, 1, -1)^T, \quad \vec{v}_1 = \frac{1}{\sqrt{2}}(0, 1, -1)^T$$

$\lambda_{2/3} = 1:$

Path: body > p > font

Edit Tool list

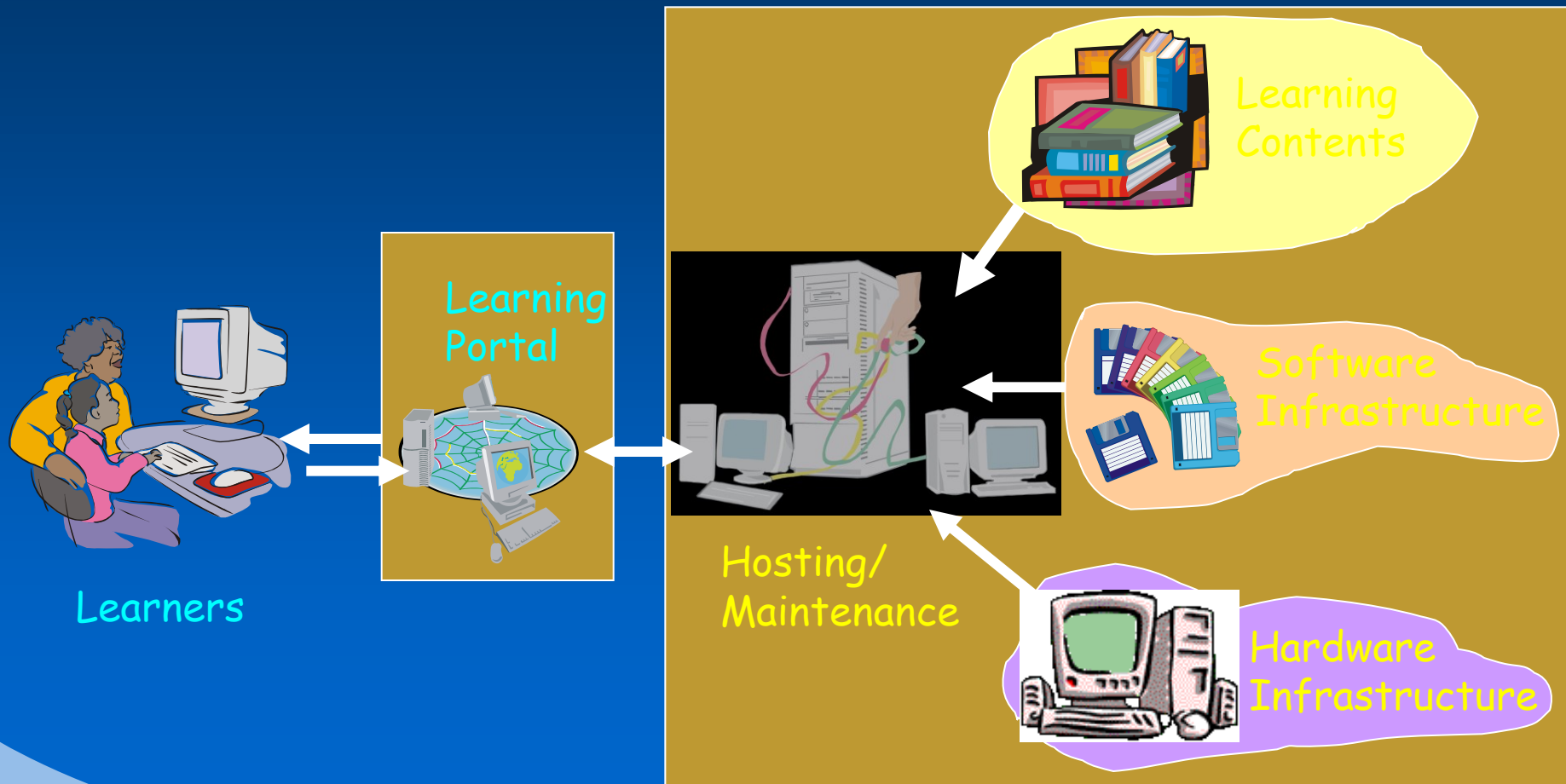
# LMS: What is it?



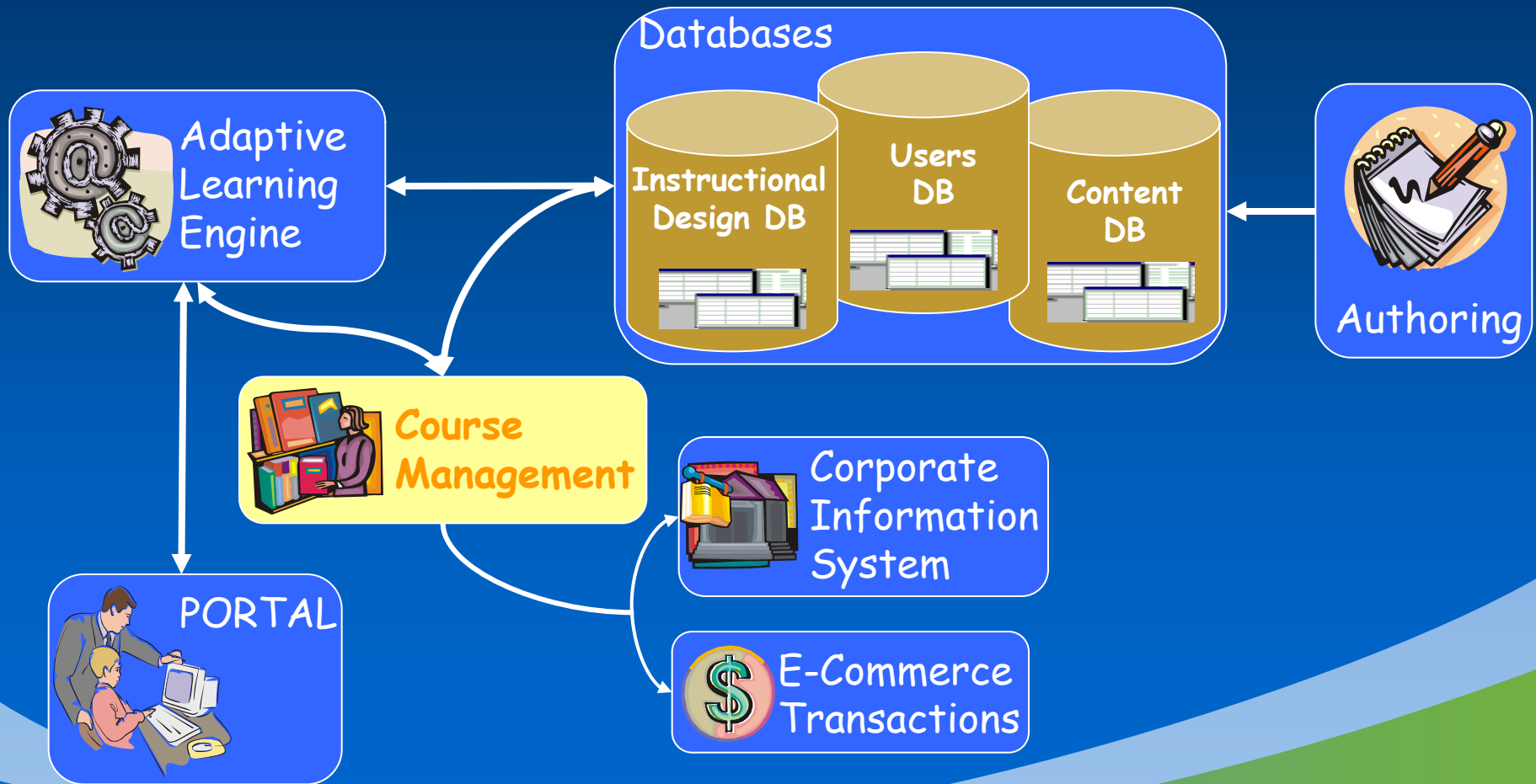
# E-Learning

- The use of technology to manage, design, deliver, select, transact, coach, support and extend LEARNING (of all kinds) (*Elliott Masie, 2001*).
- ‘The use of network technology to create, deliver, foster, support learning activities, independent of time and space’,
- E-learning is more than web-based self study courses.

