WIRTSCHAFTS UNIVERSITÄT WIEN VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS

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LEARN@WU
Supporting the Excellency in Education

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Vienna University of Economics and Business

Overview

- Goals and Background of the Learn@WU Project
- Acceptance and Usage Figures
- Success Factors
- Learning and Training Environment
- Perspectives and External Projects

WU: Vienna University of Economics and Business

WIRTSCHAFTS UNIVERSITÄT WIEN VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS

- University = *"Business University"*
- One of the largest Business Universities worldwide
  - about 25.000 students in total
  - more than 4.000 freshmen each year
  - more than 5.000 different courses per year
- E-Learning @ WU:
  - full content coverage on the first year of study
  - address heterogeneous knowledge of freshmen
  - E-Learning in the Large

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Initial Goals

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- **Provide eLearning materials for all beginner courses**
  - Full coverage with e-learning materials for 350 beginner classes in 18 different areas
    - Public and Private Law
    - Business Admin, Marketing, Human Resources, …
    - Mathematics, Statistics, Information Systems
    - Economics, Languages, …
- **Increase Efficiency**
  - Emphasize self-organized learning through immediate learner feedback
  - Integration with mark-reader to improve grading efficiency
  - Switch to half-semesters (to improve throughput)
  - Search for new knowledge delivery methods (blended learning, better usage of contact hours)
- **Improve Quality**
  - Streamlined contents of beginner courses through platform
  - High transparency of learning materials (quality assurance, …)
  - Easier curriculum development (intra-course linkage, …)
  - Development from Teacher to Coach
- **Support for Existing Students**

LEARN@WU Development

- **Initial Project:**
  - Start: autumn 2001, 2 years, budget: 3,4 Mio Euro
  - Joint development of *Department Of Information Systems* and *Department of Business Education*
  - 36 full time content developer (2 per course)
  - 2 people didactic support, 2 people technical support (incl. help desk)
  - **Content** (not platform) **project**

Learn@WU

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- **From Project to Infrastructure:**
  - **2002:** Initial Launch, Content Project, based on OpenACS (Learning Content Management System)
  - **2003:** E-Learning became strategic goal of the University, member of *DotLRN Consortium*
  - **2004:** Re-launch, based on LCMS + DotLRN
  - **2005:** E-Learning part of general Trainee Programmes
  - **2006:** Development of an E-Learning Academy
  - **2008:** Full coverage of all courses (~5000/year) Improving integration with the Campus Management System
- **Total Staff:**
  - Currently 41 people employed, more than 250 content developers

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Current Key Figures of Learn@WU

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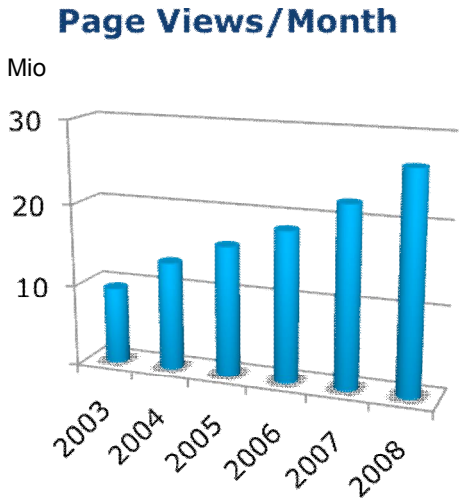
- Broad Acceptance
  - Developed more than 120.000 learning resources
  - More than 25.000 registered members
  - Students solve up to 600.000 interactive exercises per day online
  - More than 300.000 class-room exams prepared/corrected via Learn@WU (via mark-reader)
  - *"Without Learn@WU, the operations of our university would not have been possib*
    (Christoph Badelt, President of WU)

- Technical Figures
  - Up to 11 Mio hits and over 2 Mio page impressions per day from registered users
  - Average response time on views less than 0.2 sec
  - Up to 2500 concurrent users
  - Up to 65 GB/Day delivered content



