



ETH World: Teaching, Learning and Research in Virtual and Physical Space

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ETH Zurich*

Presentation at the International Plugfest 1, Zürich



Contents

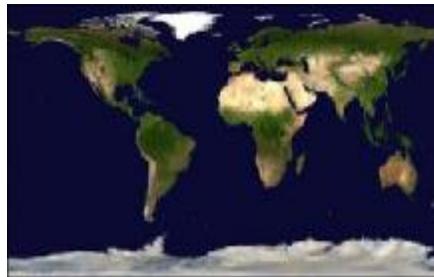
- § Goals and strategy
- § Implementing ETH World: Projects
- § Critical assessment
- § Lessons learned, outlook
- § The PROLEARN Network of Excellence



Goals and strategy

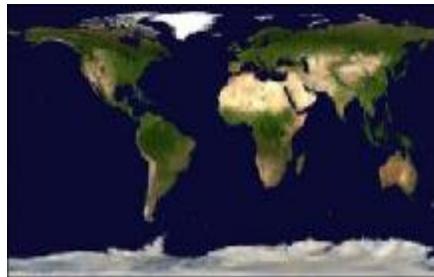
ETH World: A strategic initiative

- § To build a virtual space, interfacing and co-existing with the physical space
- § Enabling communication and co-operation independent of time and place
- § Accessible to all stakeholders



Support core processes and strategic goals of ETH Zurich

- § Teaching and learning
- § Research
- § Associated management tasks
 - ▶ Support links to external stakeholders
 - ▶ Develop university of the future
 - ▶ Strengthen international competitiveness



