



Anticipating employment and skill trends: Comparing alternative approaches

Restructuring Forum:
Sectors' New Skills for New Jobs
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Objectives

Cedefop now conducts **regular medium-term forecasts of skill supply and demand in Europe** (a quantitative macro-economic analysis to 2020)

☞ This session will discuss issues in **comparing and integrating these results with those from the sectoral studies** in quantitative and qualitative terms, including how the Cedefop work results have been used in the Sectoral Studies and how these exercises might be better joined up in future



Overview

- Why, and how to, anticipate changing skill needs
- Alternative methods: strengths & weaknesses
- Comparing the Cedefop projections and the DG Empl Sectoral studies
- Conclusions: Moving Forward



Why and how to forecast?

- Rationale for anticipation work
- Alternative approaches
- Strengths & weakness of different methods
- What can & can't be achieved



The rationale for forecasting in a market economy

- Uncertainty- we live in a rapidly changing & uncertain world
- Anticipation: everyone has to plan to avoid problems & optimise outcomes
 - government, educational institutions, individuals, employers
- Long lead times on investment decisions such as education and training choices
- Need for a cool, logical and systematic assessment of future prospects, including counterfactuals to assist in policy formation



Is systematic anticipation possible?

- Nobody can **predict** the Future with certainty
- Everybody can prepare or **plan** for the future
- To do this involves some element of forecasting: either **implicitly** or **explicitly**
- In this sense not only is forecasting possible it is also **inevitable**
- The only meaningful questions are **how**, by **whom** and with **what end** in mind?



How to anticipate changing skill needs

- Ask employers
 - Current skill deficiencies (marginal & ephemeral)
 - Anticipated change (subjective and unreliable)
- Formal, quantitative models
 - Extrapolation of past trends & other time series methods
 - Need for behavioural content
 - Transparent and explicit
- Other more qualitative approaches
 - Sectoral studies
 - Regional and other Observatories
 - Scenario development

Approach	Advantages	Disadvantages
Formal, national level, quantitative models based projections	• Comprehensive • Consistent • Transparent • Quantitative	• Data hungry • Costly • Not everything is quantifiable • False impression of precision
Surveys of employers, etc, asking about skill deficiencies & skill gaps	• Direct “user/customer” involvement	• May be very subjective and inconsistent • Too much focus on the margins
Focus groups/round tables, Delphi style methods; Scenario development	• Holistic • Direct “use/customer” involvement	• Can be non-systematic • Can be inconsistent • Can be subjective
Sectoral/ occupational / regional studies (using both quantitative & qualitative evidence)	• Holistic (for the sector) • Partial • Strong on sectoral & other specifics	• Inconsistency across sectors



What anticipation...

can provide?

- systematic analysis of the implications of continuation of past/current trends and patterns of behaviour
- different scenarios based on alternative assumptions
- basis for intelligent and informed debate and further research

and cannot do....

- make precise predictions that can be used for detailed manpower planning (not a crystal ball)
- provide qualitative information on skills and competences

Forecasts - Who needs them?

1. The State- planners/policy makers
(including education and training providers)
 2. Companies/Employers
 3. Careers advisors and individuals making career choices
 4. Markets – helping them to function better
- Different audiences may have different needs



Cedefop pan-European skills forecasting

Pilot projects on:

- demand for skills (skill needs - jobs)
- supply of skills (available skills – people)
- ☞ demonstrate feasibility & cost-effectiveness

New 4 year programme:

- further improvement of methods and data bases
- regular forecasts of skill supply & demand & possible imbalances (first one to be published early in 2010)



Aims & objectives of Cedefop projections

- Understanding past trends
- Provision of useful LMI on future occupational employment prospects & supply:
 - numbers employed, job openings & qualifications needed
 - Numbers obtaining qualifications and economically active
- Caveats:
 - Implicit assumptions about the labour market
 - Not mechanistic manpower planning



Forecast of skill supply until 2020

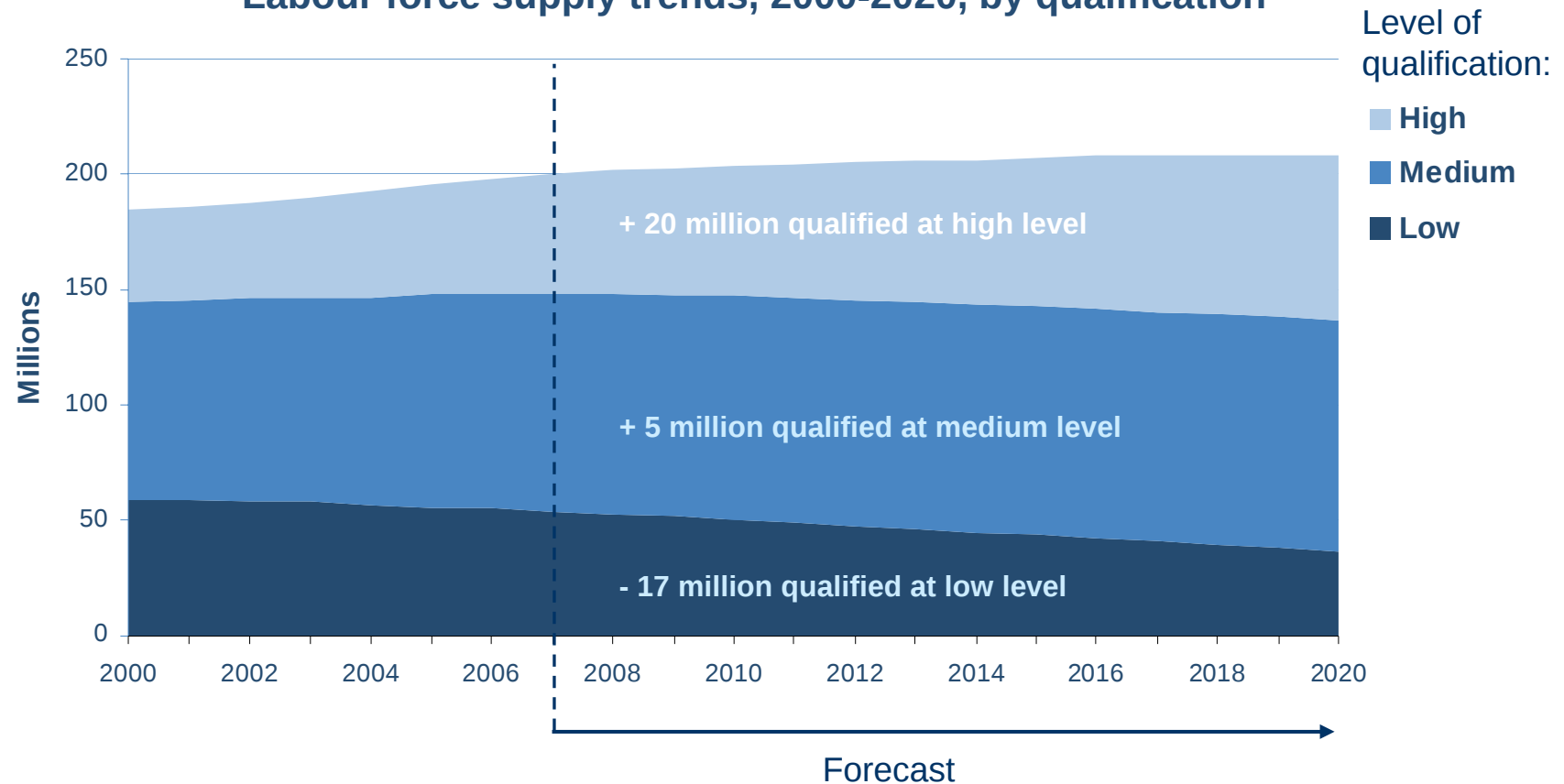
- Consistent pan-European skills supply projections using existing data
- **Skills supply measured as qualifications of population and labour force**
- Considers demographic change and scenarios
- Compatible (but not yet comparable) with previous projections of skills demand