- One of the most intensively used e-learning platforms world-wide
  - Current annual growth rate: 20-30%

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Success Factors (1)

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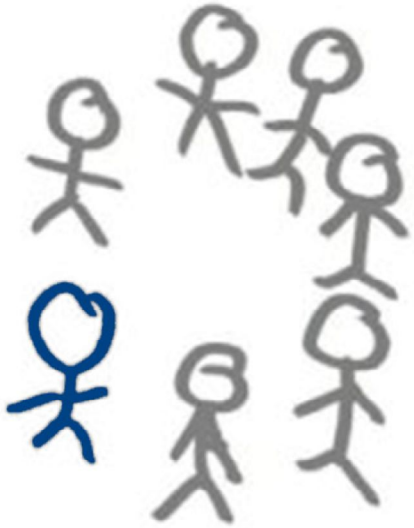
- **E-Learning integrated with curriculum**
  - Study programs in first year built around e-learning
  - E-Learning more than an optional add-on
- **University support for content development projects**
  - Project Pool (from 10h/semester to 40h/year)
  - Various kinds of e-tutors
  - E-Learning Academy (courses, trainee-programs, support)
  - Infrastructure Team (5 people)
- **Human-Centered Platform-Design**
  - University as a „community of communities"
  - Communities composed of
    - Groups of students, classes, courses, programs, alumni, …
    - Members and administrators (decentralized management)
  - Shared Design and Responsibility
  - High adaptability by community owners



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Success Factors (2)

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- **Support of the full e-learning development cycle**
  - **Content Creation**
    - Mostly interactive content, different granularity
    - Most content developed by domain experts via Microsoft Word/Microsoft InfoPath
  - **Content Delivery**
    - Interactive exercises for training and self-assessment
    - Organization via Concept Space for easy navigation and recommender system
    - Concept Space is a knowledge map for students to track their learning-progress
    - Lecturecasts
  - **Content Assessment**
    - Integration with a mark-reader for class-room exams
    - Exams 3 times per semester 20 subjects × 1000 students
  - **Result Communications**
    - Personalized Web Interface, PDF-Generation, SMS

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Monitoring Learning Progress