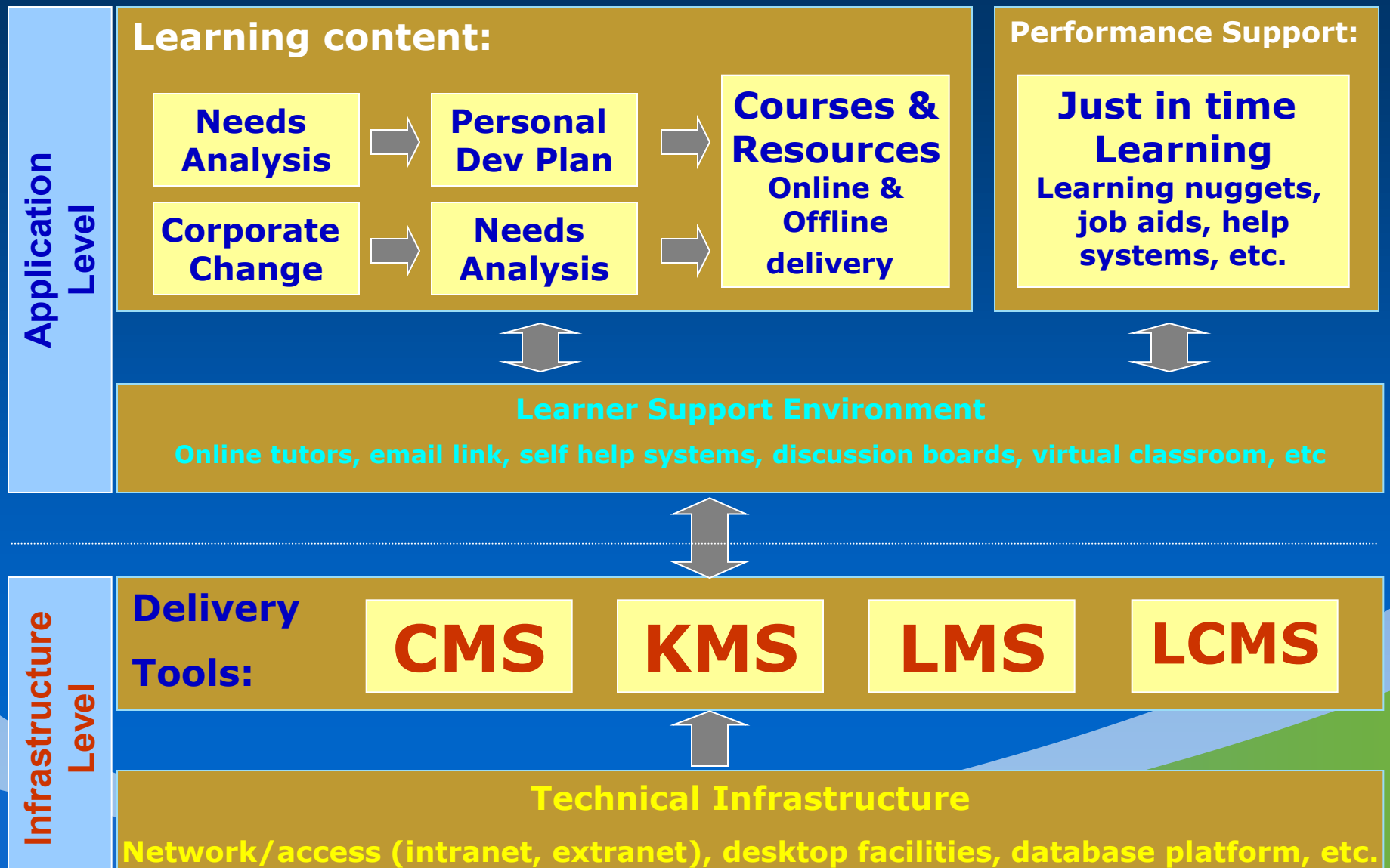
# Architecture of E-Learning System



# Software Architecture of an E-Learning System



# E-Learning Model:





# E-learning components

**LMS** (WebCT, Blackboard, Moodle, MVC, Claroline, etc)

**CMS** (PHPNuke, PostNuke, MediaWiki, etc.)



**Authoring Tools** (MS Office, PDF Writer, LaTeX, Imaging Softwares, Video Editor, etc.)

# *What is LMS?*

*many definitions are available in the e-learning literatures*

- Learning Management System (LMS) is a software package that supports **administration**, **management**, **content delivery**, **assessment**, **tracking**, **collaboration**, and **reporting** of online (web-based), face-to-face or blended training

# What is CMS?

One term with two meanings:

## ➤ Content Management System

- ❖ *Software package that can be used to develop and to manage the contents of a website*
- ❖ *Develop, manage, deliver content via the web*

## ➤ Course Management System

*Software package that can be used to manage web-based online course (e-learning)*

# *Other Similar Terms*

- **MLE** (Managed Learning Environment)
- **VLE** (Virtual Learning Environment)
- LSS (Learning Support System)
- **LP** (Learning Platform, Learning Portal)
- **LCMS** (Learning and Content Management System)

Is there any difference among them?

# *Content Management System:*

- a tool that allows you to manage the content of a website
- allow different groups to contribute to content resources
- de-skill maintenance of content
- manage the content database (expiry dates, review dates, owners, etc.)

## **Top 5 features:**

- distributed ownership of content
- workflow approval systems
- web enabled
- non-technical user interface
- leverage on existing information resources

## **Example:**

PHPNuke, PostNuke, Mambo (OSS), LotusNotes (Com), etc.

# Content Management Systems

- Used by content developers, designers and project managers.
- To author learning content as learning objects, practice and assessment items, simulations and other learner interactions.
- Store content in a learning object repository.
- Offer content management tools (egs. search for learning objects, access rights and version control).
- Used to deliver learning content in multiple format (e.g. eLearning, CD-ROM, paper-based materials and performance support).
  - Creation and administration of content
  - Presentation and publication
  - Content-syndication (exchange)

# *Learning Management System*

- Used by training managers, instructors and administrators to organize the administration and to control the training activities (learning process)
- To manage course catalog, schedule, students (users) registration, follow-up of the learning activities, and to capture learner profile data.
- Stores and track data on courses and students.
- Provides reports for training results and competency mapping/skill gap analysis.
- Supports the launch to eLearning courses.
- Shares learner data with ERP system.
- Offers ability to create and administer tests.
- Provide Communication tools

# *Knowledge Management System:*

- a tool that provides relevant information when it is required

## **Why have a KMS:**

- large amounts of information
- information is unstructured and difficult to find
- need to share valuable knowledge assets
- lots of people want access to the information

## **Top features:**

- natural language interface
- leverage on existing information
- web enabled
- ability to handle spelling mistakes, poor grammar and abbreviations
- provide tools to help develop and refine the knowledge base

**Example: MediaWiki** (used by Wikipedia, open encyclopedia)



# *Learning Management System:*

- a tool that helps to assess and improve the performance of your employees/students through learning

## **Why have a LMS:**

- evaluate the effectiveness of training
- monitor training programme roll-outs
- inform employees/students of learning opportunities
- track learners for online learning
- record assessment scores