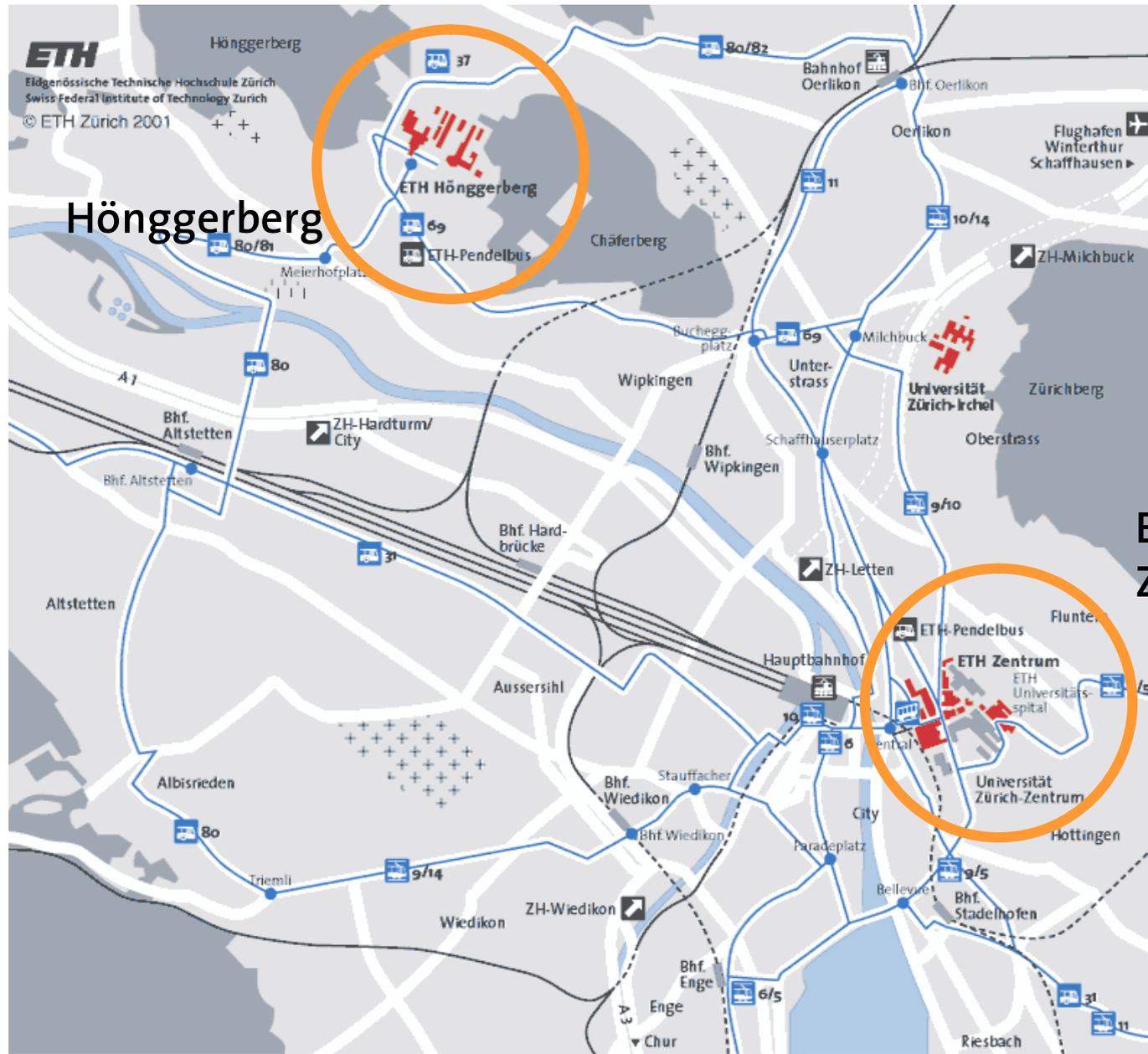
The physical space

§ ETH Zentrum in the center of the city



§ Campus
ETH Hönggerberg





Hönggerberg

ETH
Zentrum

Virtual campus extending and interfacing to the physical locations

- § Link the two campuses
- § Enhance use of facilities
- § Facilitate cooperation with external partners
- § Improve access to ETH services



ETH World will be a success if ...

- § its results are broadly used
- § it helps to create new and better forms of learning, teaching, research and management
- § it transfers new technologies into daily use
- § it strengthens the relations with alumni, business, industry and society



A virtual campus for real people

- § The primary objective of ETH World is to increase and enhance the use of new information and communication technology
- § E-learning is one important component, but not the only one
- § A distance-learning university is *not* the goal





Implementing ETH World: Projects

ETH Life – the daily web journal

ETH Life - die tägliche Web-Zeitung - Microsoft Internet Explorer provided by ISG.EE.ETHZ.CH

File Edit View Favorites Tools Help Address <http://www.ethlife.ethz.ch/articles/> Go

Die tägliche Web-Zeitung der ETH Zürich - **in english** Letzte Aktualisierung: Montag, 03.11.2003, 09:00 Uhr

Mo Di Mi
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ETH Life
wissen was läuft

Suchen

Home
Campus aktuell
Tagesberichte
News
Porträts
Kolumnen
Interviews
Surprise
Dossiers
Archiv
Redaktion
Feedback
About
Sitemap
English

Heute
Tagesberichte
Stabile Ruder-Machtverhältnisse
 Keine Überraschungen beim 52. Uni-Poly-Rudermatch auf der Limmat: 12. Sieg der Uni-Herren in Folge, und auch die Poly-Frauen liessen sich nicht schlagen – bereits zum dritten Mal. [mehr](#)▶

News
Wissenschaftskultur – ETH eröffnet Diskussion
 Heute Abend Start zur grossen Veranstaltungsreihe des Hochschulplatzes Zürich: mit einer Diskussion über den Einfluss von Wirtschaft und Gesellschaft auf die Forschung. [mehr](#)▶

Voll im Element
 Grossandrang am Erstsemestrigen-Fest: 3'500 Studis feiern bis um drei Uhr früh. Die Fotos. [mehr](#)▶

Die Woche
Mittwochs-Kolumnen
Zukunftsmaschine Nanotechnologie
 Beim Nano-Hype sind Mythen und Visionen wichtiger als Definitionen, schreibt Barbara Orland in ihrer Abschieds-Kolumne. [mehr](#)▶

Campus Life
„Vorschlag ist unrealistisch“
 Erhöhung der Studiengebühren – ein Vertreter der ETH-Studierenden zum Thema. [mehr](#)▶

