

ADDRESSING THE WIDENING SKILLS GAP IN EUROPE

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"Shaping the Information Society in Europe"

7 Companies

- BT, Siemens, Microsoft, Nokia, IBM, Thomson-CSF, Philips - IBM chairing the Steering Committee

The Issue

- ICT Skills shortages in Europe



Requirements Statement of the Industry
Generic ICT Skills Profiles



Sponsorship

- Support from the European Commission

Europe's ICT Skills Crisis

The Gap

- 500K open positions in 1998* (5 % of demand) → 1,7million in 2003 * (13 % of demand)
- 60 % of Execs in Global Companies say finding e-commerce skills is top issue **

The Causes

- NOT ENOUGH STUDENTS
- NOT THE RIGHT SKILLS
- ICT INDUSTRY IMAGE
- WOMEN NOT ATTRACTED

SUPPLY / DEMAND IMBALANCE

The Economic Cost

- 380 bn Euro/GDP Loss over next 3 years ***
- 100 bn Euro in wage revenues to be lost over next 3 years ***

* Source: IDC "Europe's IT Skills Crisis - Whose Problem is it?", Sept. 99

** Source: Forrester Report "Skills Market Place Emerge", Oct. 99

*** Source: Datamonitor

Generic ICT Skills Profiles - Project Deliverables Phase I (Pilot Project)

- **13 Profiles for**
 - ✓ **Telecommunication**
 - ✓ **Software & Services**
 - ✓ **Products & Systems****Non-technical language**

- **Communication**
 - ✓ **Website**
 - ✓ **Brochure**

- **Skills Conference November 99**
 - ➔ **New Partnerships**

ICT Skills Profiles (Examples)

Broad Job Area

■ Software Architecture and Design

Examples of Job Titles: Software Programmer; Systems Developer; Systems Architect; Systems Architecture & Design Scientist; Systems Integrator; Computer Scientist

Job Description

Tasks associated with the Job

■ Digital Design

Examples of Job Titles: Hardware (Digital) Designer; Development Engineer in Digital Baseband Processing

Technology Areas associated with the Job

■ Systems Specialist

Examples of Job Titles: Product Specialist or Consultant; Systems Engineer; Information Technology Specialist; Customer Systems Specialist; Solution Specialist

Type and Level of Skills

■ DSP Applications Design

Examples of Job Titles: Digital Hardware and Software Engineer; Algorithm Designer; Information and Communication Theory Specialist; Scientist

Description of Career Path/ Future Opportunities

■ Communications Network Design

Examples of Job Titles: Data (Mobile) Network Designer

ICT Skills Profiles (cont.)

Broad Job Area

Job Description

Tasks associated with the Job

Technology Areas associated with the Job

Type and Level of Skills

*Description of Career Path/
Future Opportunities*

■ Multimedia Design

Examples of Job Titles: Multimedia Programmer; Multimedia Network Designer; Web Designer; Human Interface Designer; Multimedia Architect; Internet/Intranet, audio, video Engineer

■ Software & Applications Development

Examples of Job Titles: Application Programmer; Software Engineer; System Developer; Technical System Designer; Software Architect; Maintenance & Support Specialist

■ Radio Frequency Engineering

Examples of Job Titles: RF Designer; RF Engineer; RF Architect; RF System Integrator

■ Data Communications Engineering

Examples of Job Titles: Communications Software Development Engineer; Network Architect; Network Product Architect, Communications Product Test Engineer

ICT Skills Profiles (cont.)

Broad Job Area

■ IT Business Consultancy

Examples of Job Titles: Enterprise Wide Information Specialist; Business Analyst; Business Architect; Application Specialist; Information Technology Strategy Consultant; Strategic Information Management Consultant; Information Management

Job Description

Tasks associated with the Job

Technology Areas associated with the Job

Type and Level of Skills

*Description of Career Path/
Future Opportunities*

■ Technical Support

Examples of Job Titles: Computer Operator; Operations Analyst; Help Desk Operator; Problem Manager; Trouble-shooter; Network Management Specialist; Configuration Management Specialist

■ Product Design

Examples of Job Titles: Design Engineer, Hardware Design Engineer; Hardware Development Engineer; Product Development; Computer Designer; System Integrator