Progress towards the Lisbon targets

Labour force supply trends, 2000-2020, by qualification



NB: Labour force aged 25 and more. EU-25 without Malta, plus Norway



On the right track...

- Europe is on track to raise its qualifications profile
 - ⇒ more Europeans acquiring high and medium qualifications
 - ⇒ fewer low-qualified Europeans
- Younger cohorts: the best qualified ever
- Rising supply parallels rising demand

BUT no room for complacency:

- Can trends be maintained?
- Will demand grow at the same pace and provide good quality jobs for all?
- What about the actual skills and their match with the labour market needs?



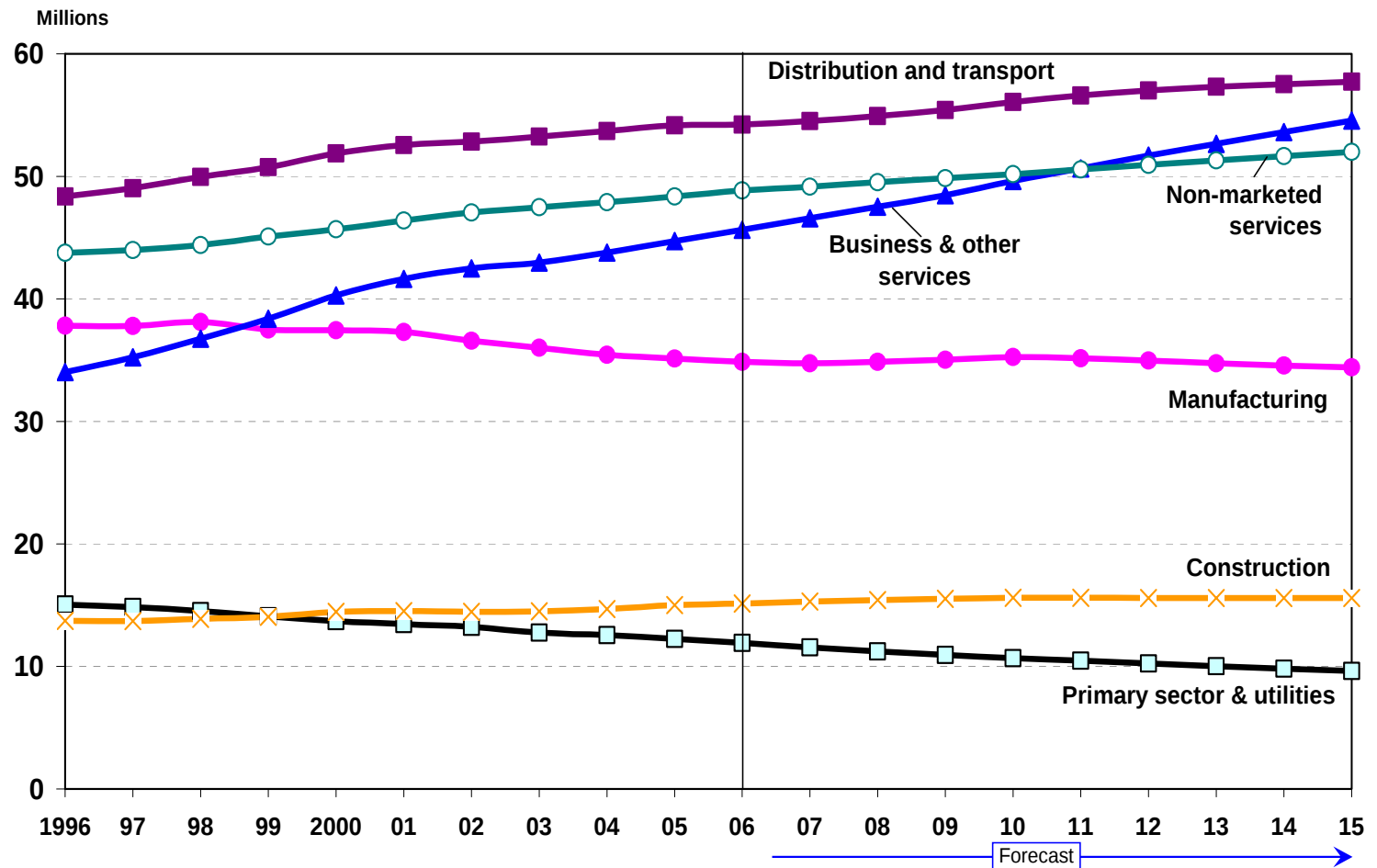
Forecast of skill demand until 2020

- Consistent pan-European skills demand projections using existing data
- **Skills demand measured as number of jobs by sector, occupation and qualification**
- Considers replacement needs
- 3 different scenarios but prepared before the financial crisis