Science Life
Eisige Gefahr
 Die VAW hat alle Schweizer Gletscher erfasst, die eine potentielle Gefahr für den Siedlungsraum darstellen. Der Kanton Wallis will dieser Gefährdung mit einem angepassten Risikomanagement begegnen. [mehr](#)▶

Services
Agenda
 **Kultur der Wissenschaften**
Wissenschaft als Wert?
19:30-21:00, AudiMax (HG F30). Diskussion

Ausserdem heute Montag:
• **150. Todestag von Karl A. Kasthofer** [mehr](#)▶

Forum
• **Eisige Gefahr**
• **Differenzierter Kommunikationsstil**
• **Inventar, Gefahrenschätzung**
• **Studiengebührenerhöhung**
• **Nanotechnologie**
• **Prof Stricker** [mehr](#)▶

[Leserbrief schreiben](#)

Die ETH in den Medien
• **ST: Vergessen und wiederentdeckt**
• **NZZ: KOF-Konjunkturbarometer steigt weiter**
• **persoenlich.com: Website für ETH-Projekt**
• **SO: Neue Leitung der ETH**
• **TA: Neue Leitung der ETH**
• **BaZ: Basel gut in Form**

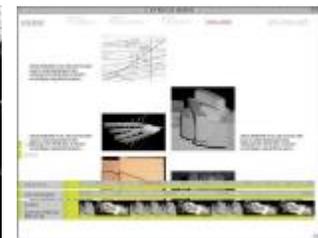
<http://www.ethlife.ethz.ch/e> Local intranet

ETH E-Collection of “grey literature”



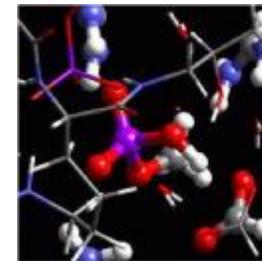
arc-line – architecture on-line

- § Radical change of introductory year at Department of Architecture
- § Web-based architectural design and production
- § Symbiosis of real and virtual space
- § Analog and digital design
- § From small objects to urban design
- § Encouraging results, but also a challenge



Vireal Lab – the virtual-real lab

- § Linking virtual and real world
- § Intelligent “roomware” for team teaching and learning
- § Collaborative work, discussion and learning
- § Interactive seminars and colloquia with external partners
- § Visualization and manipulation of 3D objects



Videoconferencing

- § Make videoconferences as ubiquitous as phone calls
- § From personal to large-group videoconferences
- § Infrastructure: Hardware recommendations, software licenses, conference bridges, scheduler
- § Documentation, training and support