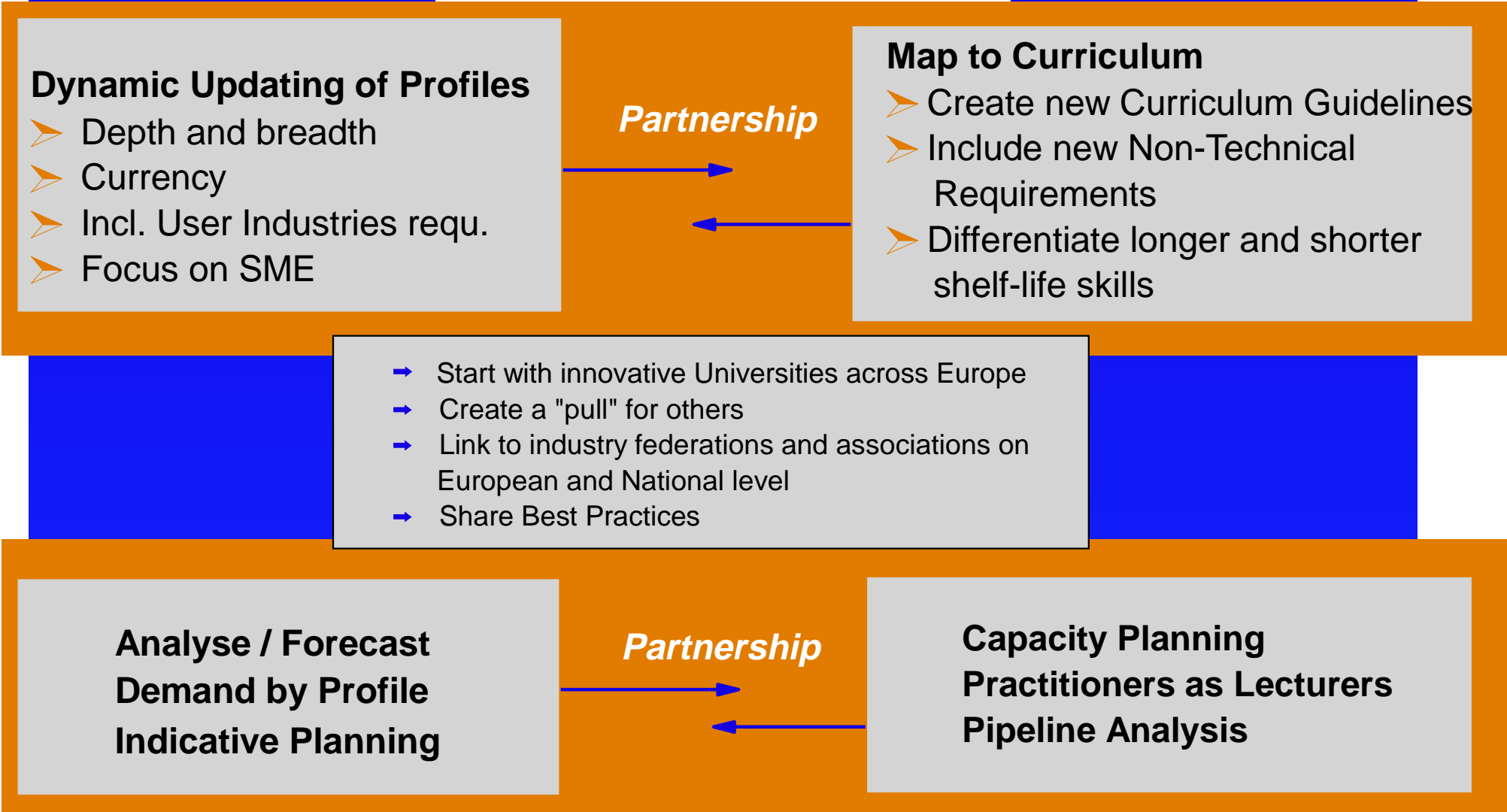
■ Integration & Test/Implement. & Test Engineering

Examples of Job Titles: Systems Integrator; System Implementation Engineer; Integration System Engineer; Integration Engineer; Implementation and Test Specialist; Integration and Test Specialist

Plan for Phase II - Dynamic Adjustment between Supply & Demand

DEMAND

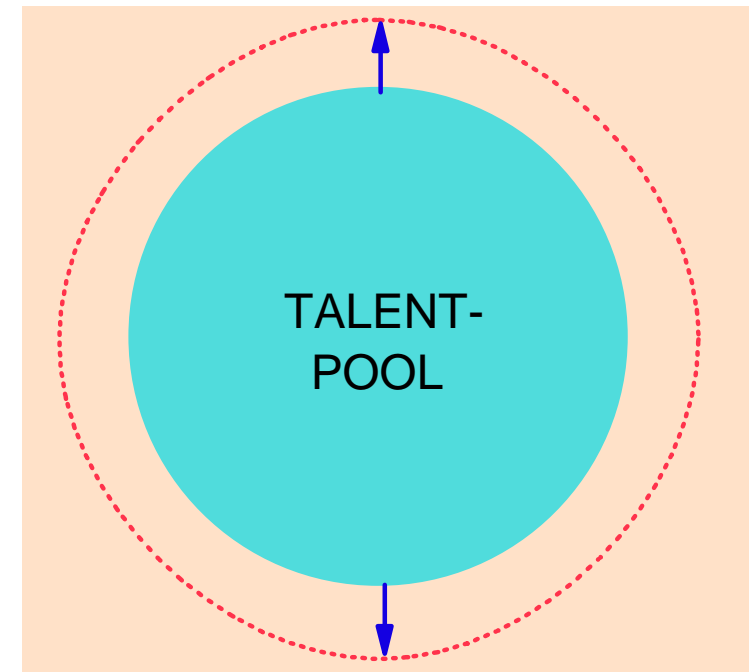
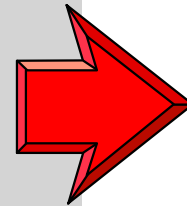
SUPPLY



