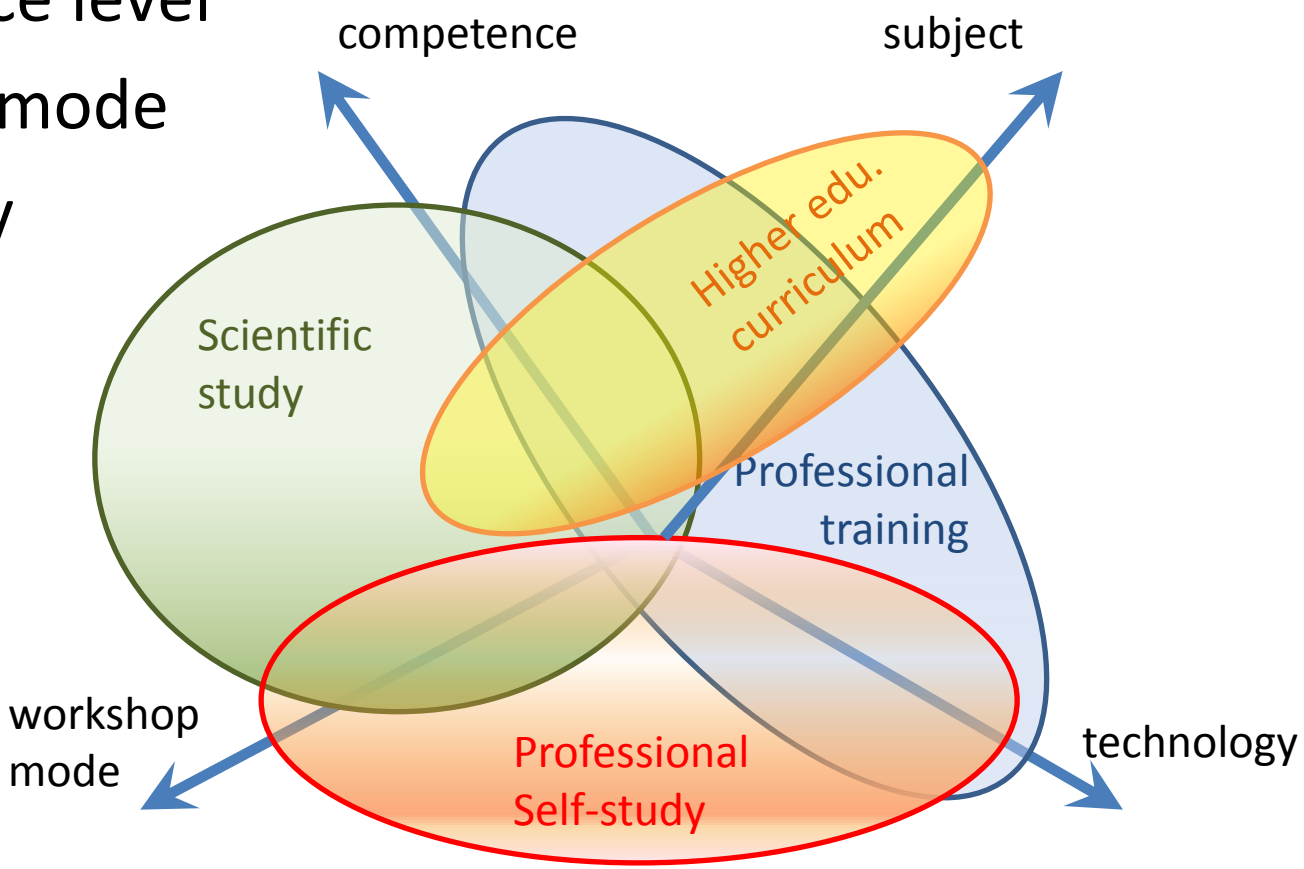
WORKSHOPS AND VIRTUAL LABS

Motivation

- Learning by doing and verifying
  - Applying proven patterns instead of tech-hype
  - Own testing of transactional properties
  - Using open source instead of hidden algorithms
- Skills that are needed in industry
  - mySQL, Oracle, … vs. Pyrrho, Ocelot, …
  - Embracing emerging trends (semantic web, ontologies, …)
- Combining theory and practice
  - There is nothing more practical than a sound theory
  - A developer without theory is like a sailor on a boat without rudder (Leonardo da Vinci)

Workshop Classification

- Target groups by
  - competence level
  - workshop mode
  - technology
  - subject



Project Workgroups (Overview)

- Framework (curricula and skills)
  - Analysis of curricula (e.g. ACM, DBTech partners, trends & needs in industry)
  - Develop and recommend DBTech Pro Framework
- Servers (DBTech Lab Servers)
  - Setup server infrastructure, tech support for users
- Tutorials (DBTech form and contents)
  - Didactically prepared material for students
  - Instructor notes, assessment material
- Workshops (DBTech Pro Workshops)
  - Develop workshops

Tutorials

- Digital video presentation
- Didactically prepared material with exercises
- Step-by-step self study
- Model solutions
- instructor notes
- Test bank for assessment of students.