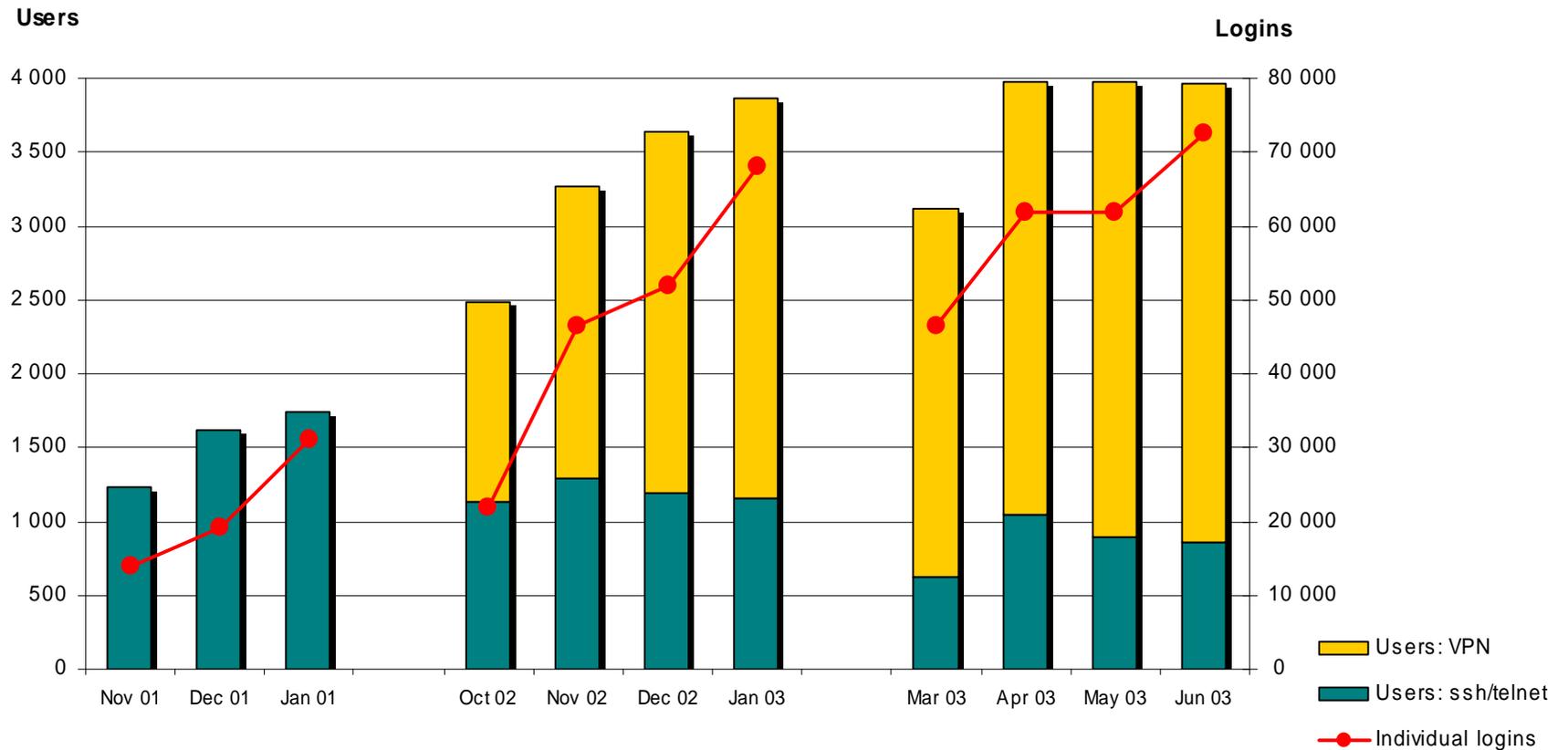
Laptops for students

- § Mobile computing with wireless LAN
- § Promote computer use and literacy of students
- § Integration of privately owned and operated computing equipment into ETH infrastructure
- § Create infrastructure for new methods in teaching and learning
 - à A large number of new student workplaces



Neptun and wireless LAN usage

Monthly use of wireless LAN at ETH Zurich





Critical assessment



Strategy and process

§ “ETH World is a virtual space to ...”

- Powerful picture but somewhat misleading
→ “... program to implement the vision of ...”

§ ETH World accelerates a process that is happening anyway

- through its projects
- by changing people’s mindsets

§ Our approach: “coordinated creativity”



Lessons learned and outlook

§ Infrastructure approach

- Create infrastructure that will be used
- Involve the potential users: students, lecturers, researchers, staff

§ Complementary to other funding instruments and initiatives

- funding for innovative learning/teaching
- research funding
- participation in international projects (e.g., PROLEARN)

§ Future challenges

- Integration of building blocks
- Sustainability – transfer to *courant normal*
- “ETH World” Department / Curriculum

Summary

- § ETH World is an instrument to develop research, teaching and learning on the highest level
- § ETH World is a technical, but also an organizational and social challenge
- § Like all successful instruments the program will eventually change the processes and structures it was designed to support





***Network of Excellence
in
Professional Learning***

PROLEARN

***International Plugfest 1
Global e Learning Summit
17th February 2004, Zurich, Switzerland***



Information Society
Technologies





Overview of PROLEARN

Objectives

- ∅ Advance the state of the art in **Technology-Enhanced Learning (TEL)** and learning resources.
- ∅ **Structure and shape research** in TEL through Joint Programme Activities (JPA): integrated basic research and outreach to industry.
- ∅ **Enable sustainable, innovative and efficient** professional eTraining infrastructures and processes, focusing on European SMEs.