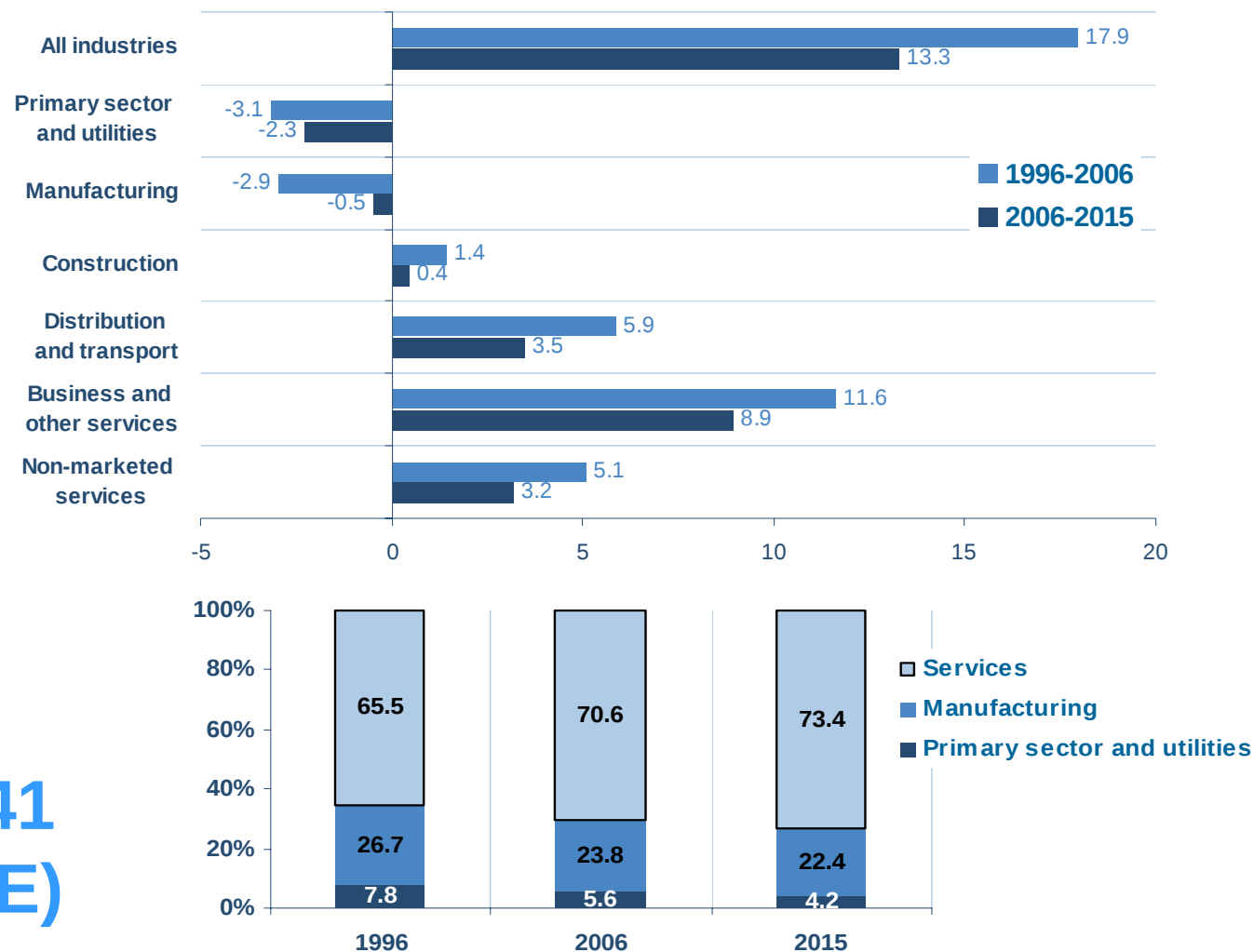


Trends by sector (EU-25+): pre-crisis



Sectoral change and structure (EU-25+): pre-crisis

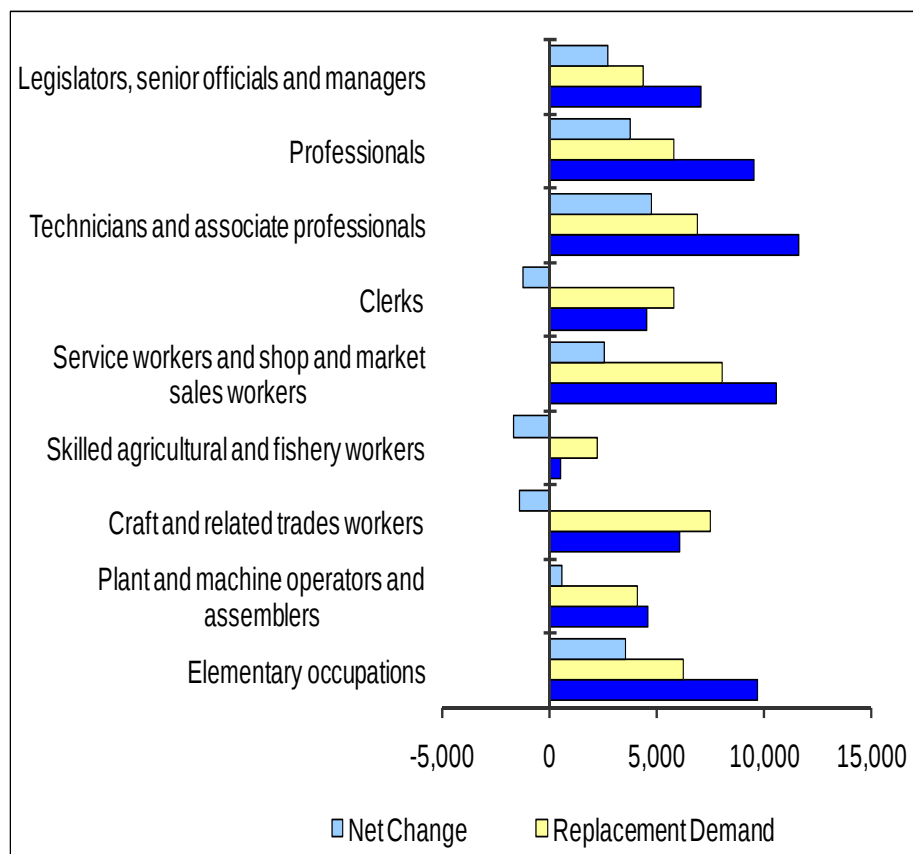
Results available for 41 sectors (NACE)