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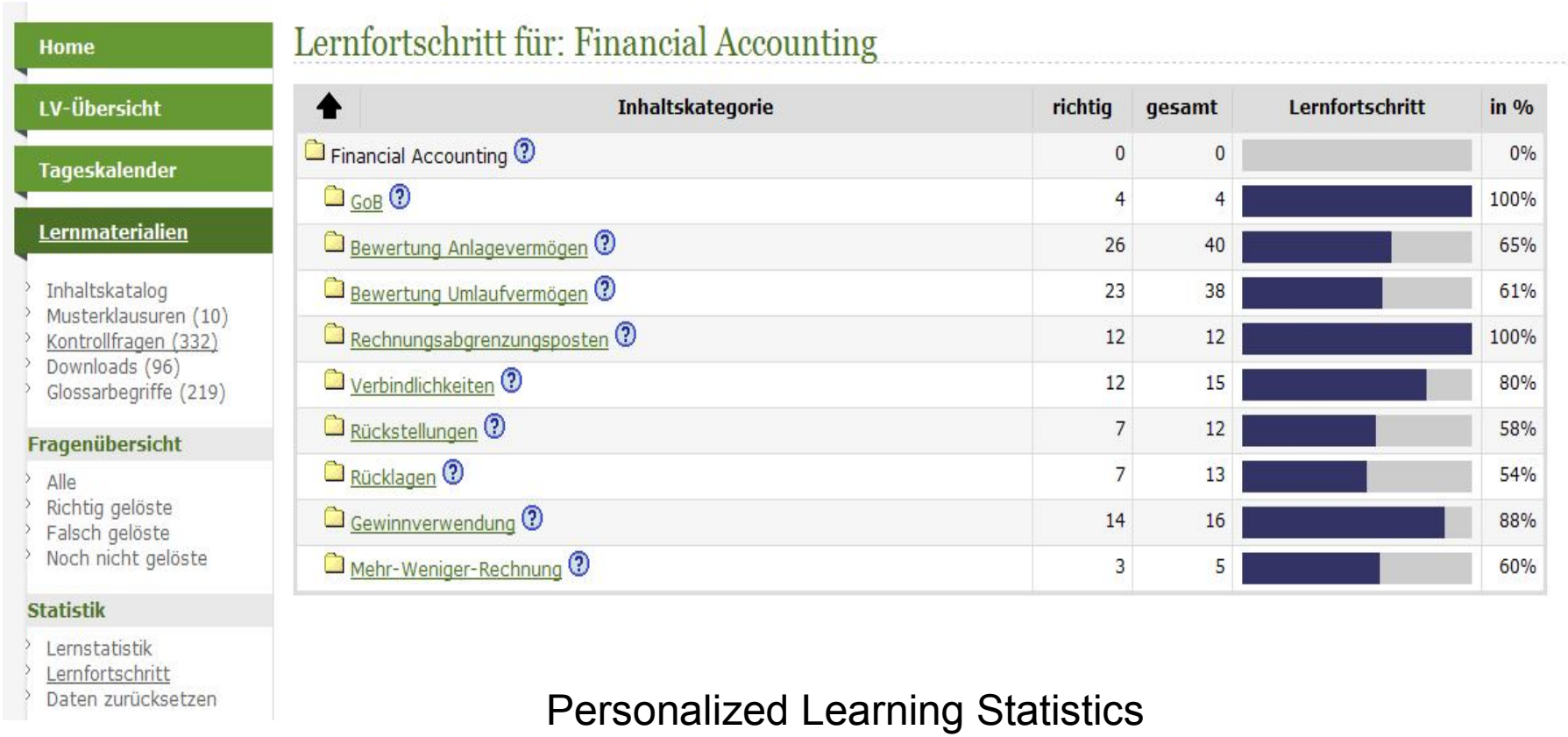

Personalized Learning Statistics

Lecturecast

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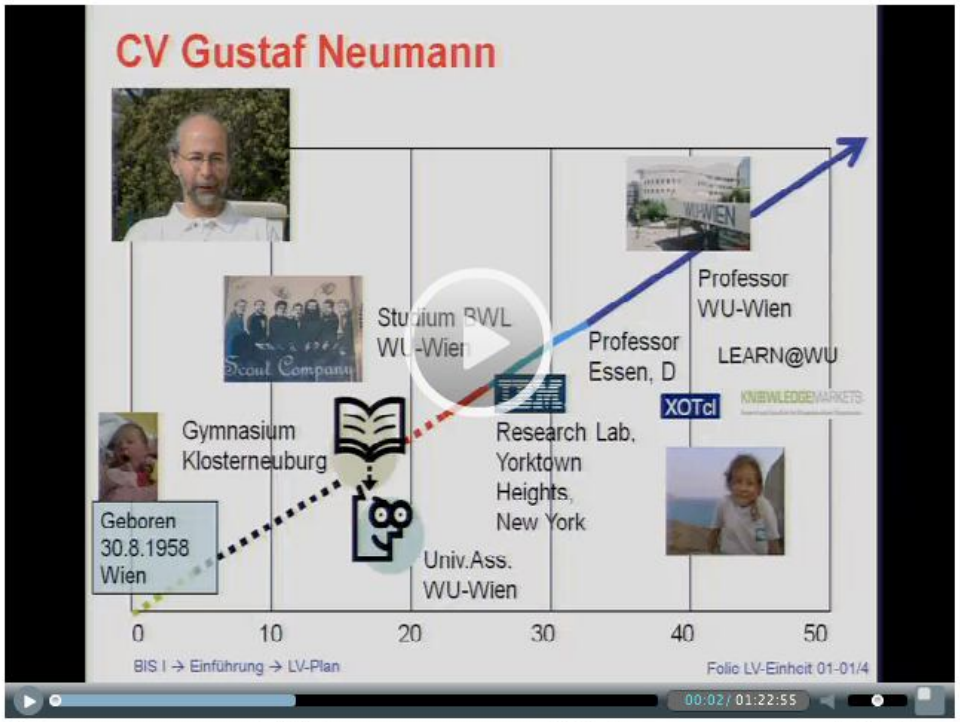