## **Top features:**

- support all learning methods: online, traditional and virtual classrooms
- accept non-vendor content
- conform to interoperability standards (SCORM, AICC)
- provide management information
- learning needs assessment

Example: WebCT, BlackBoard (com), Moodle, Atutor, MVC, Caroline (OSS)

# *Learning Content Management System:*

- a tool that helps you to manage the content within your online learning programmes
- LMS + CMS (Combination of management of content and management of the learning activity)

## **Why have a LCMS:**

- allows easy maintenance of content in a learning programme for non technical staff
- reduces maintenance costs
- rapid roll-out of changes

## **Top features:**

- interoperability with other systems (CMS, LMS)
- E-Learning-Standards (IMS, SCORM)
- simple web based forms
- try before you commit facility

**Example:** Most modern LMS already integrated with LCMS

# *Learning Support System*

- Learning Support System
  - System which delivers all the necessary tools for the SUPPORT of the learning activities
  - `Slim` version of LCMS
- Strong emphasis on
  - Self testing
  - Coaching
  - Collaboration
- Less emphasis on
  - Management and reporting of the learning activity
  - Management of courses and content

**Course Management Systems (CMSs)**  
**Versus**  
**Learning Management Systems (LMSs)**  
**(Saul Carliner)**

<http://www.learningcircuits.org/2005/nov2005/carliner.htm>

# *CMSs: Designed to Support Academic Classroom Courses (Univ & Schools)*

CMSs enable instructors to perform the following tasks:

- **Place course materials online.** *Most CMSs provide pre-programmed buttons for the course syllabus, course schedule, and course materials linked to specific lessons, such as copies of readings and PowerPoint slides from lectures.*
- **Track student progress through assessment features,** *which enable instructors to give quizzes and tests online, and an online gradebook, where instructors can post student grades.*
- **Discussion board,** *where instructors and students can discuss readings and continue class discussions between formal class sessions.*
- **Other communications tools,** *which let instructors send announcements to classes and communicate individually with students*
- **Lock box for students,** *where students can store class materials in a safe place—either a presentation to give later in class or backing up class assignments in a safe place.*
- **Course statistics,** *which provide information on the use of the course site, including who used the course site and when.*

Examples of CMSs: Blackboard, WebCT (commercial), and Moodle, Claroline (OSS).

# LMSs: designed to support corporate training

Learning management systems (LMS) refers to software that primarily acts as an electronic registrar by electronically performing various enrollment and related tasks.

LMSs were originally designed for workplace learning environments, and specifically perform some or all of the following tasks:

- **registration** (sign-ons and sign-offs of online courses), **course catalog**, **process charges for courses**,
- **track participation** (classroom attendance)
- **testing** , **track of completions** (including final scores or grades)
- **follow-up discussions with participants**
- **aggregated reports**, such as the number of people registered for particular courses
- **transfer of information to other systems**, such as human resource information systems
- **skills management.**

# Summary of Differences among LMSs and CMSs

Features	CMS	LMS
Support for ongoing classroom courses	✓	
Enrollment		✓
Automatically generated confirmation notes		✓
Course catalog		✓
Skills management list		✓
Checks for prerequisites before allowing enrollment		✓
Seamless link to e-learning		✓
Automatically generated follow-up correspondence		✓
Grade book	✓	
Administers tests and quizzes	✓ (with some limitations)	✓
Automatically transfers completion information to the permanent record		✓
Discussion board for between-class "conversation"	✓	sometimes

# **LMS and LCMS: What's the Difference?**

(Leonard Greenberg)

<http://www.learningcircuits.org/2002/dec2002/greenberg.htm>



	All learners; organization	LMS	LCMS
Who benefits?			
Provides primary management of			Learning content
Manages e-learning		Yes	Yes
Manages traditional forms of training, such as instructor-led		Yes	No
Tracks results		Yes	Yes
Supports learner collaboration		Yes	Yes
Includes learner profile management		Yes	No
Allows HR and ERP systems to share learner data		Yes	No
Schedules events		Yes	No
Offers competency mapping/skill gap analysis		Yes	No
Includes registration, prerequisite screening, and cancellation notification		Yes	No
Creates test questions and test administration		Yes	Yes
Supports dynamic pretesting and adaptive learning		No	Yes
Supports content creation		No	Yes
Organizes reusable content		Yes	Yes
Includes workflow tools to manage content creation process		No	Yes
Develops content navigation controls and user interface		No	Yes

Learner performance;  
learning requirements;  
learning programs and  
planning

Content  
developers;  
learners who  
need  
personalized  
content

# *Capabilities in an LMS:*

Managing virtual learning processes

- Support for blended learning
- Integration with HR
- Administration tools
- Content integration (Presentation)
- Adherence to standards
- Self-study (exercises, reflection, mindtools)
- Group discussion and collaborative assignments
- Assessment capabilities (Individual assignments)
- Learner management, monitoring, grouping, stats
- Skills management

# <http://www.guidetools.com/>

- **LMS** are reporting systems and generally do not include ways to create new content or to deliver small packets of learning.
- **LMS were created for:** tracking registration, attendance, class lists, grades, test results, class scheduling, other administrative requirements of schools and instructor-led classes
- An LMS helps in running a learning organisation.
- It does not help create or deploy content.
- It does not track students through a particular course or measure their performance with learning exercises and tests.
- It does not enable Tutors to communicate with the students.

## *LCMS capabilities vary, key components include:*

- **Learning object repository**
- **Automated authoring application**
- **Dynamic delivery interface**
- **Administrative application**

A quality LCMS adheres to industry standards such as IMS (Instructional Management System) and ADL's **SCORM** (Sharable Courseware Object Reference Model).

It supports and manages internally and externally (third party) created learning content, and thus preserves the investment companies are making in learning content.

# <http://www.guidetools.com/>

An LCMS provides authoring, sequencing, and aggregation tools that structure content to facilitate the learning process.

The IDC whitepaper, "**Learning Content Management Systems: Comparative Analysis of Emerging Technologies**," identifies the components of an LCMS as:

- an authoring application, templates and storyboarding capabilities, and may be used to convert existing content.
- a data repository, uses meta data to store and manage individual learning objects.
- a delivery interface, dynamically serves content that can be modified to reflect a certain look or feel, such as organizational branding.
- administration tools. manage learner profiles, course catalogues, offer collaboration tools, including chat, integrated email, and threaded discussion groups.and so forth.

# *The Must-Have Features of an LMS*

Basically, an LMS worthy of your time (and money!) must provide an infrastructure that allows you to plan, deliver, and manage e-learning programs in any existing and future formats.

The basic features (brakes and headlights) of an LMS:

- **Supports blended learning**
- **Integration with HR**
- **Administration**
- **Content integration**
- **Adherence to standards**

*Dave Evangelisti* (<http://www.learningcircuits.org/2002/mar2002/evangelisti.htm>)

# *The Must-Have Features of an LMS*

The features that aren't necessary but enhance value:

- **Assessment**
- **Skills management**
- **Configurability**

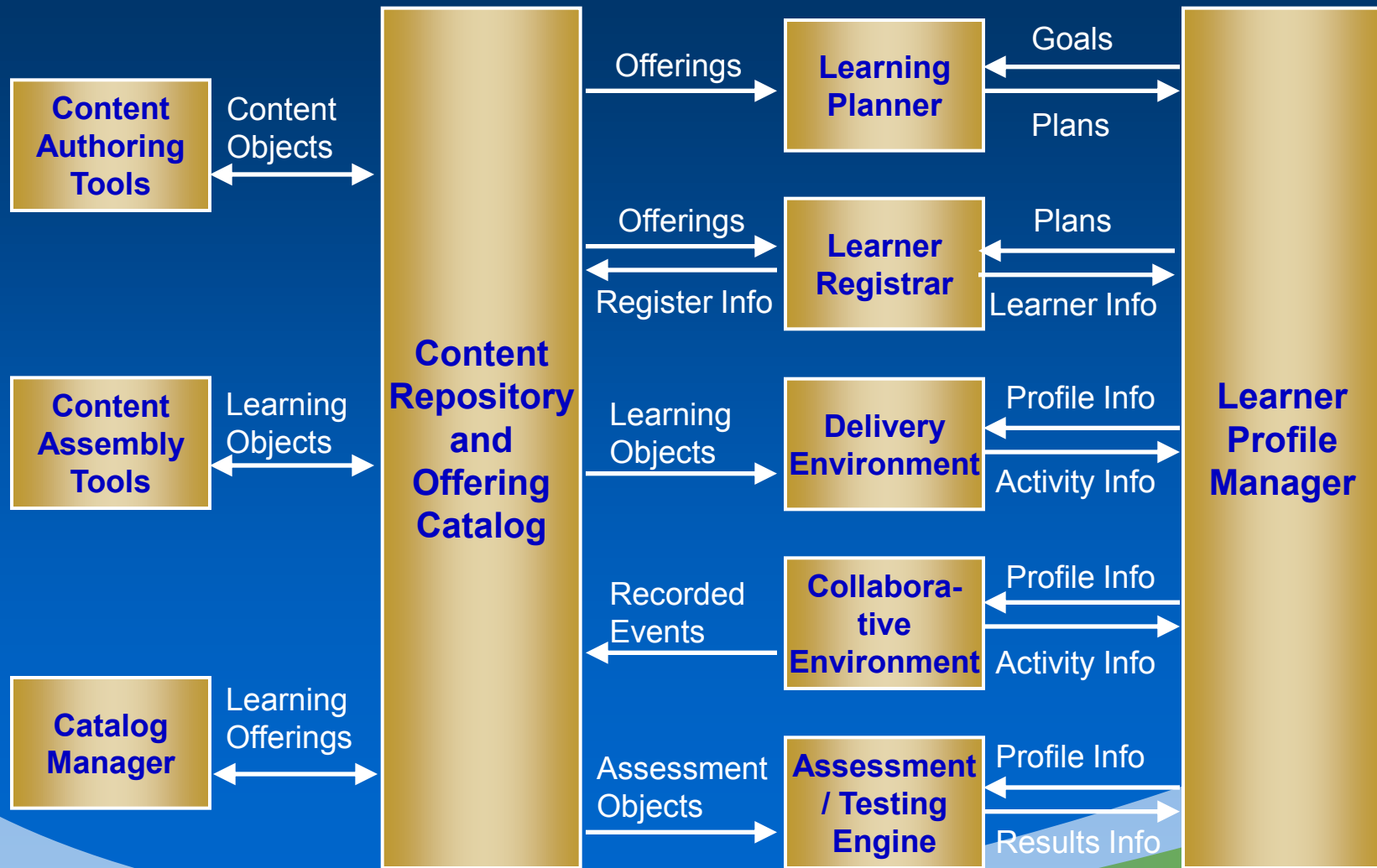
Features that may be used infrequently or only by a limited number of people:

- **Online communities**
- **Content management capabilities**

*Dave Evangelisti* (<http://www.learningcircuits.org/2002/mar2002/evangelisti.htm>)

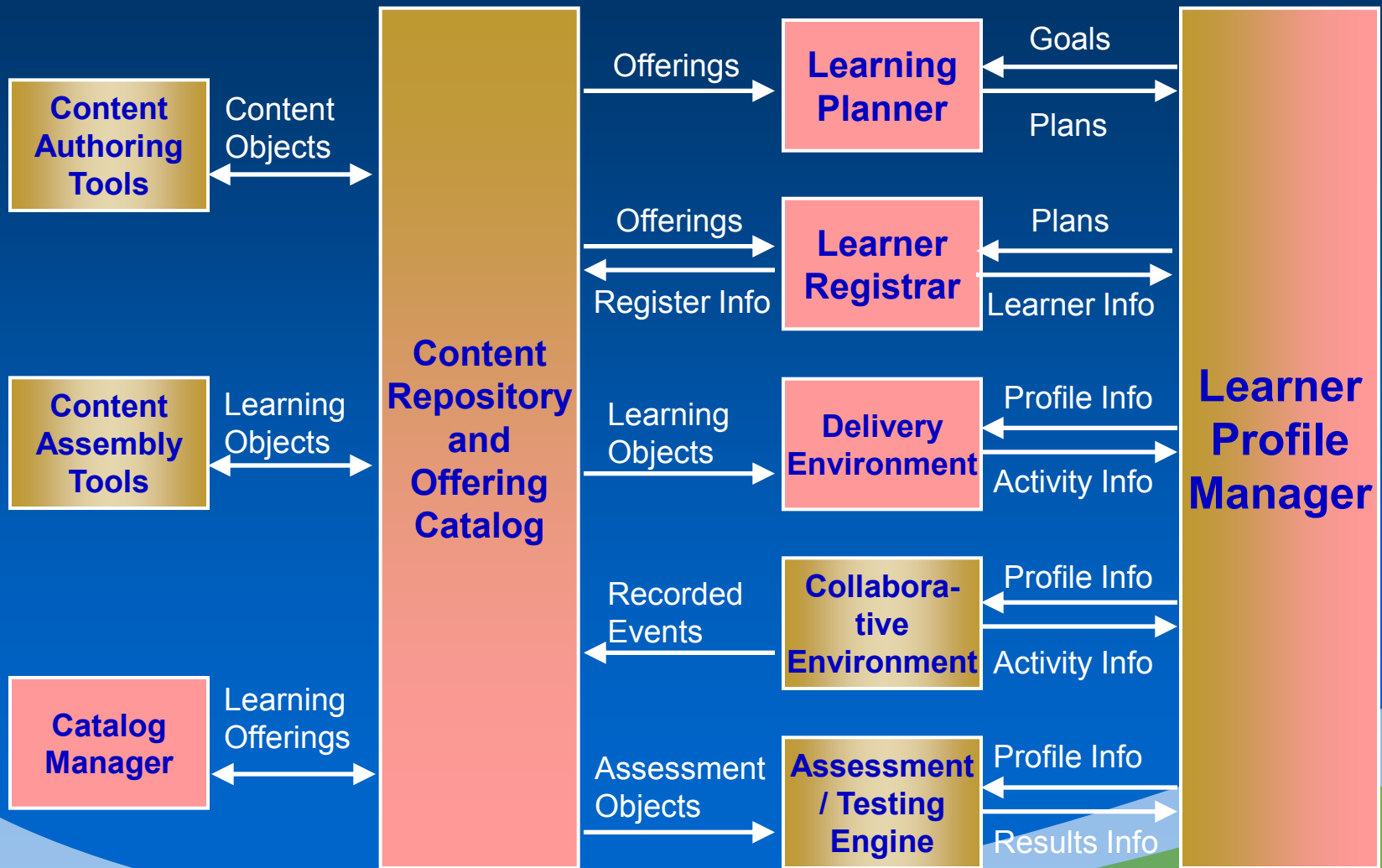
# Component Model of E-Learning

(Robby Robson: [rrobson@eduworks.com](mailto:rrobson@eduworks.com), President of EduWorks)

