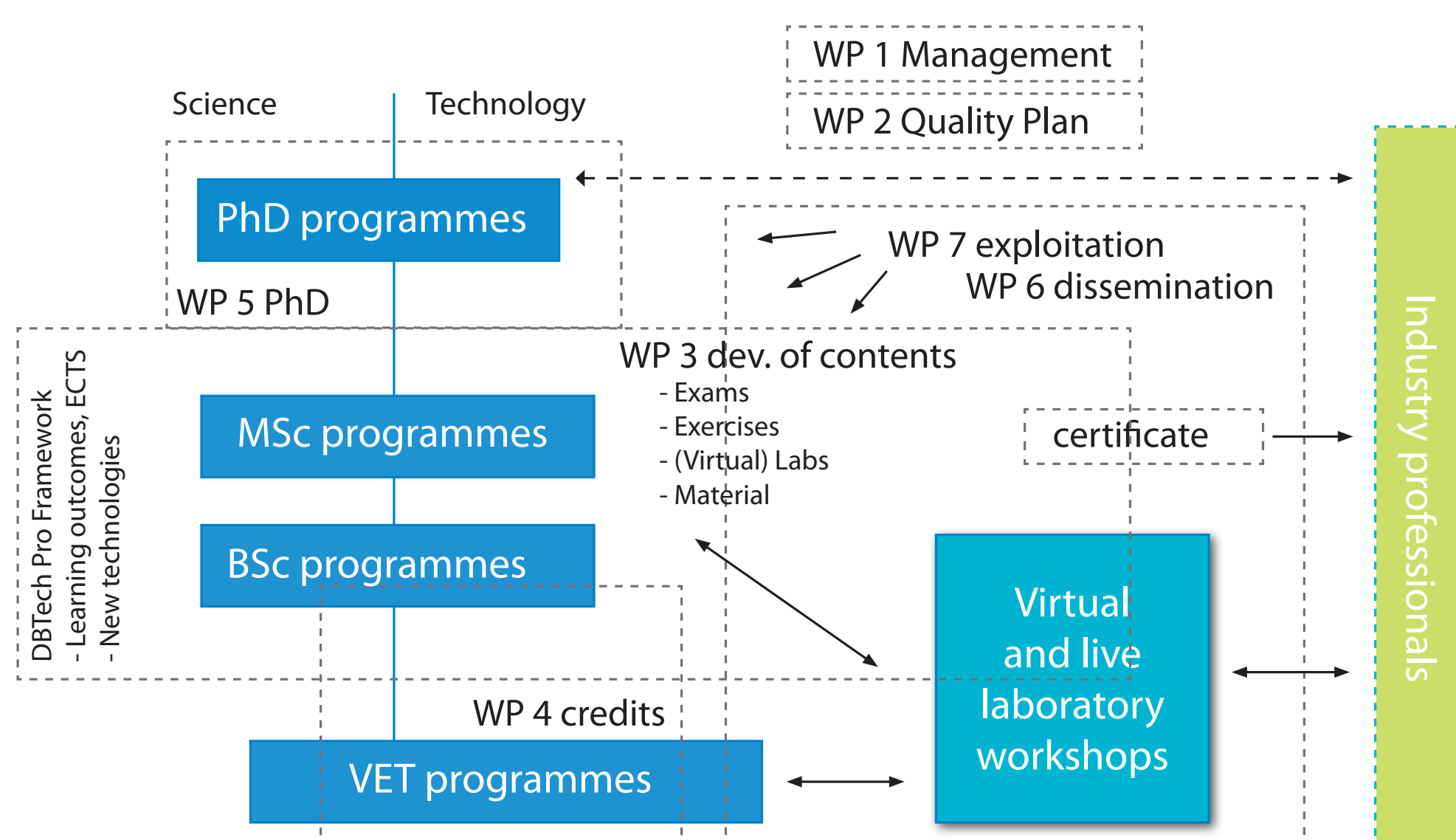


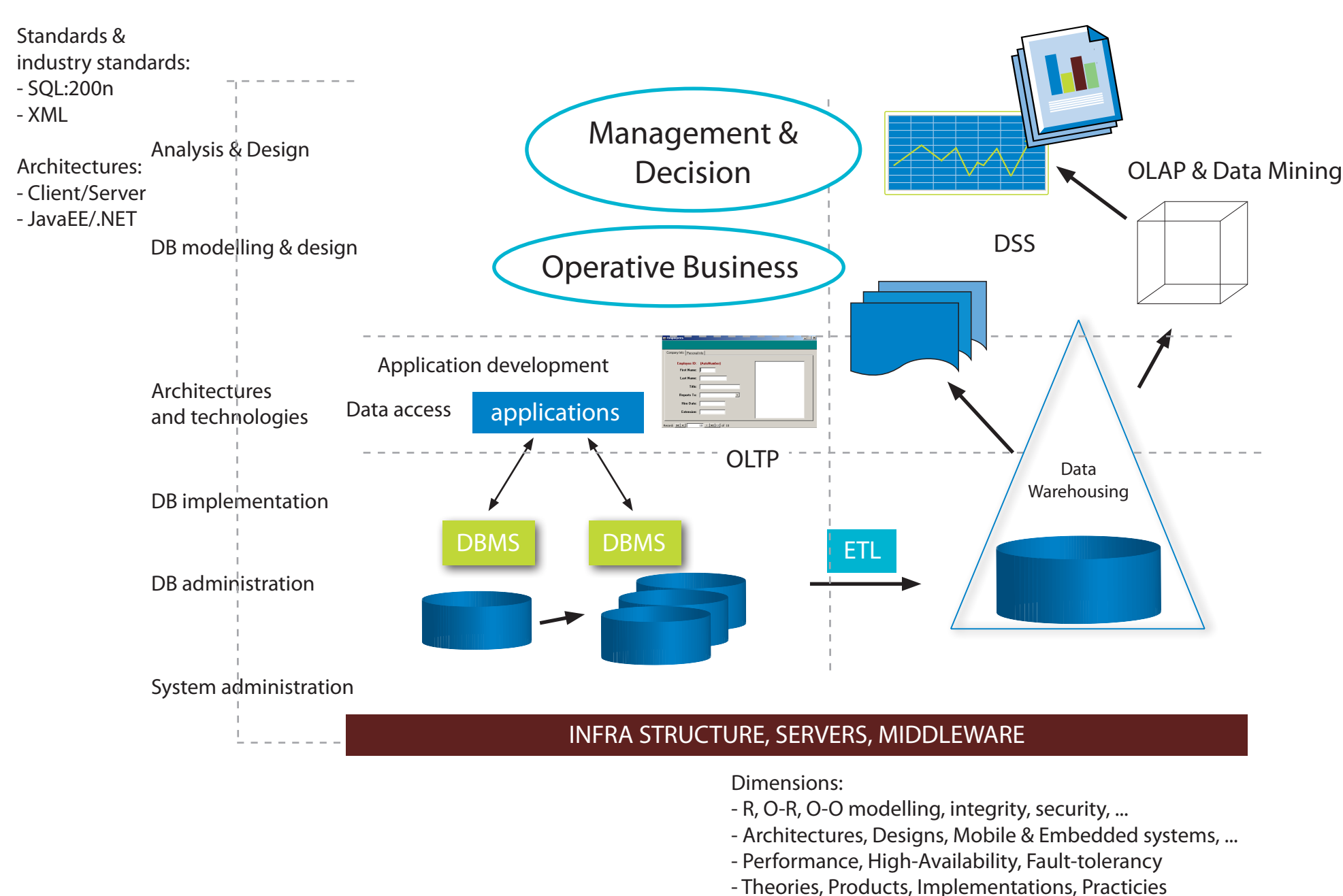
DBTech EXT

DBTech EXT is an **ICT project in EC LLP Transversal Programme**. Its main goal is to develop up to date **curricula** that meet the requirements of European labour market. The subject field is **database technologies**. The scope of the curricula development encompasses the entire educational system from vocational education to PhD education. The main deliverables of the project are **laboratory workshops** on several fields of database technologies.