- Recording of Presentations in large Lecture Rooms
- Highly automated (Touchscreen to record)
- Automated splitting at Slide changes
- Teachers decide delivery methods
  - streaming
  - video-podcast (subscription)

Mark-Reader (for large exams) and Online Feedback

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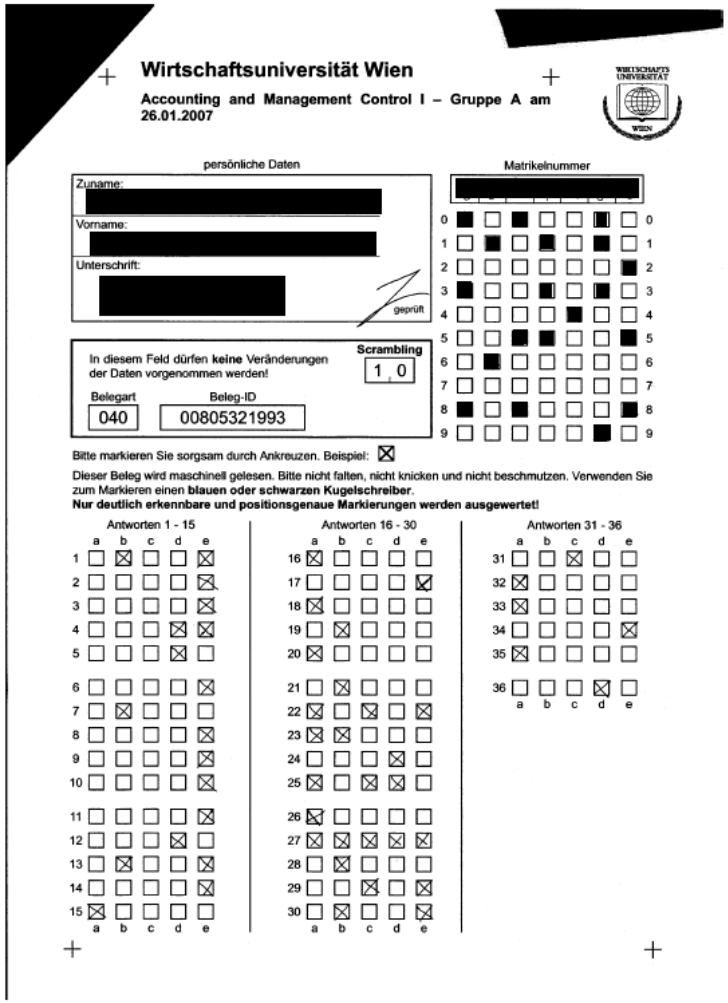

Wirtschaftsuniversität Wien

Accounting and Management Control I – Gruppe A am 26.01.2007

persönliche Daten

Zuname: [redacted]

Vorname: [redacted]

Unterschrift: [redacted]

geprüft

Matrikelnummer [redacted]

In diesem Feld dürfen **keine** Veränderungen der Daten vorgenommen werden!

Scrambling: 1 0

Belegart: 040

Beleg-ID: 00805321993

Bitte markieren Sie sorgsam durch Ankreuzen. Beispiel: ☒

Dieser Beleg wird maschinell gelesen. Bitte nicht falten, nicht knicken und nicht beschmutzen. Verwenden Sie zum Markieren einen **blauen oder schwarzen Kugelschreiber**.
Nur deutlich erkennbare und positionsgenaue Markierungen werden ausgewertet!

