e-Learning
The Portal Approach

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SAP Learning Solutions GmbH
Agenda

Introduction
International Specifications & Standards
mySAP Learning Solutions
The Learning Object Advantage
Products already available
The Market
Positioning
Availability & Schedule
Consulting
SAP Learning Solutions
New Economy = Knowledge Economy

Knowledge Workers move from project to project - taking their knowledge with them

Job security is something remembered from the ‘old days’.
Today, security lies in

- what you know how to do,
- what you can learn to do, and
- how well you can access knowledge.

People can expect to change jobs, even careers, numerous times during their professional life.

Education continues for a lifetime.

Workers who neglect to invest in their own intellectual capital do so at their own peril, as they can no longer rely on a single set of skills for lifetime employ.  (Morgan Keegan & Co., Inc.)
Performance measures drive our day to day activities

To achieve maximum performance, the right knowledge is needed at the right time

Knowledge is available everywhere - and still hard to find

Knowledge based decision making becomes a critical success factor

Knowledge leads to flexibility and confidence ... and power.

The ability to ‘learn’ is becoming the core competency for all people participating in this journey

How can we control what should be learned, transfer the right knowledge to the right people, provide everyone with a personalized learning experience and manage skills level based on performance results?
Welcome to e-Learning

Where ...

- Qualification is delivered 'tailored to your needs'
- Information & Knowledge is presented in an instructionally sound way
- Modularization allows for individual pace and timing
- Ad hoc learning creates an environment of flexibility
- Self-paced learning leverages the use of time
- Collaboration offers a way to tap tacit knowledge
  - Asynchronous Learning (forums, newsgroups, etc.)
  - Synchronous Learning (vc, chat-rooms, whiteboards, etc.)
- Learning results in
  - Improved performance
  - Sustainable competitiveness
What Is Driving e-Learning

- Rapid obsolescence of Knowledge and training
- Need for just-in-time training delivery
- Search for cost-effective ways to meet learning needs of globally distributed workforce
- Skills gap and demographic changes drive need for new learning models
- Demand for flexible access to lifelong learning

- Internet access becoming standard at work and at home
- Advances in digital technologies enable creation of interactive, media-rich content
- Increasing bandwidth and better delivery platforms make e-Learning more attractive
- Growing selection of high-quality e-Learning products and services
- Emerging technology standards facilitate compatibility and usability of e-Learning products

e-Learning

e-Commerce / e-Business
"We do not think it is too strong a statement to say that learning standards are the Holy Grail of the e-Learning industry."
Morgan Keegan & Co., Inc
Match to the SCORM – LMS Model

Planning & Authoring

Testing/Assessment

Content/Course Administration

HTML/Java/Streaming Media

Catalog & Portal Management

Learning Management

Server/Display Engine

Evaluation & Business Support

Learner Management

Reporting (Data Management)

Profiles/Registration (Roster Operations)

Profiles/Registration

Content Repository & Structure

Management

Aggregation Root

Block

SCO

Content Format

Protocols & Data Interchange

Course Assignment / Enrollment

THE BEST-RUN E-BUSINESSES RUN SAP
mySAP - Solutions
Text Tray Layout

IT to make up 15 percent of the EU's GDP
IDG, 11/23/2000

"Information and communication technologies contribute 15 percent of the European Commission said in its semi-annual economic forecasts published on Wednesday."

Broken Undersea Cable Cripples Net
E-Commerce Times, 11/22/2000

"Parts of the Internet ceased to function Tuesday when one of world's largest and damaged, stalling Web users around the globe. Internet traffic jams were worst in the undersea damage, but effects of the break in the intercontinental cable were also felt
in Europe, where..."

Employers, workers begin to hang up on telecommuting
C/Net, 11/15/2000

"The Net's Bad Apples
E-Commerce Times, 11/15/2000

"The internet has certainly thrown a new wrinkle into the journalism game, ratcheting up run for their money. Of course, along with the wave of first-rate newcomers comes the Drudge Report."

Complex Tray Layout

SAP TV
SAP Labs
SAP University
SAP University America
SAP Training Catalogue

Simple Tray Layout

Wholesales Inventories Up
Merrill Analyst Makes S&P 500
Pfizer Sees 25 Percent Earnings
Lucent's Agre Unit Files for
Iraq Export Obstacle Lens

Simple Tray Layout

Russia's Yeltsin Has Cataract
Supreme Court Allows Smol
First High Speed U.S. Train
Service
Iraq Insists On Surcharge, O\nSales
Official Tally in Romania Show

Simple Tray Layout

Who's Who
Leave Request Overview
Create Leave Request
Change Own Data
SAP´s Solution Offering

Information
- Reports, News
- Policies, Laws
- Product/Market info

Applications
- Frontend operational apps
- Analytical Apps

Services
- Travel service
- Financial services

Support
- Content directory
- Portal builder
- User management
- Single sign-on
- Personalization
- Retrieval