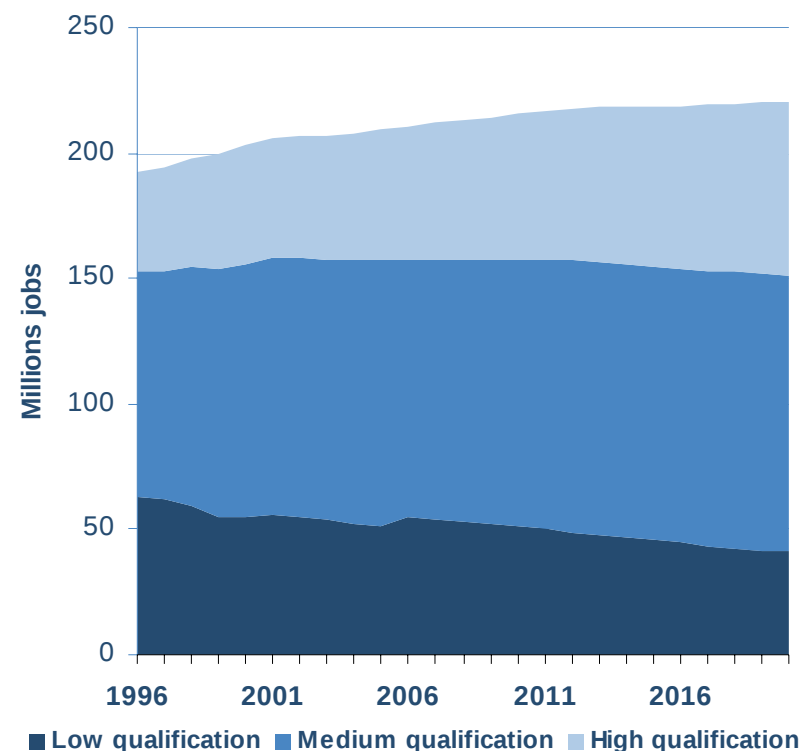


The demand for skills: 2006-2015

- Occupations:



- Qualifications:





New Cedefop projections

- Will cover both:
 - **Skill demand up to 2020**
 - **Skill supply up to 2020**
- Possibly discuss skill imbalances
- Taking into account the crisis (scenarios)
- Various new developments
- Will be published early 2010



Comparison of Cedefop & Sectoral Studies results

Cedefop

- Quantitative
- 3 scenarios to 2020
 - 41 industries
 - 25 occupations (ISCO 2 digit)
 - Qualifications (ISCED 3 broad levels)

Sectoral Studies

- Qualitative
 - 4 scenarios to 2020
 - 18 broad sectors
 - Various occupations
 - + other aspects of skills, including qualifications
- But** not complete coverage



Links with Sectoral Studies

- Cedefop projections used explicitly in a number of the studies
- Sectoral studies results have informed the new (updated) Cedefop forecast:
 - In quantitative terms (sectoral information input into E3ME)
 - In qualitative terms (skill demands & general interpretation of results)

NB: only 3 studies explicitly address the impact of the crisis



Problems in comparing the Cedefop and Sectoral Study results

- The sectoral studies:
 - Offer only a partial coverage of total employment (50-60%);
 - Adopt different definitions for sectoral boundaries;
 - Focus on only a subset of occupations;
 - Generally adopt a broader concept of skill;
 - Consider 3 or four alternative scenarios (but generally do not take direct account of the crisis);
 - Rarely provide quantitative estimates;



Results compared

- Broad comparisons of sectoral prospects
- Occupations (ISCO 2 digit) level
(qualitative changes)

Sector	Sector studies	Cedefop new forecast	includes crisis?
<i>Printing & publishing</i>	small decrease	small decrease	no
<i>Electricity, gas, water & waste</i>	no change	small decrease	no
<i>Post & telecommunications</i>	small increase	small increase	no
<i>Chemicals, pharmaceuticals, rubber & plastic prod</i>	slight decrease	small increase	no
<i>Health & social work</i>	increase	increase	no
<i>Computers, electronic & optical products</i>	decrease	small increase	no
<i>Furniture</i>	slight decrease	increase	no
<i>Financial services</i>	decrease	decrease	yes
<i>Non-metallic minerals</i>	no change	no change	no
<i>Transport & logistics</i>	small decrease	small decrease	yes
<i>Other services, maintenance & cleaning</i>	slight decrease	slight decrease	no
<i>Building & repairing of ships & boats</i>	decrease	decrease	yes
<i>Electromechanical engineering</i>	no change/small decrease	increase	no
<i>Defence</i>	large decrease	large decrease	no
<i>Textiles, wearing apparel & leather products</i>	decrease	decrease	no
<i>Distribution & trade</i>	no change	small increase	no
<i>Hotels & restaurants</i>	flat/small increase	small increase	no