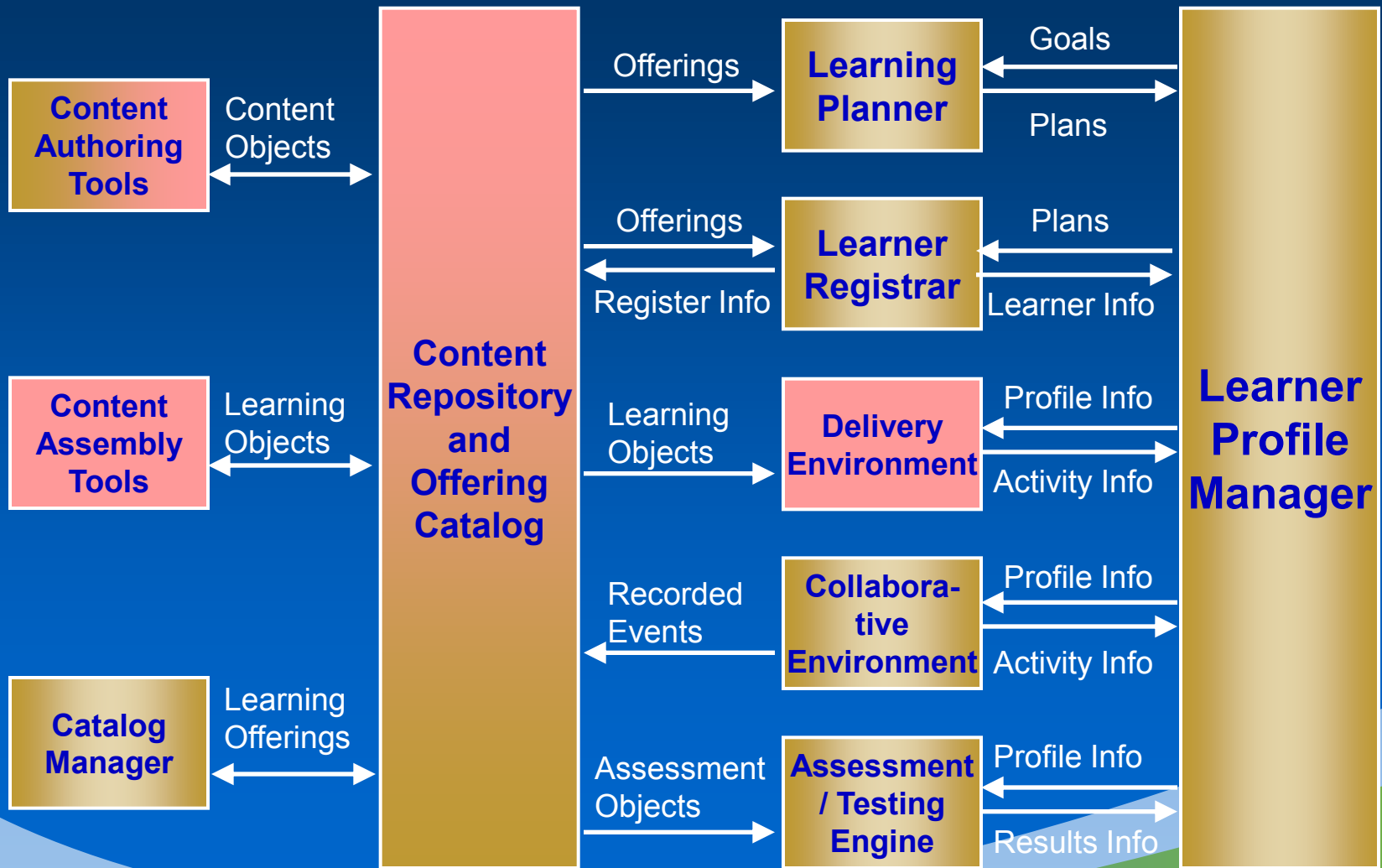




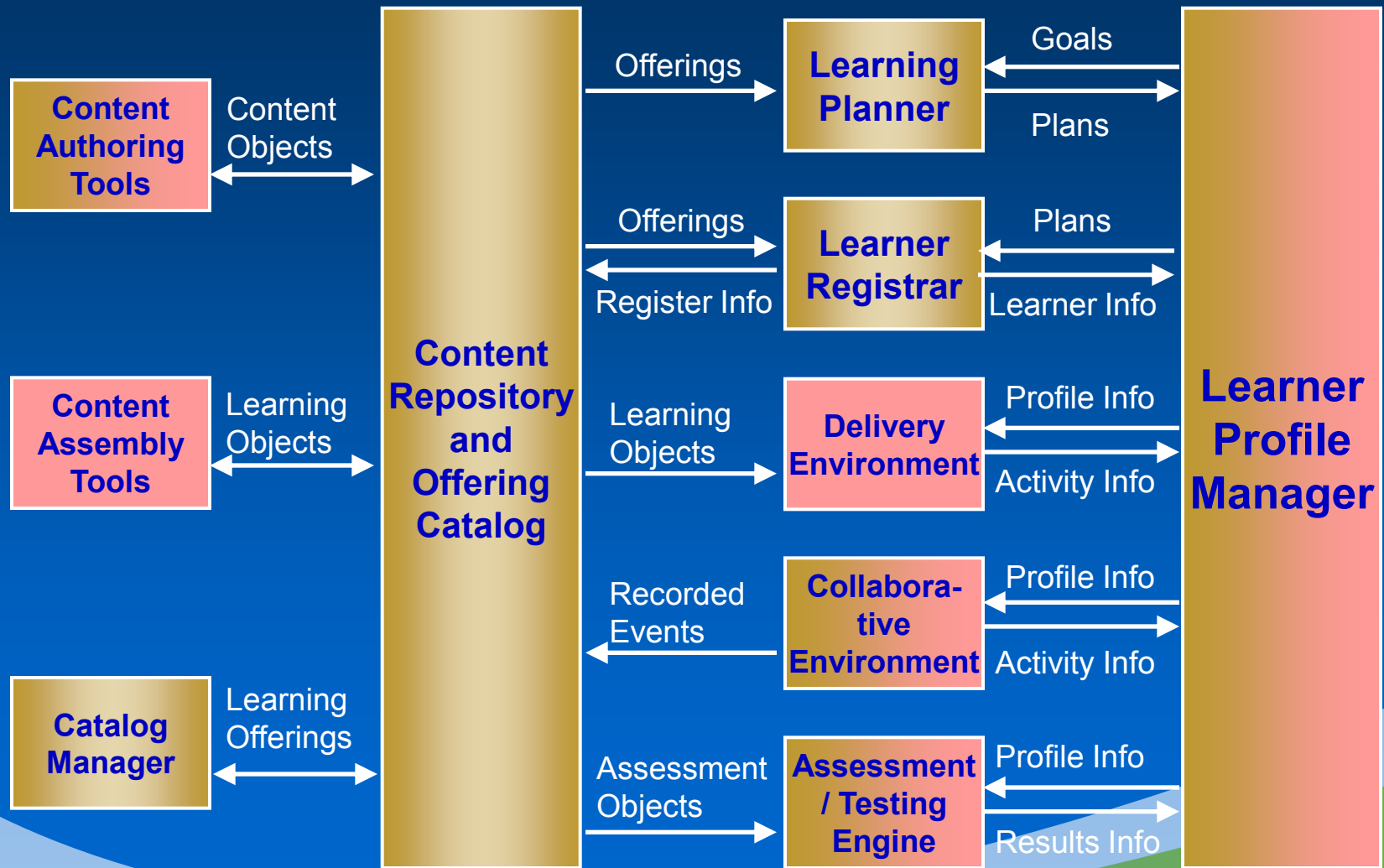
# Enterprise LMS



# LCMS

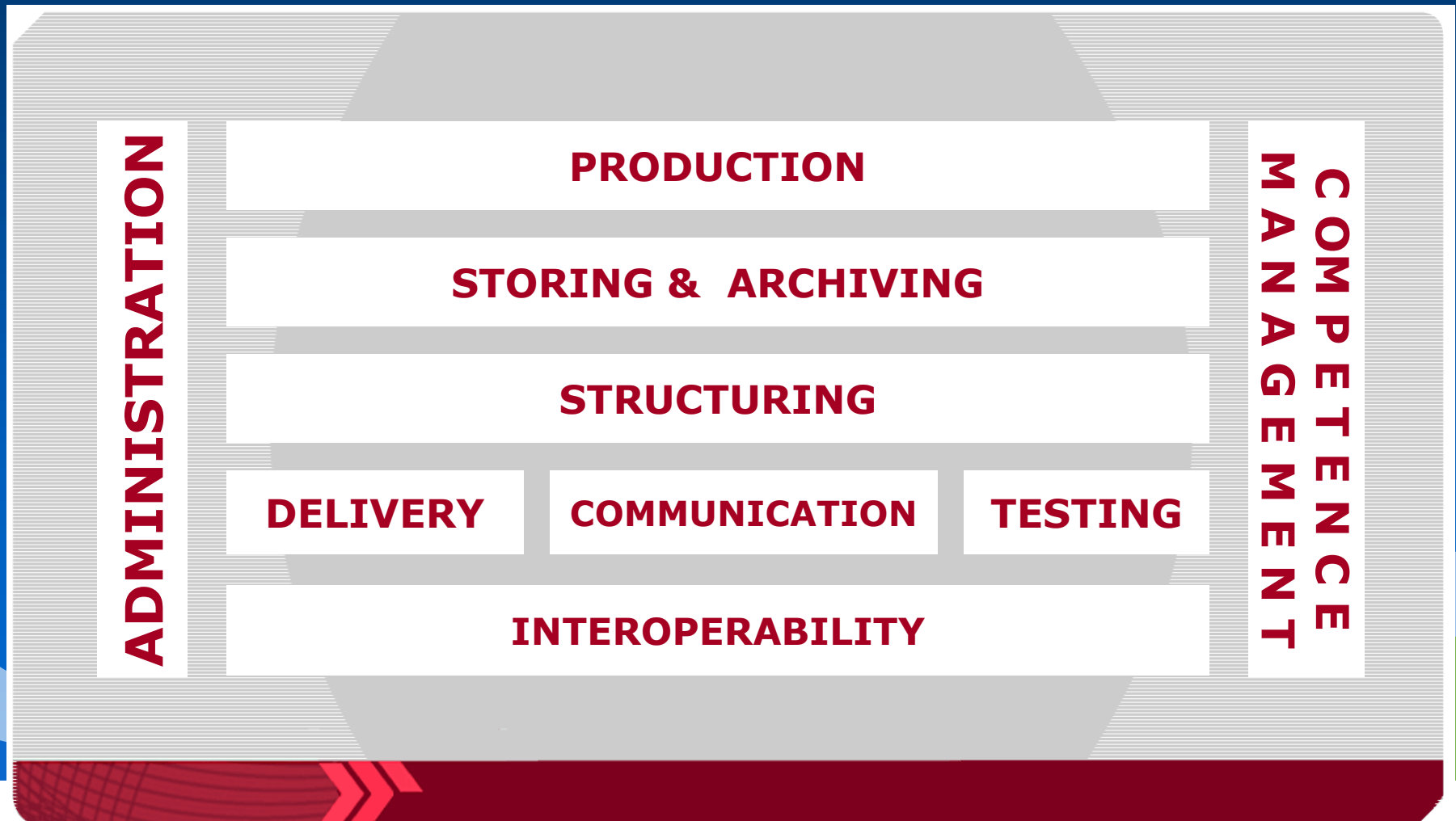


# Course Management System (VLE)



# What are LCMS Components?

A model by P. Vandeveldde from EUROPACE in “*EPYC for E-Learning*” 2002



# PRODUCTION

- Within the LCMS or by the use of external tools
- Own content and/or third-party content
- Type of learning materials
  - No barrier for LCMS, but infrastructure
- Produce and work together on the same course
- Templates
- Reusable Learning Objects – RLO
  - small parts of learning materials
  - can be used in different courses
  - for different purposes



# Storing & archiving

- Choice of database
  - Which databases (and other systems) are in use within the company
- Reusability and authenticity
  - Sharing and reusing of different RLO's
  - What with changes in RLO's
- Metadata & Standards
  - Description of the learning materials
  - Different initiatives



# *How to make a good choice of standard*

- Strictly speaking, there are no eLearning standards, there are a series of groups developing specifications, guidelines and recommendations.
- Recently Learning Object Metadata (LOM) standard is approved by IEEE
- Not really necessary to make a choice, as many of the existing specifications cover different things. (i.e: content developer, ADL SCORM, IMS Content Packaging, IMS metadata, IMS Question and Test)
- Some specifications include others (ADL SCORM 1.2 uses IMS specifications for metadata and packaging, and AICC for tracking)

# Structuring

- Creation of courses using the different RLO's