Consulting
- Travel service
- Financial services

Browser
- Publish & subscribe
- Search
- Classification
- Crawlers
- Content store
- Distr. Authoring

Miniapps on JAVA

Basic Portal Platform
- Portal Server
- WCM
- Collaboration

SAP & Non-SAP Applications

Portal Server
- Content directory
- Portal builder
- User management
- Single sign-on
- Personalization
- Retrieval

WCM
- Publish & subscribe
- Search
- Classification
- Crawlers
- Content store
- Distr. Authoring

Collaboration
- Workflow, Inst Mess.
- Appl. Sharing
- Collab. Filtering
- Teamrooms

BW
- Data Warehousing
- ETL, Reporting
- Analysis
- Data mining
SAP BW – HR Webcockpits
The Environment for e-Learning

mySAP Workplace – Enterprise Portal

Human Capital Management  e-Learning  Knowledge Management  Business Intelligence  CRM

mySAP Workplace - Web Content Management
The Scope for e-Learning

- Business driven Knowledge Transfer
- Hybrid Learning Portals
- Personalized Learning Processes
- Assessment based Learning
- Objective based Dynamic Course Assembling
- Learner Collaboration
- Learner Progress Tracking
- Skills Management
- Knowledge Mining
- Shareable (among various systems) Courseware
- Reusable (for several delivery paths) Courseware
- Performance Support
- Training Quality Assurance
Objective Statement

Instruction
- IE: Motivation (e.g., statement of benefits)
- IE: Presentation (e.g., concept, facts, rules, examples, etc.)
- IE: Activity (e.g., discovery, simulation, matching, questions, etc.)
- IE: Summary (e.g., conclusion, self-assessment, etc.)
- IE: other

Assessment Tests

- Learning Paths
- Learning Objects
Organizations produce generic knowledge, coded in xml, which can be used as instructional elements within a Learning Object for which content in different output formats can be generated to serve a multitude of business purposes.
Knowledge Objects

- Demos
- Examples
- Ideas / Suggestions
- Prototypes
- Models
- Plans
- Abstracts
- Guides
- Test Cases

and more ....

Learning Objects

- Objective Statement
- Instruction
- IE: Motivation (e.g., statement of benefits)
- IE: Presentation (e.g., concept, facts, rules, examples, etc.)
- IE: Activity (e.g., discovery, simulation, matching, questions, etc.)
- IE: Summary (e.g., conclusion, self-assessment, etc.)
- IE: other

Education specific Knowledge Objects

- Unformatted
- Based on agreed structure
- XML-coded
- Reusable
- Driven by Learning Objective

Performance Assessment
The Learning Object Advantage

Achieving the company’s goals
Business purpose and results

A high degree of cost-reduction

High manageability of content
High level of reusability
Support for widely accepted industry specifications and standards

Faster & focused learning
Increased fairness during assessment tests
Changed behavior and higher retention
Personalization & individualization
Performance Improvement

Purposeful business information
Cost Savings

Expenses (according to Computerwoche 43/2000)
- German companies spent 34 Billion DEM on employee education in 1999 – amounting to around 2207 DEM per person
- 47% of these expenses relate to travel, tuition and training fees – the bigger part for continuing payroll while on training
- Average training expenses per person and day = 350 DEM

With e-Learning
- Travel is not required
- Participation in whole events is not required – Absence time from work environment decreases
- Courses that 100% meet business objectives can be assembled dynamically
- Exchange of ideas and knowledge takes place globally, not locally in small group of course participants
- Skills information is generated without manual maintenance
- Generate multiple output formats from one content
Eventually: The LMS as a Knowledge Broker

Learning Management

- Decision Support
- Business Support
- Process Support

Context

- Business Intelligence
- Production Data
- Documents

Training Material

Guidance | Presentation | Simulations | Assessments | ...

- Data Warehouse
- ERP System
- Content Repository
- Training Repository

THE BEST-RUN E-BUSINESSES RUN SAP
Components Available

- Planning
- Authoring
- Publishing
- Portal & Catalog Mgmt.
- Learner Management
- Course Assignment
- Learning Management
- Evaluation & Business Support

- Qualification Management
- PAW
- LO Editor (prototype)
- IDE
- Workplace
- Knowledge Warehouse
- HRMS
- TEM
- Booking
- ESS Enrollment
- Objective Mastery Tracking
- Mediator
- Test Results Reporting
- SPSS Interface
Test Authoring
Instructional Design Editor