	Occupational Group	Textile Industry	Printing and Publishing	Chemicals, pharmaceuticals and plastic products	Non-Metallic Materials	Electromechanical engineering	Computer, Electronic and Optical Products	Furniture and others	Electricity, gas, water and waste	Distribution and trade	Tourism including hotels, catering and related services	Transport and logistics	Postal sector	Telecommunications	Financial services bank, insurance and others	Health and Social Work	Other Services	Total
ISCO 1	Managers	↗	↘	↘	↗	↗	↗	↗	↗	↗		↗	↘	↗	↘	↗	↗	↗
	Total	↗	↘	↘	↗	↗	↗	↗	↗	↗		↗	↘	↗	↘	↗	↗	↗
ISCO 2	Accounting, business, sales, marketing and finance professionals	↗	↗	↗	↗	↗	↗	↗	↗	↗		↗	↘	↗	↗			↗
	Computing professionals	↗	↗	↗	↘	↗	↗	↗	↗						↗			↗
	Engineers	↗		↗	↘	↗	↗	↗	↗					↗				↗
	Journalists, editors and writers		↗															↗
	Medical doctors															↗		↗
	Nursing and midwifery															↗		↗
	Other professionals	↘			↗	↗	↗							↗	↗			↗
	Total	↗	↗	↗	↘	↗	↗	↗	↗	↗		↗	↘	↗	↗	↗		↗
ISCO 3	Health associate professionals							↗								↗		↗
	Industrial designers							↗										↗
	Logistics Professionals											↗						↗
	Operations professionals												↗					↗
	Pilots											↗						↗
	Ship officers											↗						↗
	Social workers						↗	↗								↗		↗
	Supply chain professionals			↗			↗	↗		↗								↗
	Technicians					↘				↗			↘	↘			↘	↗
	Total			↗		↘	↗	↗		↗		↗	↘	↘		↗	↘	↗
ISCO 4	Administrative support staff	↘	↘	↘	↘	↘	↘	↗	↘	↘		↘	↘	↘	↘		↗	↘
	Total	↘	↘	↘	↘	↘	↘	↗	↘	↘		↘	↘	↘	↘		↗	↘
ISCO 5	Sales personnel												↘	↗				↗
	Service workers									↘		↗	↘	↗	↗		↘	↗
	Total									↘		↗	↘	↗	↗		↘	↗
ISCO 7	Metal, machinery and related trades workers						↘					↗						↘
	Precision, handicraft, printing and related trades workers	↘	↗		↘		↘	↘		↘					↘			↘
	Total	↘	↗		↘	↘	↘	↘		↘		↗			↘			↘
ISCO 8	Assemblers	↘					↗											↗
	Labourers and operators						↗											↗
	Machine operators	↘						↘		↘								↘
	Plant and machinery maintenance and repair			↘	↗			↗										↗
	Production workers		↘	↘														↘
	Ships' deck crews and Locomotive-engine and Motor-vehicle drivers				↘	↘				↗		↗						↗
	Total	↘	↘	↘	↘	↘	↗	↘		↘		↗						↘
ISCO 9	Helpers, cleaners and freight handlers											↗				↗	↗	↗
	Labourers	↘		↘	↘	↗		↘							↘			↘
	Total	↘		↘	↘	↗		↘				↗			↘	↗	↗	↘
Other occupational functions									↗									↗
Total economy		↘		↘	↗	↘	↘	↘	↗	↗	↗				↘			↗



Importance of anticipating changing skill needs in Europe

- Analysing changing skill needs (quantitatively and qualitatively) is an important element in avoiding market failures:
 - more transparency
 - improve matching .. but also some danger of policy failure
- This type of Labour market information is a public good - but use of results in Europe is mainly limited to Government (policy makers & expert groups).
- North-America provides an example of 'best practice' in providing material to all target groups leading to greater market transparency & efficiency



Conclusions: Moving forward (or closer together?)

- Two ways the approaches could be better joined up:
 - Sectoral studies to focus more directly of detailed occupational change (as US BLS)
- Development of quantitative scenarios to 2020 based on sectoral studies but using E3ME

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Title:

**Validation and competence development
towards new skills in car and metal sector**

Anders Krantz

Managing Director

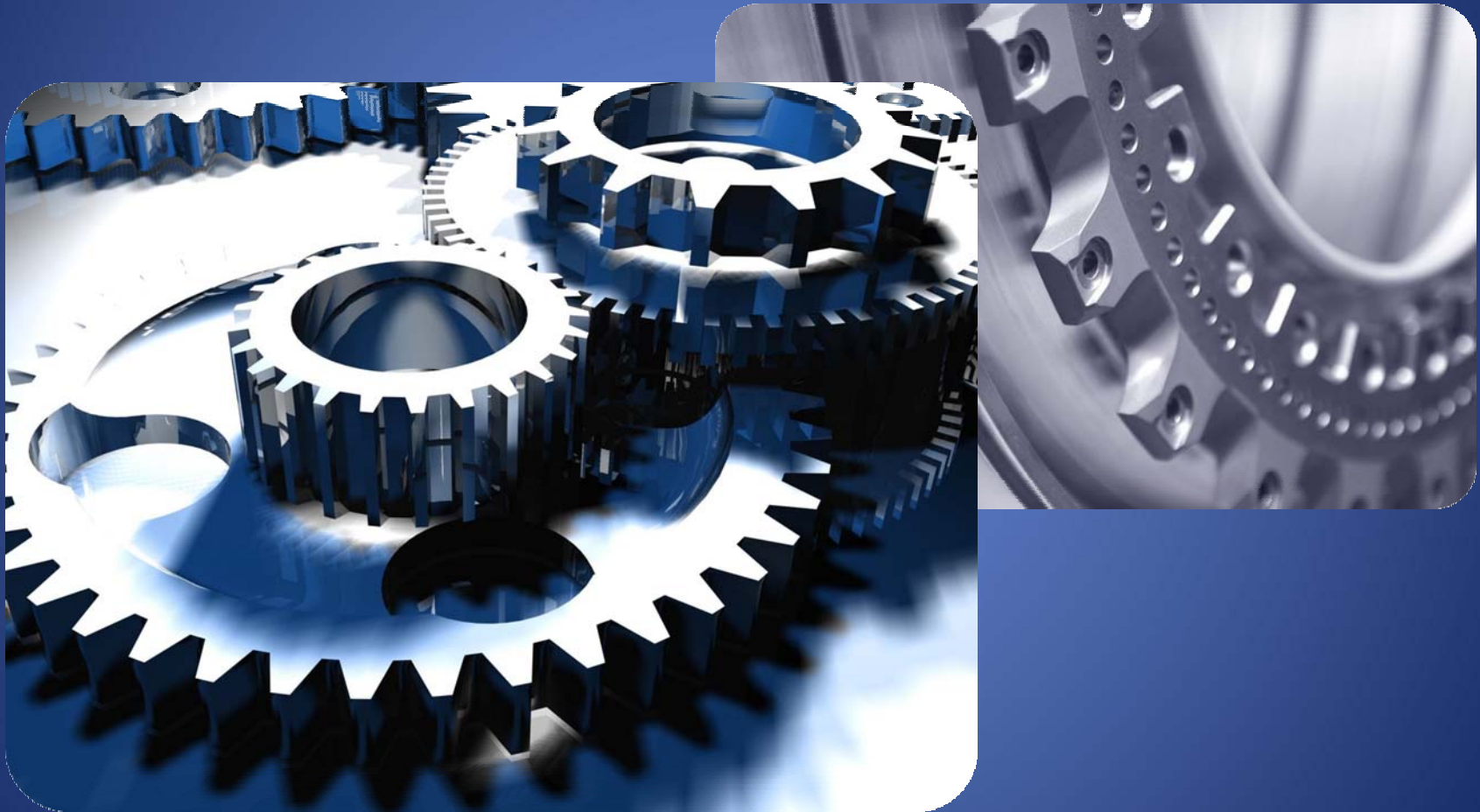
Partner Alliance,

Co-ordination of education products, services and
concepts in private and public sector.

Former part project leader in the German Article 6 project
AREE 2005-2007, Swedish part project Competence Builder.

- Strategic competence provisioning - implementation
- Method and technology for **Life Long Learning**

Complexity and flexibility needs constant new skills



A validation and competence project started 1998 by a network within the automotive and metal

sector



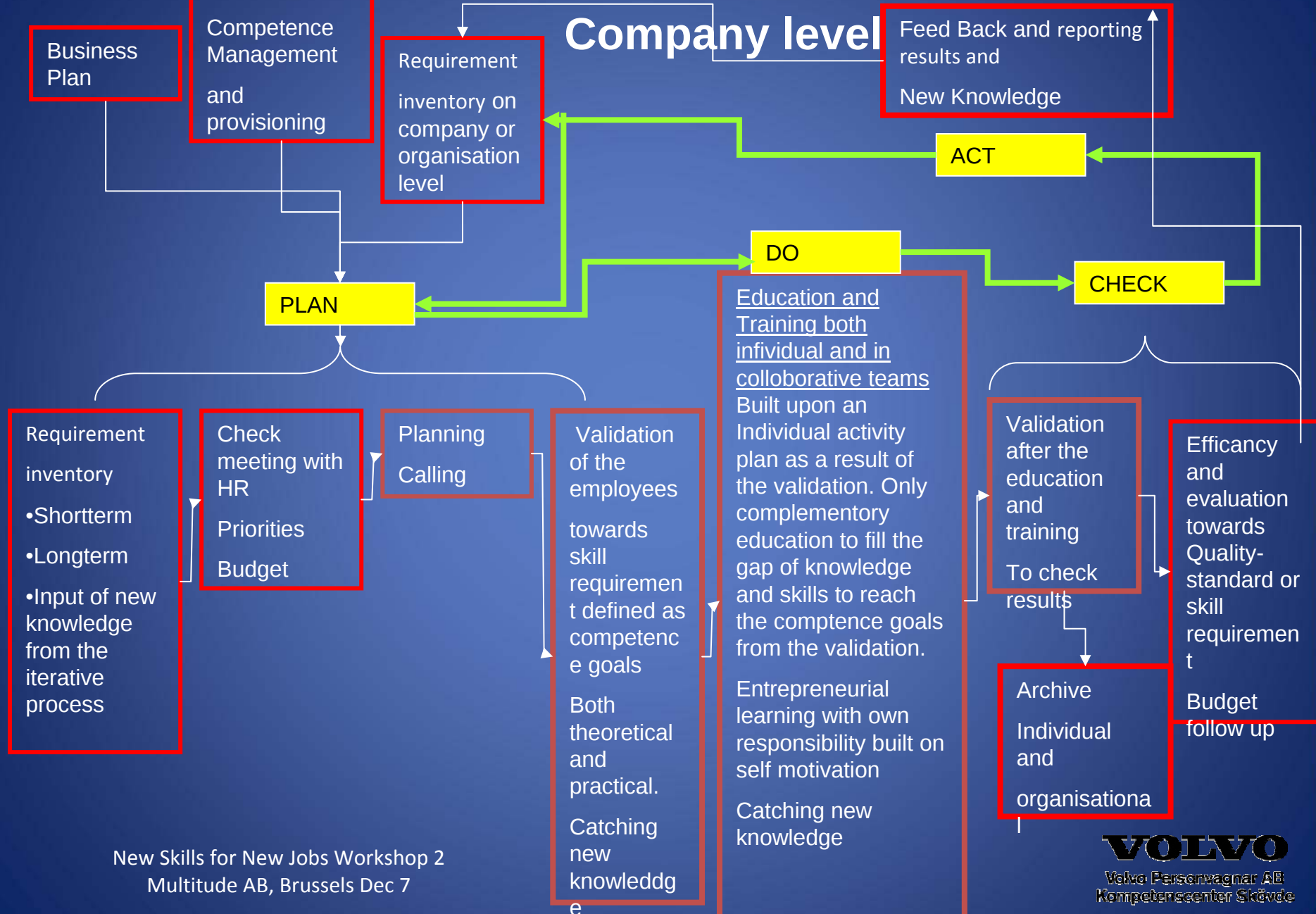
- Volvo Car Corporation
- IF Metall – Swedish Metal Union
- Sandvik Materials Technology AB
- Sandvik Coromant AB
- County Administrative Board of Gävleborg
- University of Gävle
- Skärteknikcentrum Sverige AB
- Swedish Public Employment Service
- Mapaz AB
- Multitude AB

Background of the validation and competence development towards new skills for CNC technicians in automotive and metal sector