Facts

- ∅ **6 Mio. Euro** for **4 Years**
- ∅ **> 217** researchers, a number of PhD students
- ∅ started on **01 January 2004**



PROLEARN Partners

n **Coordinator:** L3S (*Learning Lab Lower Saxony*)

Vice-Coordinator: DFKI
(*Deutsche Forschungszentrum für Künstliche Intelligenz*)

n **19 Core Partners**

OU UK, Ariadne, FHG, WUW,
CSI, EPFL, ETHZ, POLIMI, JSI,
UPM, KTH, NCSR, INT, HEC,
TUE, RWTH

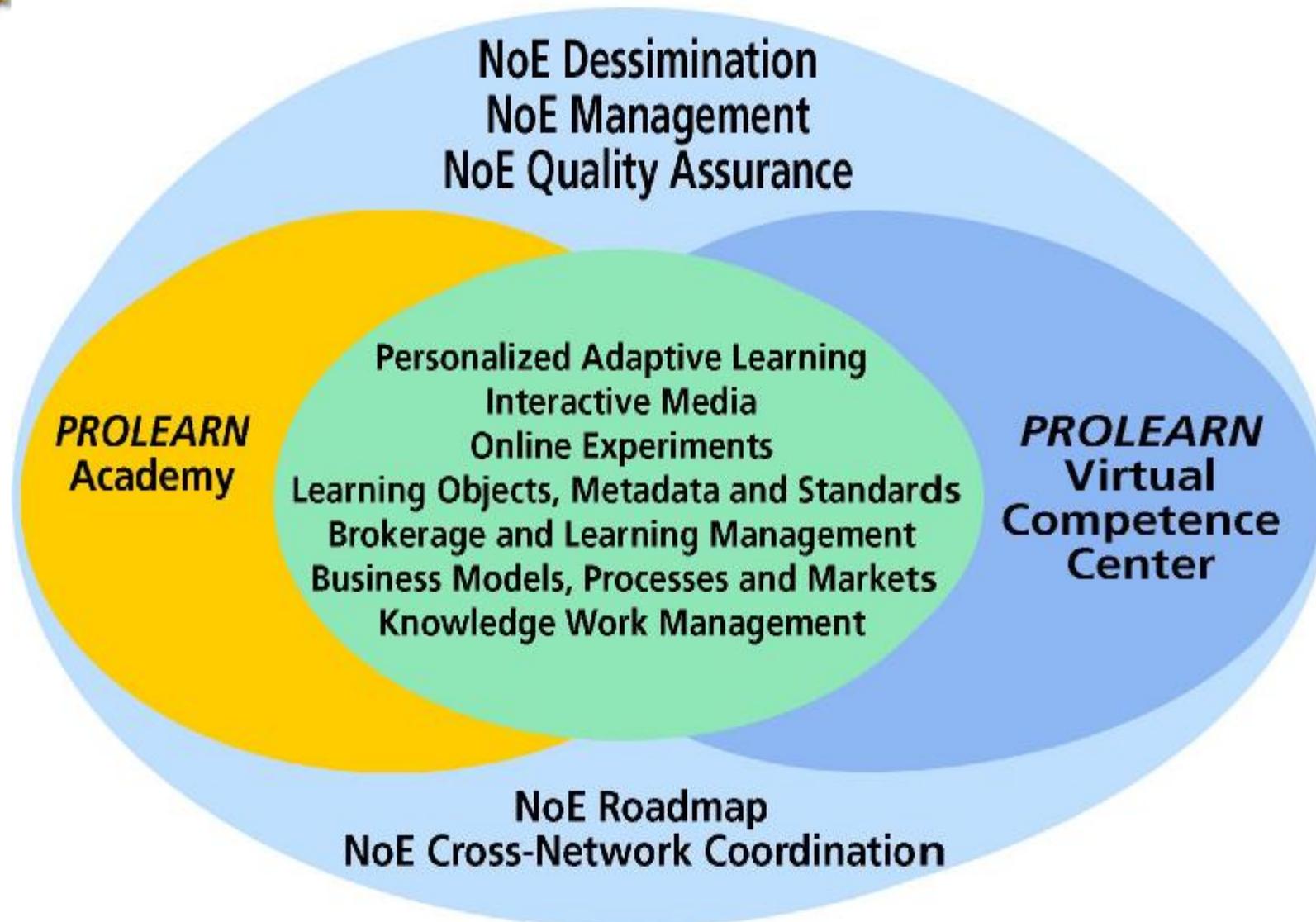
n **Associate Partners**

(Academia & Industry, > 100)

BT, Carnegie Mellon, Stanford,
IBM, France Telekom, Klett
Verlag, IMC, OU NL, Simon
Fraser Univ., Pittsburgh Univ.,
Swedish Educ. TV, etc.