- But also
  - FAQ
  - Glossaries
  - Reference material
  - Links
  - Search tools
  - Annotations
  - Download area





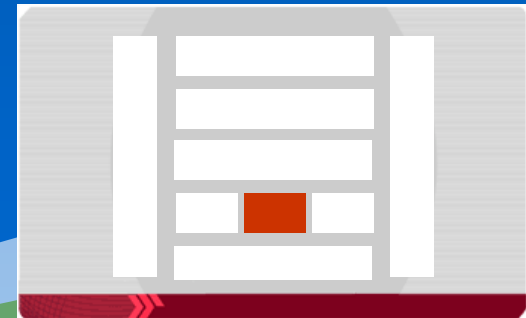
# *Delivery*

- User interface
  - Browser
  - Clientsoftware
  - Plug in
- Transfer of the course to
  - CD
  - Paper
  - Mobile unit



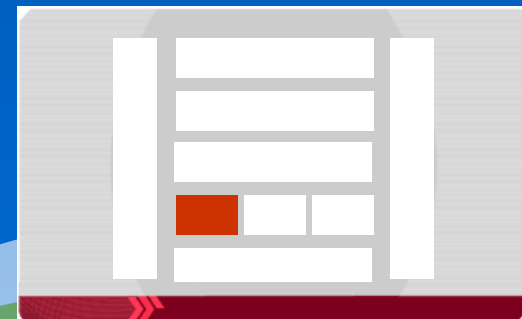
# Communication (1)

- Synchronous and Asynchronous
  - Who with who
  - E-mail
  - Discussion fora (moderated or free)
  - Sharing of documents
  - Whiteboard
  - Chat
  - Audio and videoconferencing
  - Calendar
  - Annotations



# Communication (2)

- Use the standard communication environment
  - Do not use 2 types of communication softwares
  - Sufficient possibilities to structure
  - Sufficient functionalities
- Within LCMS
  - Sufficient functionalities
  - Sufficient possibilities to structure
  - Reinventing the wheel



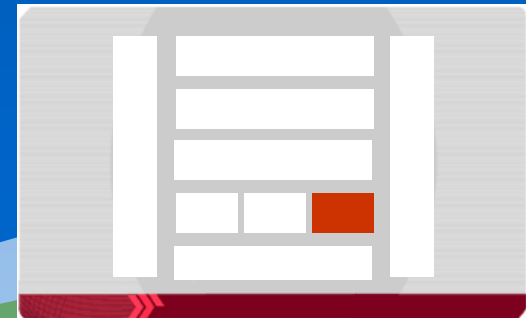
# eTesting

- Testing – to measure and to evaluate mainly knowledge:
  - Trainer evaluates and determines criteria
  - Learning and testing are clearly separated
  - Purpose
    - Pre/post testing
    - Self evaluation
  - Questions
    - Type of questions (MC, Y/N, drill, matching, ...)
    - Feedback and hints
    - Templates
  - Reports of the results
    - Within the LCMS or with own tools



# eAssessment

- Assessment – to measure and to evaluate knowledge and competencies:  
Authentic situations
  - Implementation of knowledge
  - Trainees have an active role in assessment process
  - Example ‘360° assessment’  
‘e’ is the online support of this process