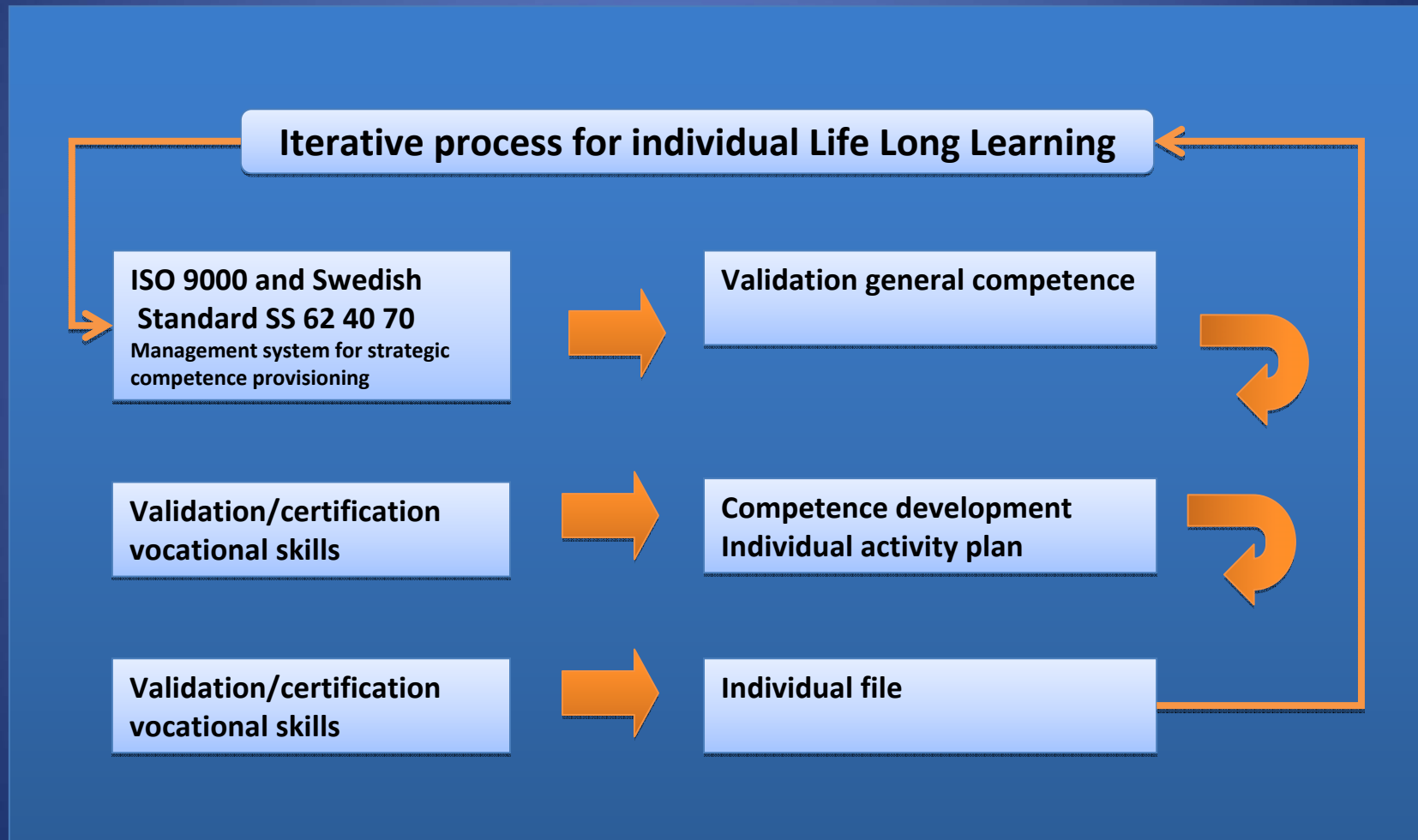
- **1998** Cooperation to identify new skills needed in production and development of internet services to support a qualified validation and education process for Life Long Learning.
- **2004** Priority CNC Technology and start of the first pilot project.
- **2005** CNC Technology **Green Certificate version 1**
- **2007** CNC Technology **Green Certificate version 2**
- **2008** CNC Technology **Blue Certificate version 1**
- **2009** CNC Technology **Black Certificate version 1**
- **2009** Complete content and internet services for validation and competence development on sector level implemented in Sweden.

Implementation process to match ISO 9000

Company level



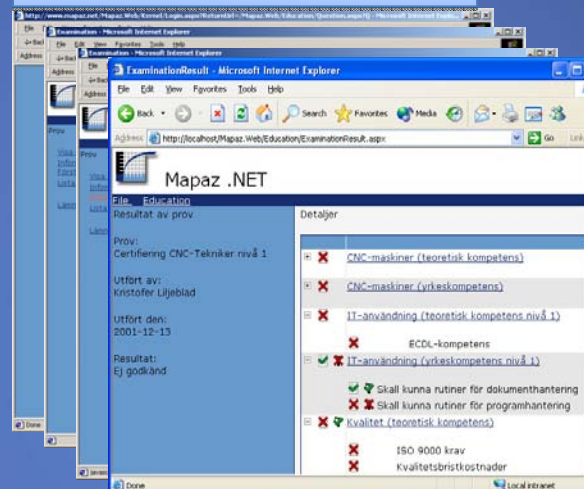
Iterative process for individual Life Long Learning Individual level



The process for validation



Theoretical Validation



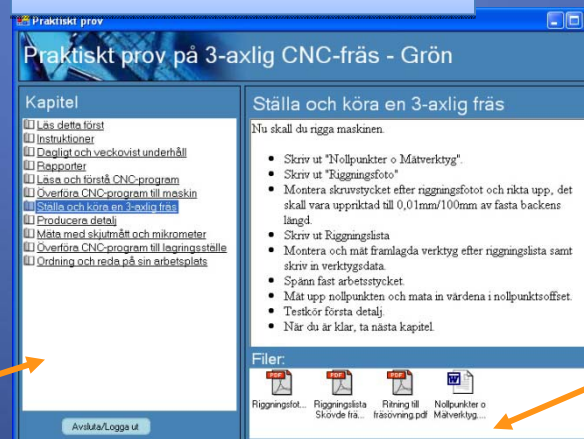
Each individual logs in on Mapaz server through Internet

A test is automatically generated by random for each individual when they login.