NoE Structure and Work Packages



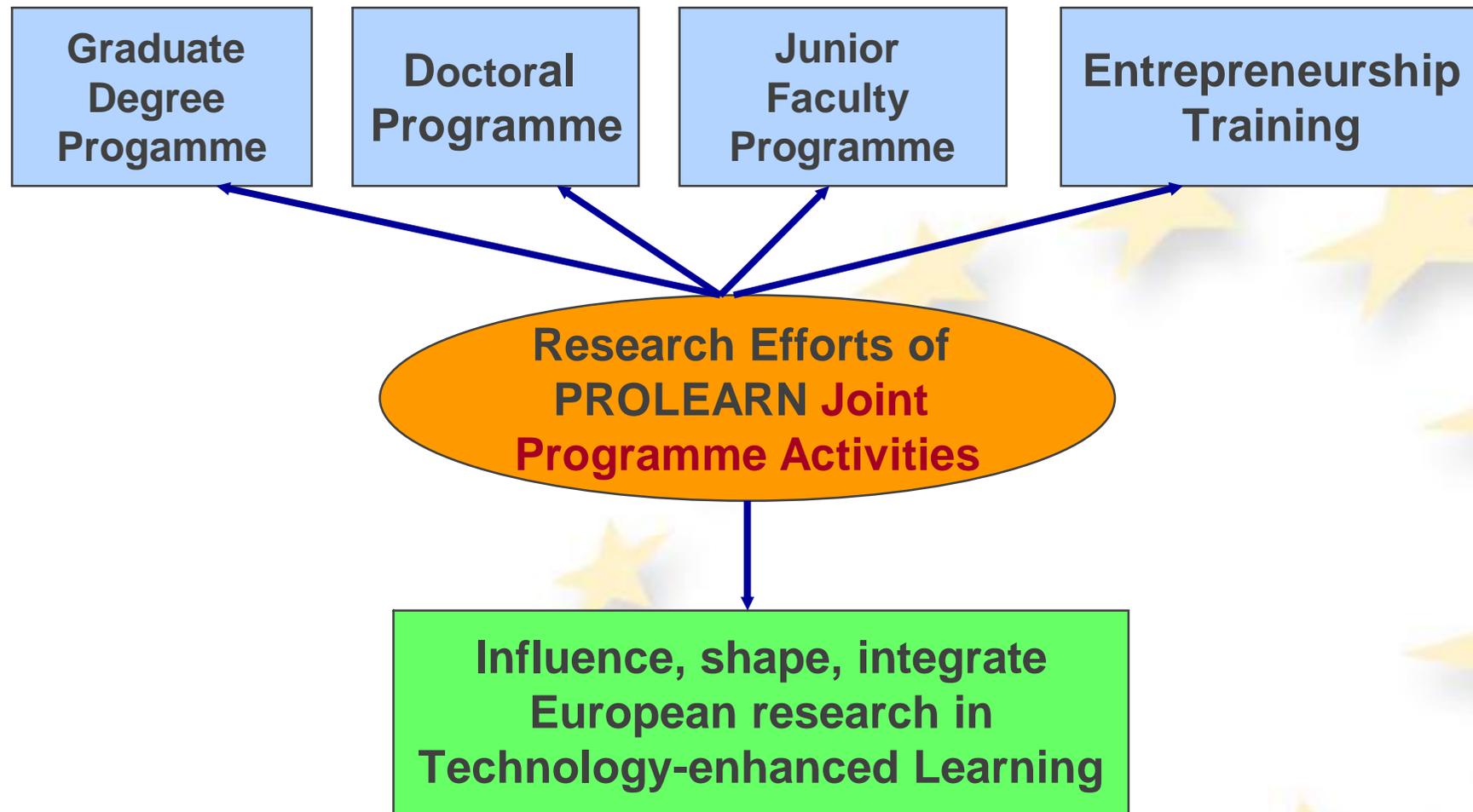


Relevance of PROLEARN for European TEL

- Ø **personalized adaptive learning**
 - è **systems and services for contextualized learning**
- Ø **interactive media and online educational laboratories**
 - è **rich content (*activities instead of encyclopedias!*)**
- Ø **metadata standards and brokerage systems**