# *Administration*

- Where to draw the line between course administration and personnel administration
- Management of the users
- Development and delivery of the course catalogues
- Development of the learning path



# Administration (2)

- Administration of and reporting on the learning activity
  - Necessary?
  - What to register and who has access to the results
- Subscription, invoicing and payment
  - Internal
  - External

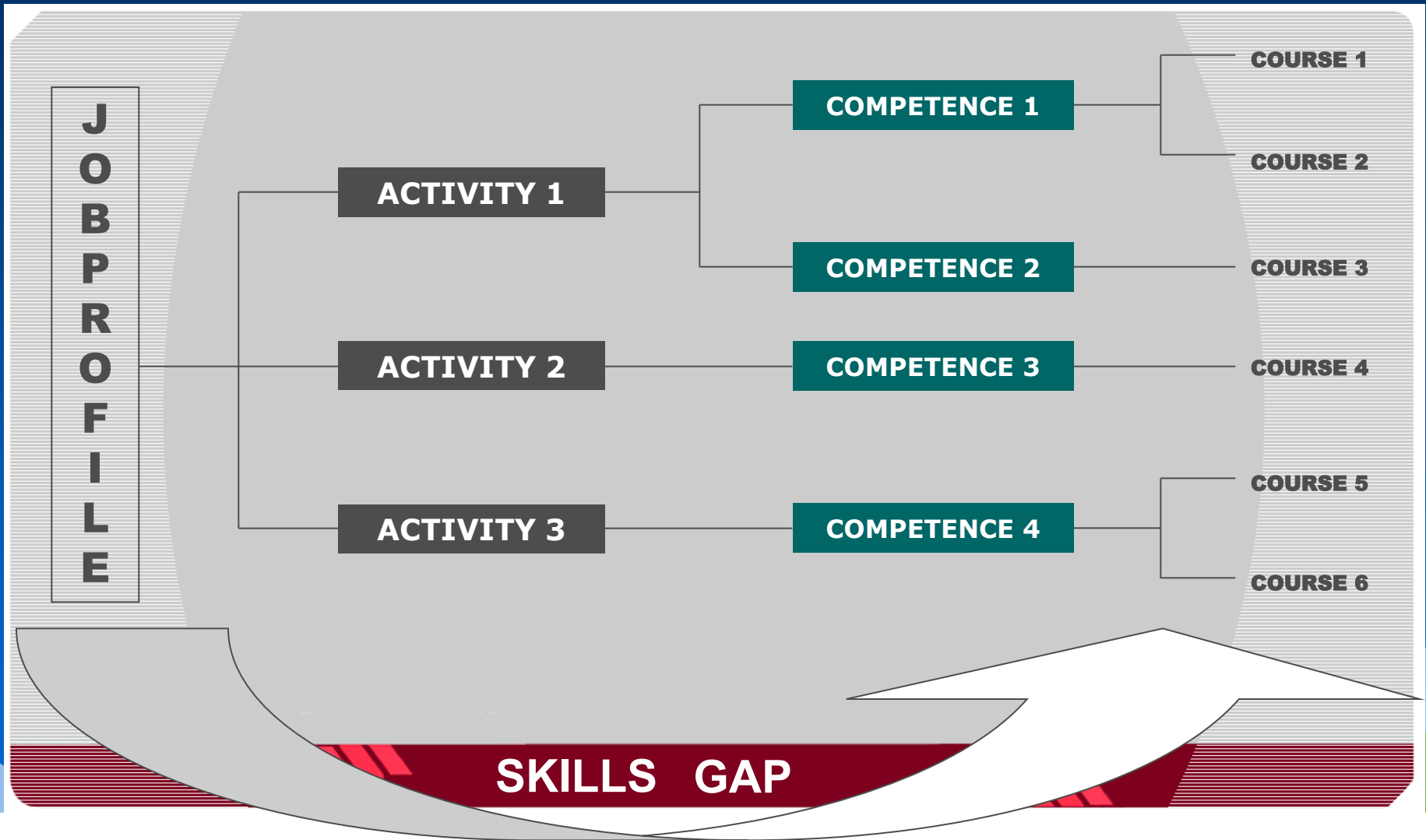


# *Competence management*

- Competences:
  - Coherent set of behaviours, knowledge, values, styles and conceptions
- Competence management
  - Strategic process to map the present competences and to develop a policy for future development.
- Competence scheme
  - Detailed map of the desired competences
- Job profile
  - Connection job and the necessary competences



# Competence management (2)



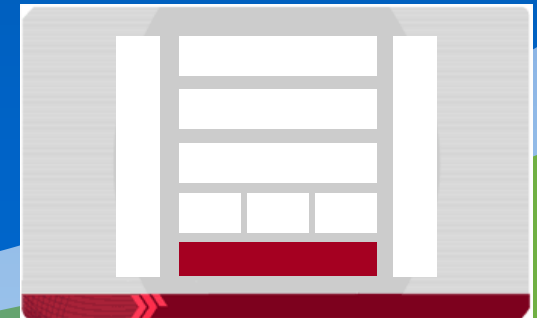
# Competence management (3)

- Connection between profile and learning path
- Evaluation of competences
  - By whom
  - Which level, which extent
- Skills gap analysis



# *Connection with other systems*

- Which system?
  - SMTP-server
  - Knowledge management
  - Databases
  - External competence schemes and systems
  - ...



# *A Task!*

- Find out information about some LCMSs, e.g. from [www.edutools.net](http://www.edutools.net)
- What components do each LCMS have?
- Which LCMS is best according to your survey?

# Evaluating a Learning Management System

(John Hall - January 2003) <http://www.clomedia.com/>

- **High availability:** The LMS must be robust enough to serve the diverse needs of thousands of learners, administrators, content builders and instructors simultaneously.
- **Scalability:** The infrastructure should be able to expand—or “scale”—to meet future growth, both in terms of the volume of instruction and the size of the student body.
- **Usability:** To support a host of automated and personalized services, such as self-paced and role-specific learning, the access, delivery and presentation of material must be easy-to-use and highly intuitive—like surfing on the Web or shopping on Amazon.com.
- **Interoperability:** To support content from different sources and multiple vendors’ hardware/software solutions, the LMS should be based on open industry standards for Web deployments (XML, SOAP or AQ) and support the major learning standards (AICC, SCORM, IMS and IEEE).
- **Stability:** The LMS infrastructure can reliably and effectively manage a large enterprise implementation running 24x7.
- **Security:** As with any outward-facing collaborative solution, the LMS can selectively limit and control access to online content, resources and back-end functions, both internally and externally, for its diverse user community.

## *A Learning Management System optimally should:*

- Consolidate training initiatives on a scalable, low-cost Web-based platform,
- Assemble and deliver learning content rapidly in multiple languages.
- Measure the effectiveness of training initiatives.
- Mix classroom and online learning.
- Integrate with other enterprise application solutions.
- Centralize and automate administration.
- Use self-service and self-guided services as much as possible.
- Support portability and standards: AICC, IMS and SCORM.
- Personalize content and enable knowledge re-use.

# Major Criteria for Selecting a LMS

*Fred M. Beshears -3/27/01 (based on Software Package Evaluation and Selection by Hollander)*

- **Known Requirements**  
Ability of the package to meet the university's current academic and administrative requirements, and future requirements that are currently known to exist.
- **Unknown Future Requirements**  
Ability to modify the package to meet the university's new requirements as they become known.
- **Implementability**  
Ability to implement the package easily.
- **Supportability**  
Ability of the vendor to support both the package and the University in the future.
- **Cost**  
Total cost to purchase and implement the package as well as ongoing maintenance and support costs.