Tutorials (example)

Education and Training

DBTech EXT*
OLAP and Data Warehousing
Virtual Laboratory Workshop
(OLAP&DW VLW)

Lifelong Lear

In this laboratory, we will demonstrate the basic utilities of the open-sourc
applying OLAP techniques for the purpose of analytically process data under c

Part A: Tutorial (Theoretical) Introduction

Step-A1: Virtual workshop participants should be aware of the reading ma
available in the relevant bibliography
Step-A2: Tutorial lecture slides . Evangelidis and L. Karamitopoulos
Step-A3: Try OLAP, a web-based tutorial that is maintained by Bernard L

Part B: Hands-On Laboratory, PALO® for Excel

There are two hands-on laboratory exercises, which demonstrate the basic utilities of *PA*
Excel, and one exercise that tests the corresponding learning outcomes.

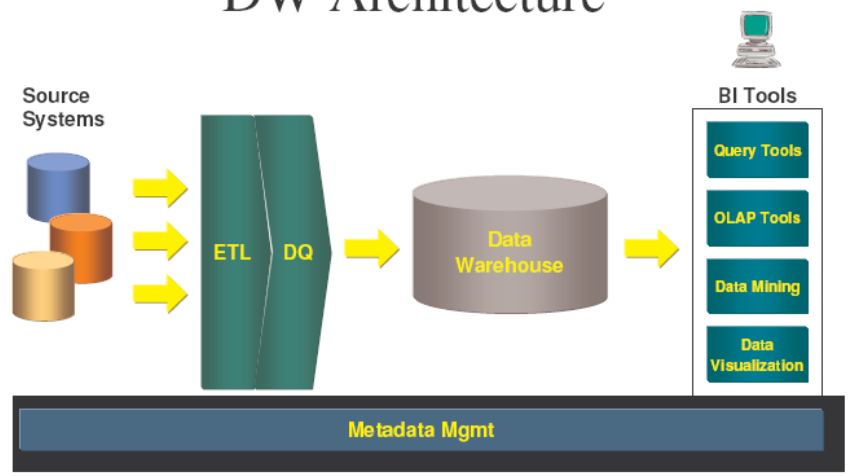
Step-B1: Obtain the required software for this laboratory, which is (a) *Microsoft Office*
PALO for Excel / Windows (Open Source – Archive Download). *PALO* softw
be downloaded from the official site of Jedo
http://www.jedox.com/en/downloads/current/download.html. You may n
register; if you do so, you will have access to the provided demo
corresponding manuals (2) can be downloaded from the same site through "S
– PALO Manuals" (First steps with Palo for Excel – Manual" and "Instal
Setup Guide – Manual"). Note that *PALO* offers the corresponding softw
Linux, as well.
Step-B2: Install the *Palo for Excel* software. The *Palo Excel* client setup includes the
software *.NET Framework v2.0* and *SP3* for *Excel 2003*, and you can op

DBTech Pro Workshop at Reutlingen University, Germany
November 2-3, 2004

Knowledge Discovery from Databases
Data Warehousing & OLAP

Georgios Evangelidis - Leonidas Karamitopoulos

DW Architecture



DBTech Workshop Structure

THEORY

- Theoretical contents
  - ✓ Basic concepts
  - ✓ Problem identification
- Practical Contents / Tool descriptions
  - ✓ Selected tools
  - ✓ Other tools

LABORATORY

- Concept recognition
  - ✓ Problem solving experimentation
- Behaviour observation
  - ✓ Learning