 - è **open access to European learning resources (e.g., ARIADNE, UNIVERSAL/EducaNext, Edutella)**
- Ø **knowledge work management**
 - è **knowledge and performance management tools and models**
- Ø **business models**
 - è **smooth market development and increased social effectiveness**



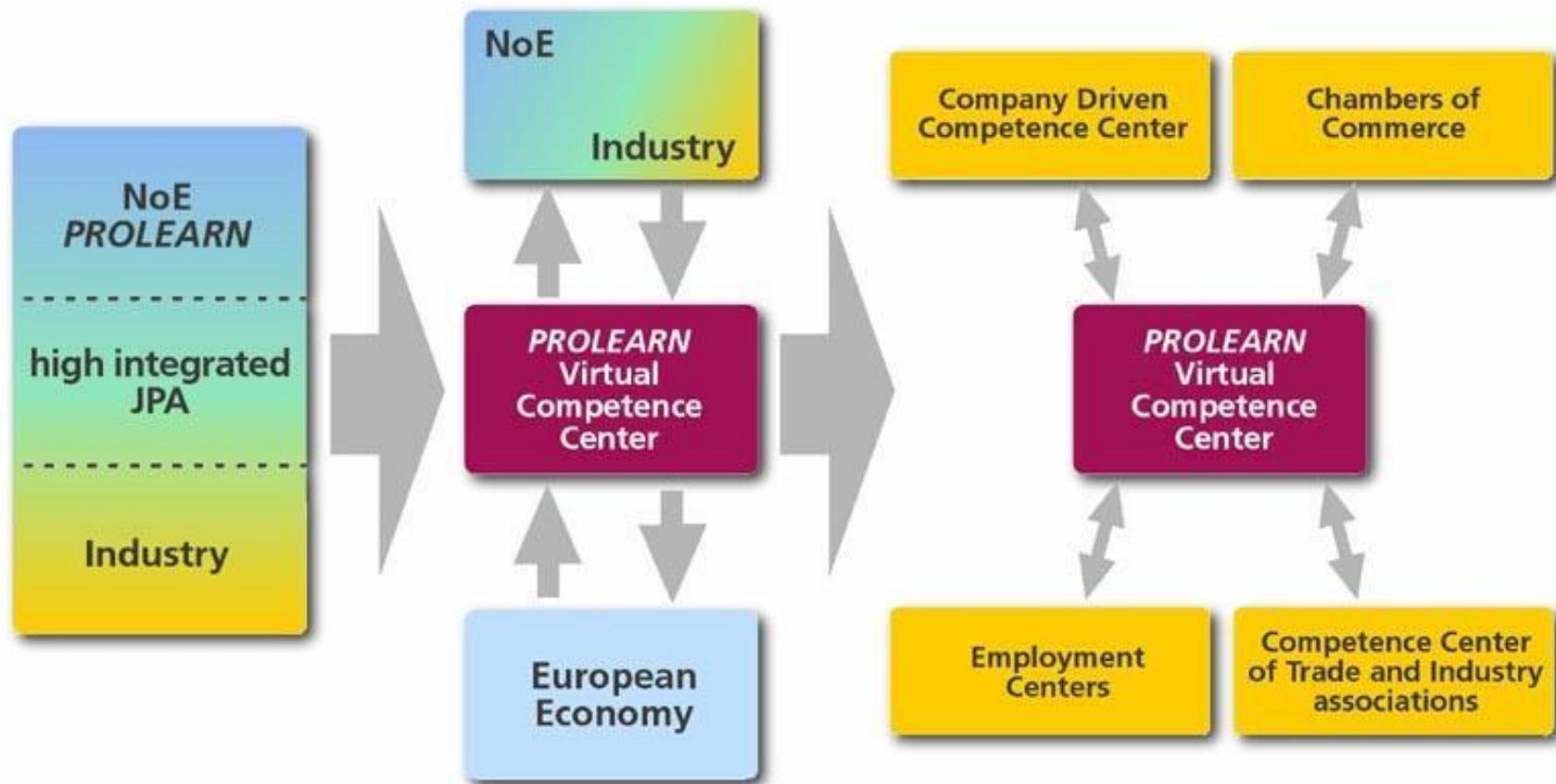
PROLEARN Academy: **Integration of Research and Training**