Course Structure

Knowledge Relationships

Didactical Strategy
Learning Portal – Self Services

HR 450 - Payroll (HR-450)
Zeitraum: 17.01.2000 bis 21.01.2000

<table>
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<th>Zeitlicher Ablauf</th>
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<th>Mittwoch</th>
<th>Donnerstag</th>
<th>Freitag</th>
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<td>18.01.2000 von 09:00 bis 17:00</td>
<td>19.01.2000 von 09:00 bis 17:00</td>
<td>20.01.2000 von 09:00 bis 17:00</td>
<td>21.01.2000 von 09:00 bis 12:00</td>
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Preis: 0,00
Veranstaltungssprache: Deutsch
Delegation: Freie Plätze: 0, Buchungen: 0, Verfertige: 0

[Image of a computer screen with a SAP interface]
A Course in Knowledge Warehouse

Welcome to the CRM ONLINE TRAINING
Performance Unit Mobile Sales
A Sample Learning Object

My role: Accounts Payable Accountant

- Document Entry
- Payment received and Clearing
- Analyze vendor accounts (balances and items)
- Manage vendor information (e.g. permanent data)
- Correspondence (e.g. balance confirmations)
- Reporting and Closing

The key activities in the Accounts Payable role can be described as a cycle of interrelated events. These key activities include:

- Document entry
- Analyze vendor accounts
- Manage vendor information
- Payment and clearing
- Correspondence
- Reporting and closing

Click each key activity to display a short description.
Web-based Testing

- Testing
- Evaluation
- Detailed Feedback
Business Support & Evaluations

Descriptive Statistics

Item Answer Analysis
Skills & Competency Management

### Person: Display Profile (01/23/2001 - 12/31/9999)

**Person: Display Profile (01/23/2001 - 12/31/9999)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Name</td>
<td>Sarah Felder</td>
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**EE group**
- 1: Active employee
- Pers.area: BE31
- Personnel area: BE31

**EE relation**
- 84: MN employee

### Qualifications

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<tr>
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<th>Bezeichnung</th>
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<td>3</td>
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<td>12/31/99</td>
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</table>

### Status

- Ya-Wen Lu
- Chris Williams
- Gordon Lacey
- Colin Neal
- Norman Abbate
- Sarah Fielder
- Maria Castello
- Angela Eggston
- Rachel McLennon
- Joseph Revei
- Dieter Mueller
- Eva Schmidt
- Adam Neter

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**THE BEST-RUN E-BUSINESSES RUN SAP**
Components Outlook (names are working titles)

- Qualification Management
  - PAW
  - LO Editor (prototype)
  - IDE
- Workplace
  - Knowledge Warehouse
- HRMS
- TEM Booking
  - ESS Enrollment
- Objective Mastery Tracking
  - Mediator
- Test Results Reporting
  - SPSS Interface
- EBO Catalog
  - Learning Object Editor
  - Learning Path Editor
  - Web-Based Objective Editor
  - LOM Tagging Support
- Publisher
- WP 3.0
  - Web-Content Management
- Learner Account
- Web-based Assignment & Enrollment
- LearningPath Generator
  - Learning Path Navigator
- SCORM Learning Server
  - CSF Support
- Survey Engine
  - Training Quality Analysis
  - Learner Progress Reporting

Planning | Authoring | Publishing | Portal & Catalog Mgmt. | Learner Management | Course Assignment | Learning Management | Evaluation & Business Support

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What Others Say

„Web-based training market poised for staggering growth.“
WRHAMBERCHT + CO

„The next few years should see revolutionary changes.“
WRHAMBERCHT + CO

„e-Learning is ... a fundamentally more efficient and effective way [than traditional education and training] to organize and deliver knowledge resources to businesses and individuals competing in the knowledge economy.“
Morgan Keegan & Co., Inc.

„There are two fundamental equalizers in life – the Internet and education.“
John Chambers, CEO Cisco Systems, 1999
The higher education e-Learning market development

• The U.S. higher education market consists of 3,700 educational institutions and accounts for $225 billion in expenditures.

• Enrollment in institutions of higher education was over 14 million students in the 1996-1997 school year, and is expected to increase to 16 million by 2008.

• There are 6.6 million adults (persons aged 25 and older) projected to enroll in higher education by 2007.

• The number of high school graduates is expected to increase 20% from 1995 to 2008 (from 2.5 million to 3.0 million).

• Sixty-five percent of all high school graduates go on to college.

• The number of students enrolled in distance education is expected to grow from 753,640 in 1998 to 2.2 million by 2002. (Source: NCES, IDC)

• By 2003, over 50% of all higher educational institutions globally will be offering e-Learning programs to students.

(Source: Gartner Group)
The route to a production system

- Goals Setting
- Orientation
- Evaluation
- Decision
- Detailed Concept Development
- Implementation
- Production
Consulting Services

Business Engineering
(Process Analysis & Concept Development)

e-Learning Strategy Consulting

Goals Setting
Orientation
Evaluation
Decision
Detailed Concept Development
Implementation
Production

Hosting Services
Project Management
Implementation
Contact:

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