DBTECH EXT WORKPACKAGES



THE DBTECH EXT FRAMEWORK



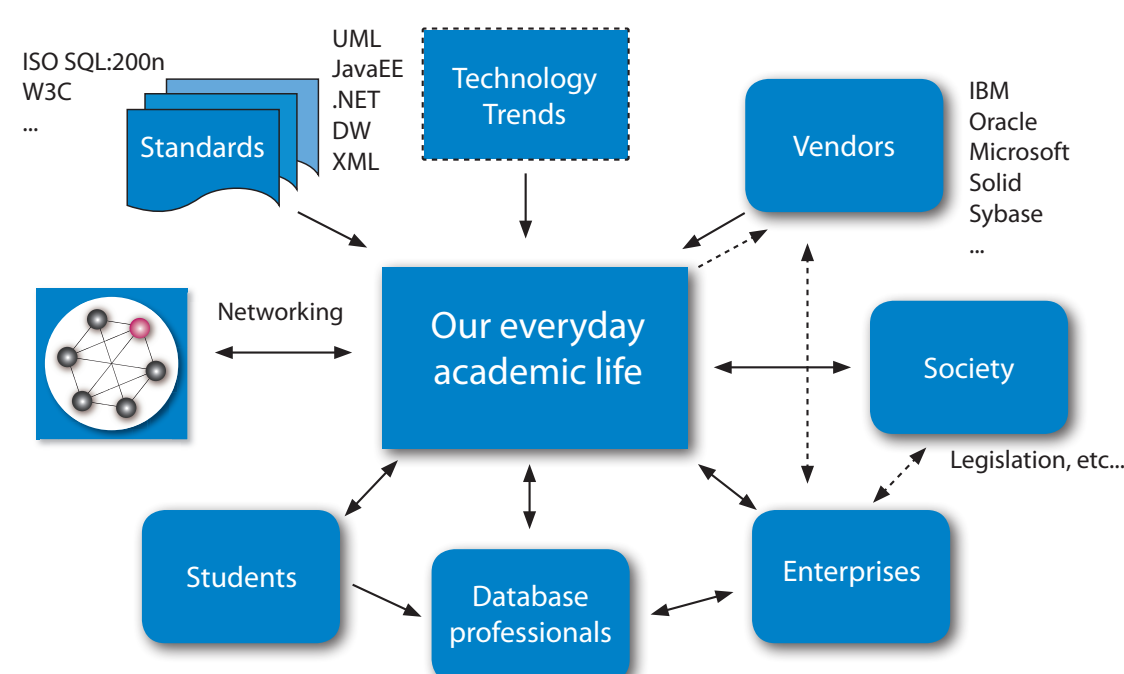
AIMS OF THE DBTECH PRO / EXT WORKSHOPS

- We use real DBMS products used by the industry
- We learn by doing
- We learn to verify issues
- We learn that there exist problems
- We learn by understanding the problems
- We learn to meet the problems