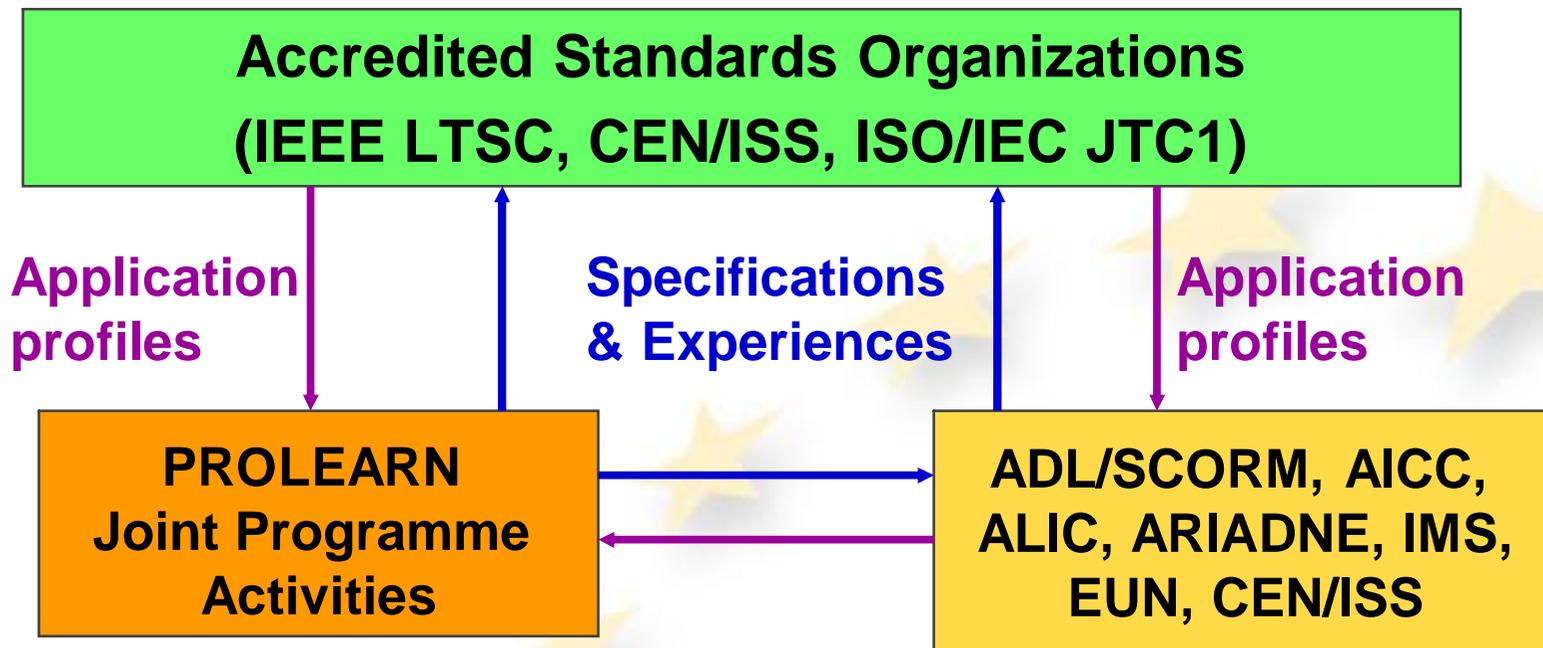
PROLEARN Virtual Competence Center: Outreach to Industry

Level 1 Level 2 Final Stage





Relevance of PROLEARN for Standardization





PROLEARN Project Website:
<http://www.prolearn-project.org>