Plan for Phase II (cont.) - Increase Talent-Pool

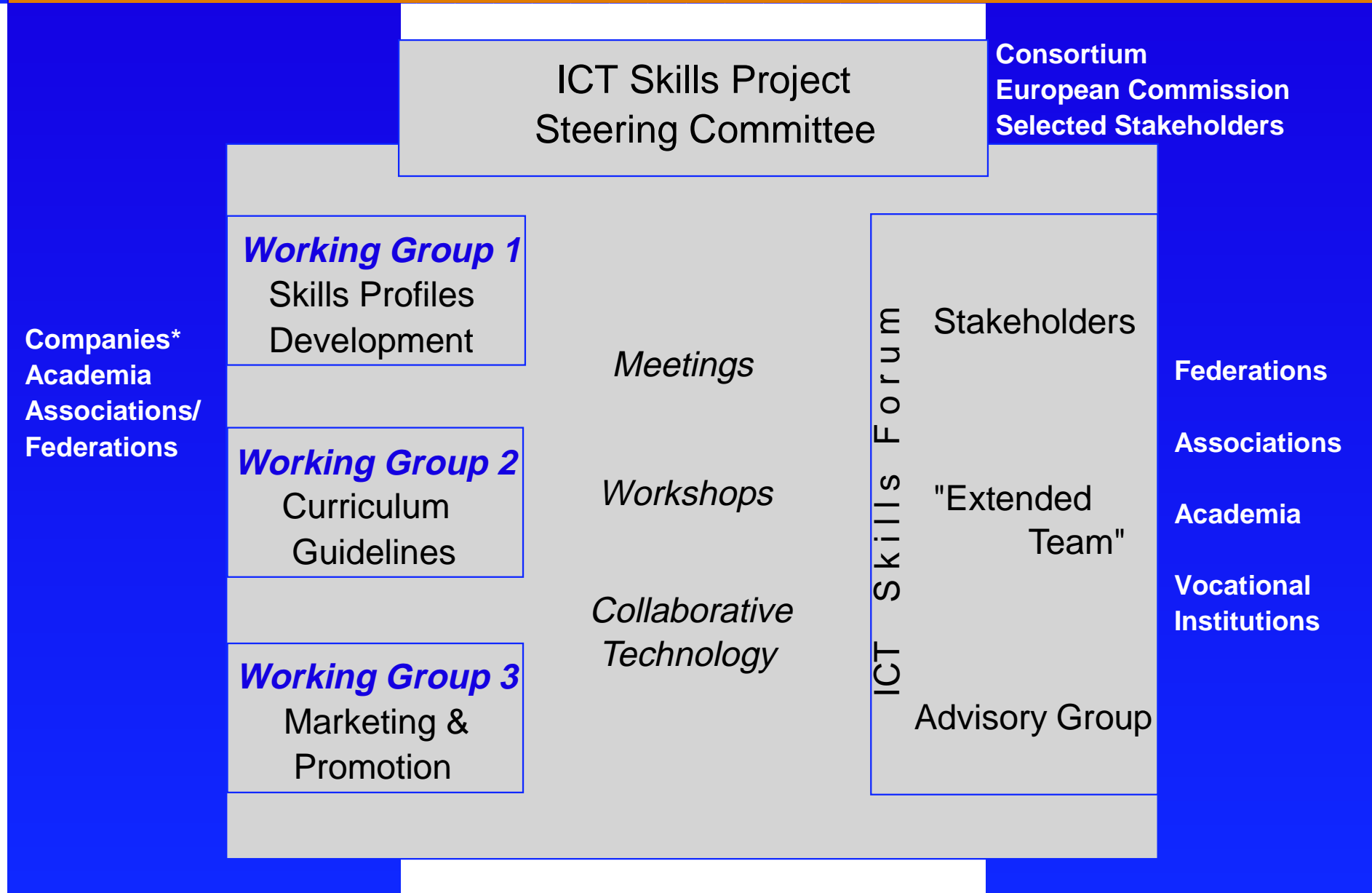
Marketing and Communication Plan

- Change Image from "IT" to "New Economy" / e-Economy
- Attract Women
- Campaign by Segment
- Start early (primary/secondary Schools)
- Enhance Website ("Skills Portal")



Mobilize potential IT Workforce

Project Structure for Phase II



* additional Companies expected to join
ICT Consortium

Summary

- Sense of Urgency to Address the ICT Skills Issue - *Economic Impact*
- *New Partnerships* between Industry, Government and Academia
- Speed is key -- Market changes *accelerate*
- Manage *Supply-Demand* Equation - Quantity and Quality
- Enhance the Learning Cycle with *e-Learning* - New Pedagogy

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Generic Skills Consortium

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