# Implementability:

- Vendor background
- Software maturity
- Technology maturity
- Modifications
- Third party implementor considerations
- Implementation assistance from LMS vendor
- Quality
- Documentation
- Training



# Supportability:

- Vendor responsiveness
- Quality
- Development methodology
- Modifications
- Financial stability
- Warranty
- User groups
- Support functions

# Learning Technology Functionality

Robby Robson - 2004 (President of Eduworks) [www.eduworks.org](http://www.eduworks.org)

Correlate learning needs with content assets

## CREATE CONTENT

Match content to goals  
Design / Author / Assemble content  
Package / Describe content

## MANAGE CONTENT

Import / Store / Find / Serve content  
Offer Learning Catalog  
Manage rights / versions

## ENGAGE IN LEARNING

View and navigate through content  
Communicate and collaborate via email, chat, whiteboards etc.  
Take Tests  
Engage in simulations and scenario-based learning  
Share applications / participate in Webinars

## MANAGE LEARNING

Maintain learning profiles and histories  
Manage enrollment and enforce business rules  
Manage physical resources  
Provide authentication and security  
Assign credit or certification  
Report results

## DETERMINE GOALS

Set Instructional Goals  
Establish Competencies / Certifications  
Set Business Goals / Determine Metrics

## MANAGE GOALS

Manage skills & competencies  
Evaluate training effectiveness / apply to training decisions

Determine learning and performance support requirements

# Course Management System Functionality

Correlate learning needs with content assets

## CREATE CONTENT

Match content to goals

Design / Author /  
Assemble content

Package / Describe  
content

## MANAGE CONTENT

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## MANAGE LEARNING

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and histories

Manage enrollment and  
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Manage physical  
resources

Provide authentication  
and security

Assign credit or  
certification

Report results

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Manage skills &  
competencies

Evaluate training  
effectiveness / apply to  
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# (Corporate) LMS Functionality

Correlate learning needs with content assets

## CREATE CONTENT

Match content to goals

Design / Author /  
Assemble content

Package / Describe  
content

## MANAGE CONTENT

Import / Store / Find /  
Serve content

Offer Learning Catalog

Manage rights / versions

## ENGAGE IN LEARNING

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## MANAGE LEARNING

Maintain learning profiles  
and histories

Manage enrollment and  
enforce business rules

Manage physical  
resources

Provide authentication  
and security

Assign credit or  
certification

Report results

## DETERMINE GOALS

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Establish Competencies /  
Certifications

Set Business Goals /  
Determine Metrics

## MANAGE GOALS

Manage skills &  
competencies

Evaluate training  
effectiveness / apply to  
training decisions

Determine learning and performance support requirements

# Authoring Tool Functionality

Correlate learning needs with content assets

## CREATE CONTENT

Match content to goals

Design / Author /  
Assemble content

Package / Describe  
content

## MANAGE CONTENT

Import / Store / Find /  
Serve content

Offer Learning Catalog

Manage rights / versions

## ENGAGE IN LEARNING

View and navigate  
through content

Communicate and  
collaborate via email,  
chat, whiteboards etc.

Take Tests

Engage in simulations  
and scenario-based  
learning

Share applications /  
participate in Webinars

## MANAGE LEARNING

Maintain learning profiles  
and histories

Manage enrollment and  
enforce business rules

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Report results

## DETERMINE GOALS

Set Instructional Goals

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Determine Metrics

## MANAGE GOALS

Manage skills &  
competencies

Evaluate training  
effectiveness / apply to  
training decisions

Determine learning and performance support requirements

# Learning Content Management System Functionality

Correlate learning needs with content assets

## CREATE CONTENT

Match content to goals

Design / Author /  
Assemble content

Package / Describe  
content

## MANAGE CONTENT

Import / Store / Find /  
Serve content

Offer Learning Catalog

Manage rights / versions

## ENGAGE IN LEARNING

View and navigate  
through content

Communicate and  
collaborate via email,  
chat, whiteboards etc.

Take Tests

Engage in simulations  
and scenario-based  
learning

Share applications /  
participate in Webinars

## MANAGE LEARNING

Maintain learning profiles  
and histories

Manage enrollment and  
enforce business rules

Manage physical  
resources

Provide authentication  
and security

Assign credit or  
certification

Report results

## DETERMINE GOALS

Set Instructional Goals

Establish Competencies /  
Certifications

Set Business Goals /  
Determine Metrics

## MANAGE GOALS

Manage skills &  
competencies

Evaluate training  
effectiveness / apply to  
training decisions

Determine learning and performance support requirements

# Virtual Classroom Functionality

Correlate learning needs with content assets

## CREATE CONTENT

Match content to goals

Design / Author /  
Assemble content

Package / Describe  
content

## MANAGE CONTENT

Import / Store / Find /  
Serve content

Offer Learning Catalog

Manage rights / versions

## ENGAGE IN LEARNING

View and navigate  
through content

Communicate and  
collaborate via email,  
chat, whiteboards etc.

Take Tests

Engage in simulations  
and scenario-based  
learning

Share applications /  
participate in Webinars

## MANAGE LEARNING

Maintain learning profiles  
and histories

Manage enrollment and  
enforce business rules

Manage physical  
resources

Provide authentication  
and security

Assign credit or  
certification

Report results

## DETERMINE GOALS

Set Instructional Goals

Establish Competencies /  
Certifications

Set Business Goals /  
Determine Metrics

## MANAGE GOALS

Manage skills &  
competencies

Evaluate training  
effectiveness / apply to  
training decisions

Determine learning and performance support requirements

# Human Capital Management System Functionality

Correlate learning needs with content assets

## CREATE CONTENT

Match content to goals  
Design / Author / Assemble content  
Package / Describe content

## MANAGE CONTENT

Import / Store / Find / Serve content  
Offer Learning Catalog  
Manage rights / versions

## ENGAGE IN LEARNING

View and navigate through content  
Communicate and collaborate via email, chat, whiteboards etc.  
Take Tests  
Engage in simulations and scenario-based learning  
Share applications / participate in Webinars

## MANAGE LEARNING

Maintain learning profiles and histories  
Manage enrollment and enforce business rules  
Manage physical resources  
Provide authentication and security  
Assign credit or certification  
Report results

## DETERMINE GOALS

Set Instructional Goals  
Establish Competencies / Certifications  
Set Business Goals / Determine Metrics

## MANAGE GOALS

Manage skills & competencies  
Evaluate training effectiveness / apply to training decisions

Determine learning and performance support requirements



# Top 10 LMS Purchasing Mistakes

Dave Egan (2002) <http://www.astd.org/astd>

1. Skirting senior management
2. Failing to spell out your needs
3. Comparing apples and oranges
4. Excluding IT from the process
5. Focusing more on price than value
6. Overlooking scalability
7. Ignoring LMS interoperability
8. Overlooking vendor track records
9. Reinforcing old ways
10. Selecting customization instead of configurability

# Source of LMS Informations:

➤ [www.edutools.net](http://www.edutools.net) : Complete info and comparison of tens of LMSs

➤ Web Courseware Comparisons and Studies

<http://www.mcli.dist.maricopa.edu/ocotillo/courseware/compare.html>

• LIBRARY Learning Management Systems (LMS): **e-Learning Centre**

<http://www.e-learningcentre.co.uk/eclipse/Resources/vles.htm>

• [\*\*LEARNING PLATFORMS Presentation\*\*](#)

• [\*\*LCMS Presentation\*\*](#)

# *Post SURVEY*

## What will you do after having this training?

1. I will (continue to) teach my classes with a LCMS.
2. I will find out more information about LCMSs.
3. I will propose my institution to use LCMS.
4. I will not teach my class using LCMS until my institution establish e-learning system.
5. I don't think LCMS will make better education, so I will not use LCMS to teach my class.