Antworten 1 - 15

	a	b	c	d	e
1	☐	☒	☐	☐	☒
2	☐	☐	☐	☐	☒
3	☐	☐	☐	☐	☒
4	☐	☐	☐	☒	☒
5	☐	☐	☐	☒	☐
6	☐	☐	☐	☐	☒
7	☐	☒	☐	☐	☐
8	☐	☐	☐	☐	☒
9	☐	☐	☐	☐	☒
10	☐	☐	☐	☐	☒
11	☐	☐	☐	☐	☒
12	☐	☐	☐	☒	☐
13	☐	☒	☐	☐	☒
14	☐	☐	☐	☐	☒
15	☒	☐	☐	☐	☐

Antworten 16 - 30

	a	b	c	d	e
16	☒	☐	☐	☐	☐
17	☐	☐	☐	☐	☒
18	☒	☐	☐	☐	☐
19	☐	☒	☐	☐	☐
20	☒	☐	☐	☐	☐
21	☐	☒	☐	☐	☐
22	☒	☐	☒	☐	☒
23	☒	☒	☐	☐	☐
24	☐	☐	☐	☒	☐
25	☒	☐	☒	☒	☐
26	☒	☐	☐	☐	☐
27	☒	☒	☒	☒	☒
28	☐	☒	☐	☐	☐
29	☐	☐	☒	☐	☒
30	☐	☒	☐	☐	☒

Antworten 31 - 36

	a	b	c	d	e
31	☐	☐	☒	☐	☐
32	☒	☐	☐	☐	☐
33	☒	☐	☐	☐	☐
34	☐	☐	☐	☐	☒
35	☒	☐	☐	☐	☐
36	☐	☐	☐	☒	☐

Accounting and Management Control I - Gruppe A vom 26.01.2007
Einsicht für Matrikelnummer 0651498

Scrambling: 10
Note: 3 - Befriedigend

Gesamtpunktezahl: 120,00
erreichte Punkte: 93,60 (78,00 %)

Frage	Antworten richtig	Antworten angekreuzt	Punkte maximal	Punkte erreicht	Prozent
1	- b - - e	- b - - e	3,00	3,00	100,00
2	- - - - e	- - - - e	6,00	6,00	100,00
3	- - - - e	- - - - e	2,00	2,00	100,00
4	- b c - e	- - - d e	4,00	0,00	0,00
5	- - - d e	- - - d -	3,00	1,50	50,00
6	- - - - e	- - - - e	4,00	4,00	100,00
7	- b - - -	- b - - -	3,00	3,00	100,00
8	- - - - e	- - - - e	3,00	3,00	100,00
9	a - - - -	- - - - e	3,00	0,00	0,00
10	- - - - e	- - - - e	3,00	3,00	100,00
11	- - - - e	- - - - e	3,00	3,00	100,00
12	- - - d -	- - - d -	4,00	4,00	100,00
13	- b - - e	- b - - e	3,00	3,00	100,00
14	- - - - e	- - - - e	3,00	3,00	100,00
15	a - - - -	a - - - -	3,00	3,00	100,00
16	a - - - -	a - - - -	10,00	10,00	100,00
17	- - - - e	- - - - e	2,00	2,00	100,00
18	a - - - -	a - - - -	4,00	4,00	100,00
19	- b - - -	- b - - -	4,00	4,00	100,00
20	a - - - -	a - - - -	2,00	2,00	100,00
21	- b - - -	- b - - -	2,00	2,00	100,00
22	a - c d -	a - c - e	2,00	0,33	16,67
23	a - - - -	a b - - -	2,00	0,00	0,00
		Zwischensumme:	78,00	65,83	