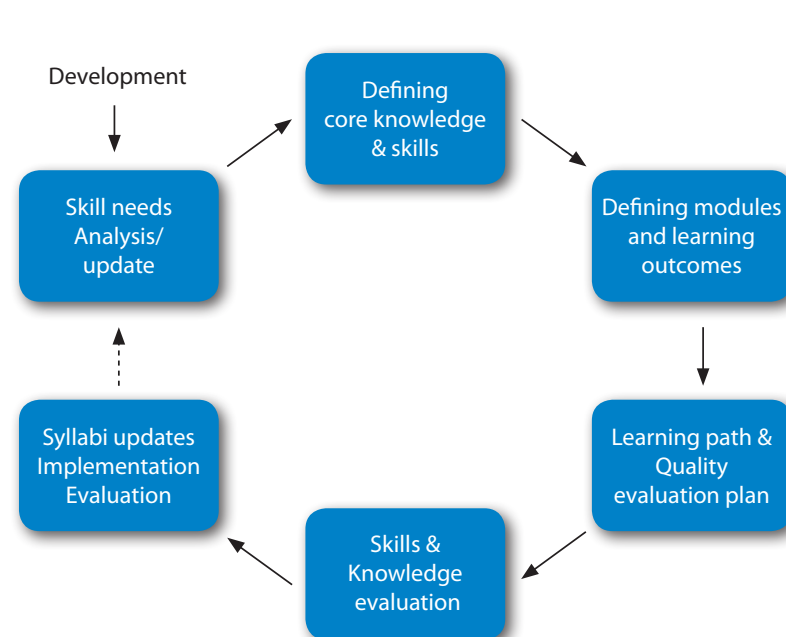
WORKSHOPS

1. Database Modeling and Semantics
2. Database Administration and Tuning, Index Design
3. Concurrency Control and Recovery
4. Data Access Patterns, O-R Mapping
5. XML and Databases
6. Distributed, Replicated, Mobile and Embedded Databases
7. Data Warehousing and OLAP
8. Business Intelligence and Knowledge Discovery

THE CORE STAKEHOLDERS IN THE CURRICULA DEVELOPMENT PROCESS



CURRICULA / SYLLABI DEVELOPMENT CYCLE

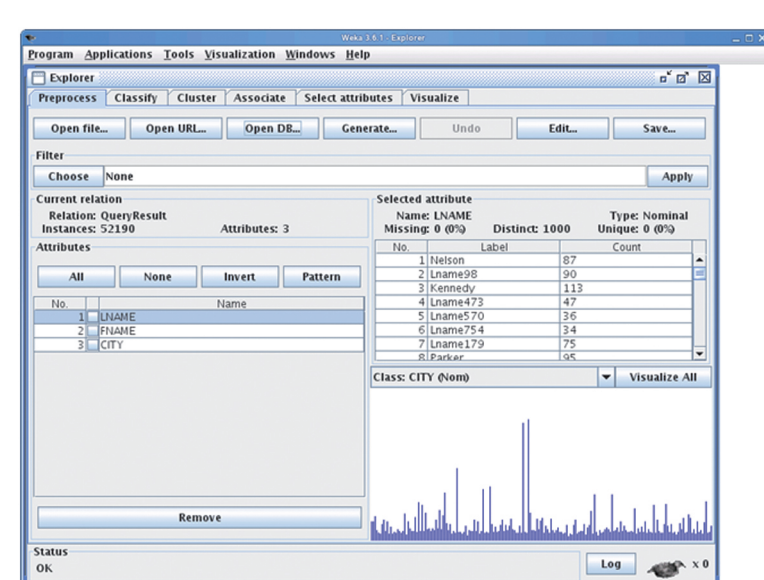


COMPARISON OF CLI APIS AND ORM FRAMEWORKS

	CLI APIs:	ORM Frameworks:
	ODBC	Java camp
	JDBC	.NET
	ADO.NET	JDO
		TopLink
		Hibernate
		JPA
Updated Type 0 - sensitive	possible	no
Update Type 1 - rrv predicate	possible	possible
Update Type 2 - select ... update	possible	possible
Performance o verhead	low	high (beta)
OOP programming	labor-intensive	yes
Persistence	SQL	yes
Use of native SQL	detailed	limited
- isolation	full control	default
- local transaction	full control	TM ¹⁾
- global transaction	ADO.NET	full control
2 nd level caching		implicit ²⁾
Optimistic Locking	RVV	yes
Version stamping (default)		configurable
		client-side
		server-side

1) using Transaction Manager (TM) 2) using TransactionScope

AN EXAMPLE OF THE DATA MINING VIRTUAL LABORATORY WORKSHOP



For more information:

<http://www.dbtechnet.org>
<http://dbtech.uom.gr>

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