Demonstrations

EVALUATION

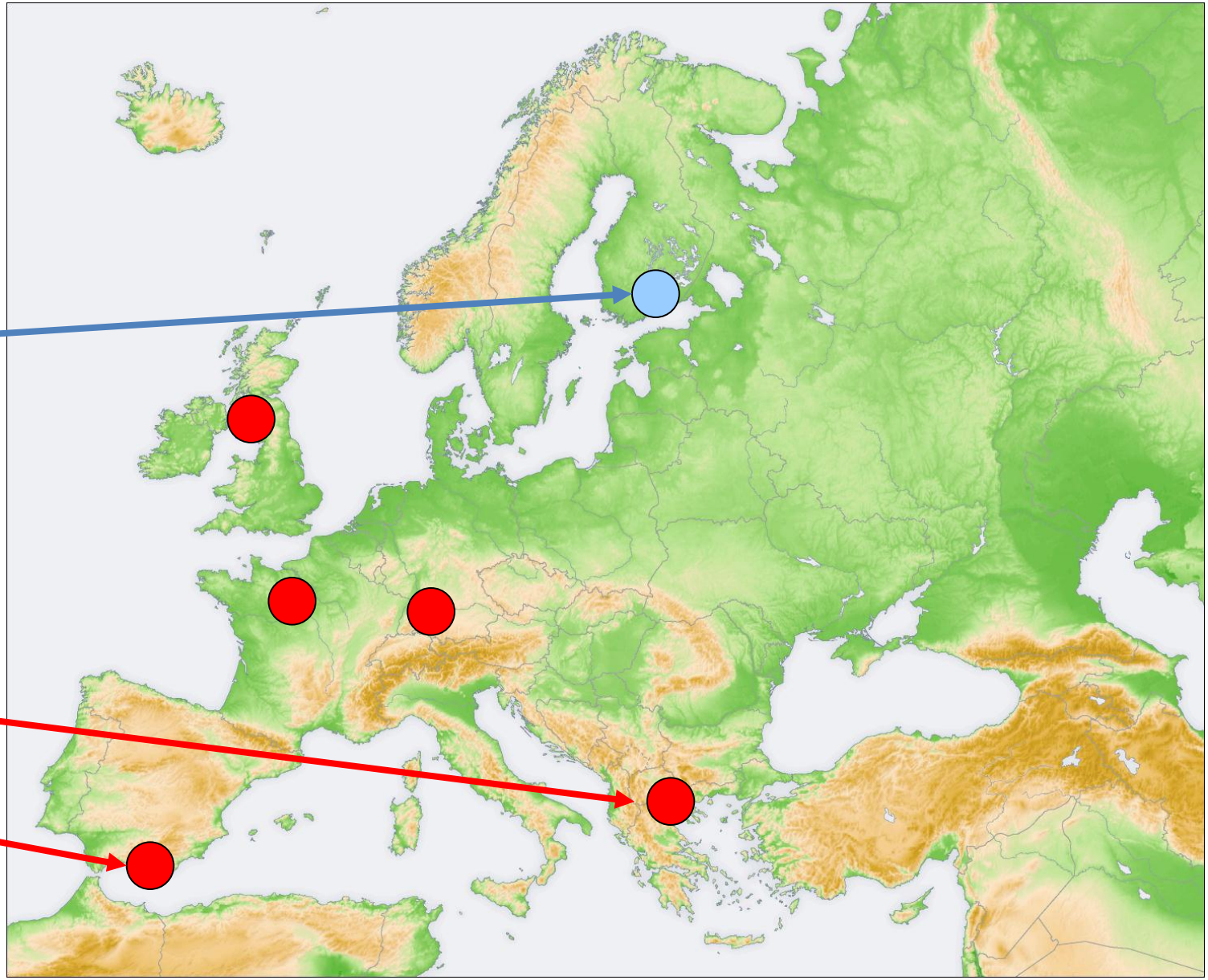
Workshop Formats

- Live workshops
  - Face to face lectures (theory)
  - Hands on labs (practise)
- Virtual workshops
  - Online course material (UOM DBTech Portal)
  - Virtual labs (UMA Virtual Desktop)
  - (A)synchronous communication with teacher

DBTech Workshops

- Database Modeling and Semantics
- Database Administration & Tuning / Index Design
- Concurrency Control & Recovery
- Data Access Patterns, O-R Mapping
- XML & Databases
- Distributed, Embedded, Replicated, and Mobile DBs
- OLAP and Data Warehousing
- Business Intelligence and Knowledge Discovery from Databases

DBTech EXT Distributed Resources



HAGGA-HELIA
Project CMS

Univ. of Macedonia
eLearning Platform
(Moodle)

Univ. of Malaga
Virtual Desktop
Infrastructure