Frage	Antworten richtig	Antworten angekreuzt	Punkte maximal	Punkte erreicht	Prozent
		Übertrag:	78,00	65,83	
24	- - - d -	- - - d -	2,00	2,00	100,00
25	a - c d -	a - c d -	2,00	2,00	100,00
26	a - - - -	a - - - -	2,00	2,00	100,00
27	- - c d e	a b c d e	2,00	0,00	0,00
28	- b - - -	- b - - -	2,00	2,00	100,00
29	- - c - e	- - c - e	6,00	6,00	100,00
30	- b - - e	- b - - e	4,00	4,00	100,00
31	- - c - -	- - c - -	4,00	4,00	100,00
32	- - - d -	a - - - -	4,00	0,00	0,00
33	- - - d -	a - - - -	4,00	0,00	0,00
34	- - - - e	- - - - e	3,00	3,00	100,00
35	a - - - -	a - - - -	3,00	3,00	100,00
36	- - c - -	- - - d -	4,00	0,00	0,00
37					
38					
39					
40					
41					
42					
43					
44					
45					
		Prozent-Rundung:		-0,23	-0,19
		Gesamtsumme:	120,00	93,60	78,00

Hinweis zur Darstellung:
Markierungen, die bei den richtigen Lösungen in der Tabelle nicht angeführt sind, waren für die Berechnung der Note nicht erforderlich. Eventuell an diesen Stellen vorhandene Markierungen wurden als gegenstandlos betrachtet.
Sämtliche Zahlen auf dem Ausdruck wurden auf zwei Nachkommastellen gerundet. Da die Summen und Prozente mit den genauen Werten berechnet wurden, kann es zu Abweichungen kommen.

Hinweise zur Punkteberechnung:
Jeder Frage ist eine maximale Punkteanzahl (max) zugewiesen. Weiters gibt es eine Anzahl von richtigen (r) und falschen (f) Antwortalternativen.
Für jede richtig angekreuzte Alternative werden max/r Punkte vergeben und für jede falsch angekreuzte Alternative werden max/f Punkte abgezogen. Es werden keine negativen Punkte vergeben.
Wenn eine Frage nur eine falsche Alternative besitzt (und diese angekreuzt war), wird nur die Hälfte der Punkte, also max/2 und nicht max/f, abgezogen. Sollte eine Frage nur eine richtige Alternative besitzt, so werden bei dieser Frage keine Teilpunkte vergeben.
Beispiel: Bei einer Frage sind maximal 3 Punkte zu vergeben. Die Alternativen a,d und e sind richtig (und daher b und c falsch). Für jede richtig angekreuzte Alternative ist deshalb 3/3 (=1) Punkt zu vergeben und für jede falsch angekreuzte Alternative werden 3/2 (=1,5) Punkte abgezogen.

Success Factors (3)

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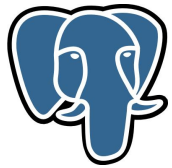
- **Highly scalable Platform**
  - Fully based on Open Source software components
  - OpenACS (Community Framework),
  - DotLRN (Course Management + Collaboration tools)
  - PostgreSQL, Aolserver, XOTcl



XOTcl

- **Integration with e-learning Research**
  - Technical Lead at the *Institute of Information Systems and New Media*
  - Actively participating in many EU Research Projects (currently 4, acquired in last three years more than 1 Mio € research funds)
  - Founded University Spin-off *Knowledge Markets*

KNOWLEDGEMARKETS

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Sample Projects

- **Prolix (EU)**
  - Workplace Learning, learning alignment with business processes
- **LtFLL(EU)**
  - Advanced Text Mining for E-Learning applications (Grading support, Recommender Systems, …)
- **Role (EU)**
  - Social Networking in E-Learning Systems
- **iCoper (EU)**
  - Open Contents, Learning Outcomes, Competencies
- **Bildungsserver Burgenland (Gov.)**
  - E-Learning support for Schools (more than 30.000 users)
- **Daimler (Company)**
  - Knowledge Management along a supply chain Management System (several thousand supplier)

Knowledge Markets
Reference Customers

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