Automatic correction and display of the validation result



Practical Validation



Unique instructions and documents for each validation moment.

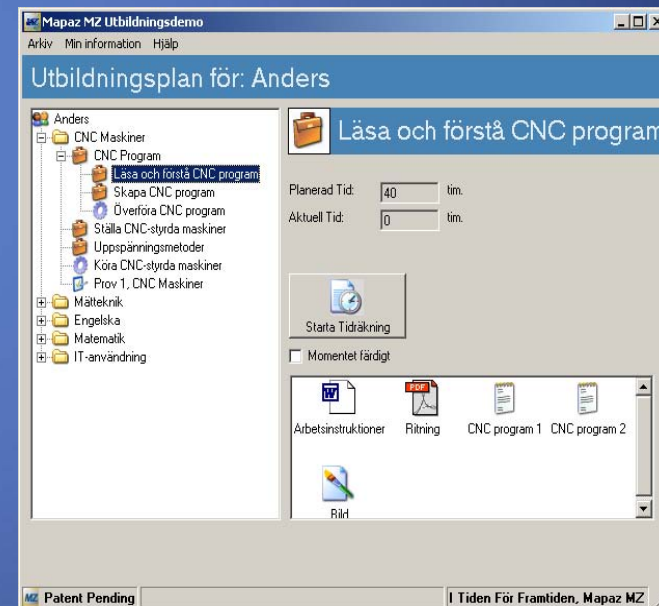
The supervisor marks each validation moment with a status (passed/failed) through a computer, handheld computer or a cell phone.

The results of the validation automatically generated

Certificate



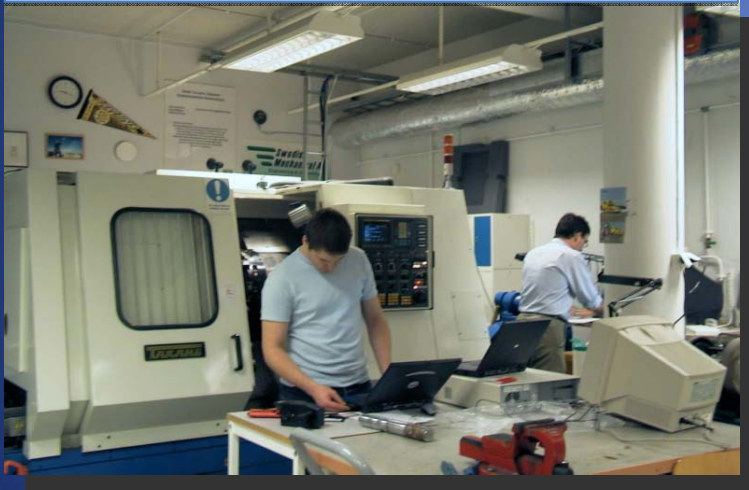
Individual study plan



The process for competence development

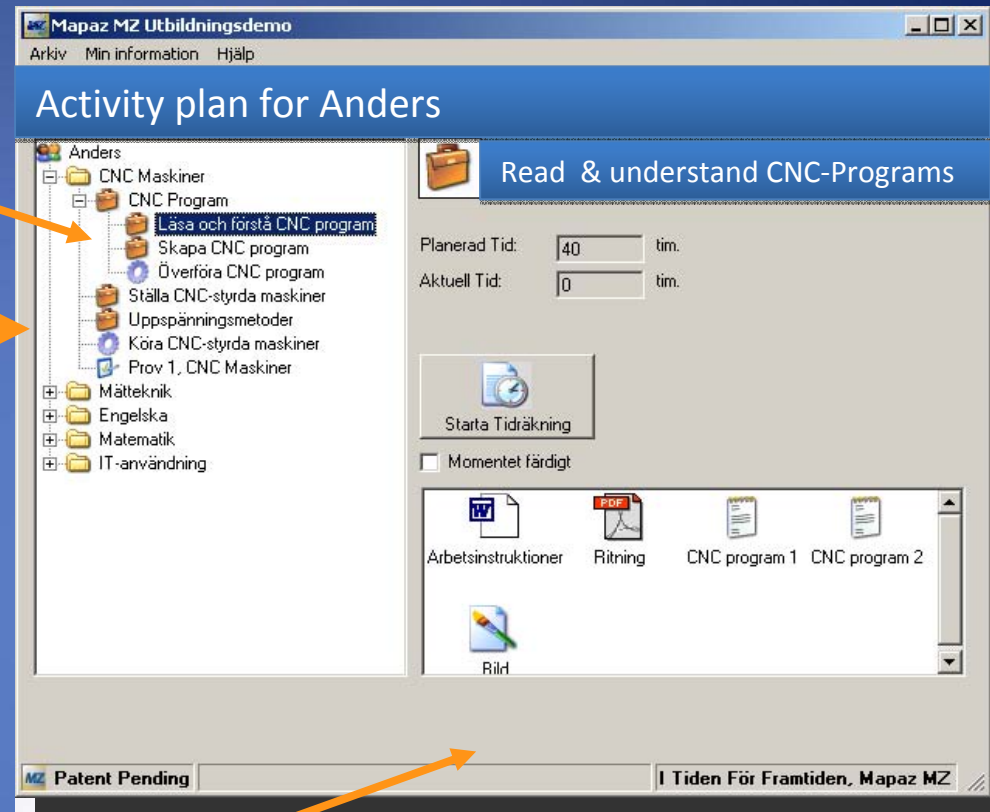
Individual study plan is automatically generated from the result of the validation

Self studies from the working place during the machine is running through the computer, Internet and Mapaz Mz's logistics solutions and individual study plan.



Study materials as film, sound and documents are connected to the individual study plan which is shown on the computer through the Internet

From the working place You have realtime connection with the competence support through webcam, computer and Internet





Swedish car and metal sector network for validation and competence development

52 test centers all over Sweden so far...

- Companies – skill requirements as master
- Universities – impact
- Upper secondary schools – impact

Responsibility **Skärteknikcentrum in Sweden AB**, partly owned by the technicians employers organisation – Teknikföretagen
CNC Green , Blue and Black certificates

Certification

Test centers(52)

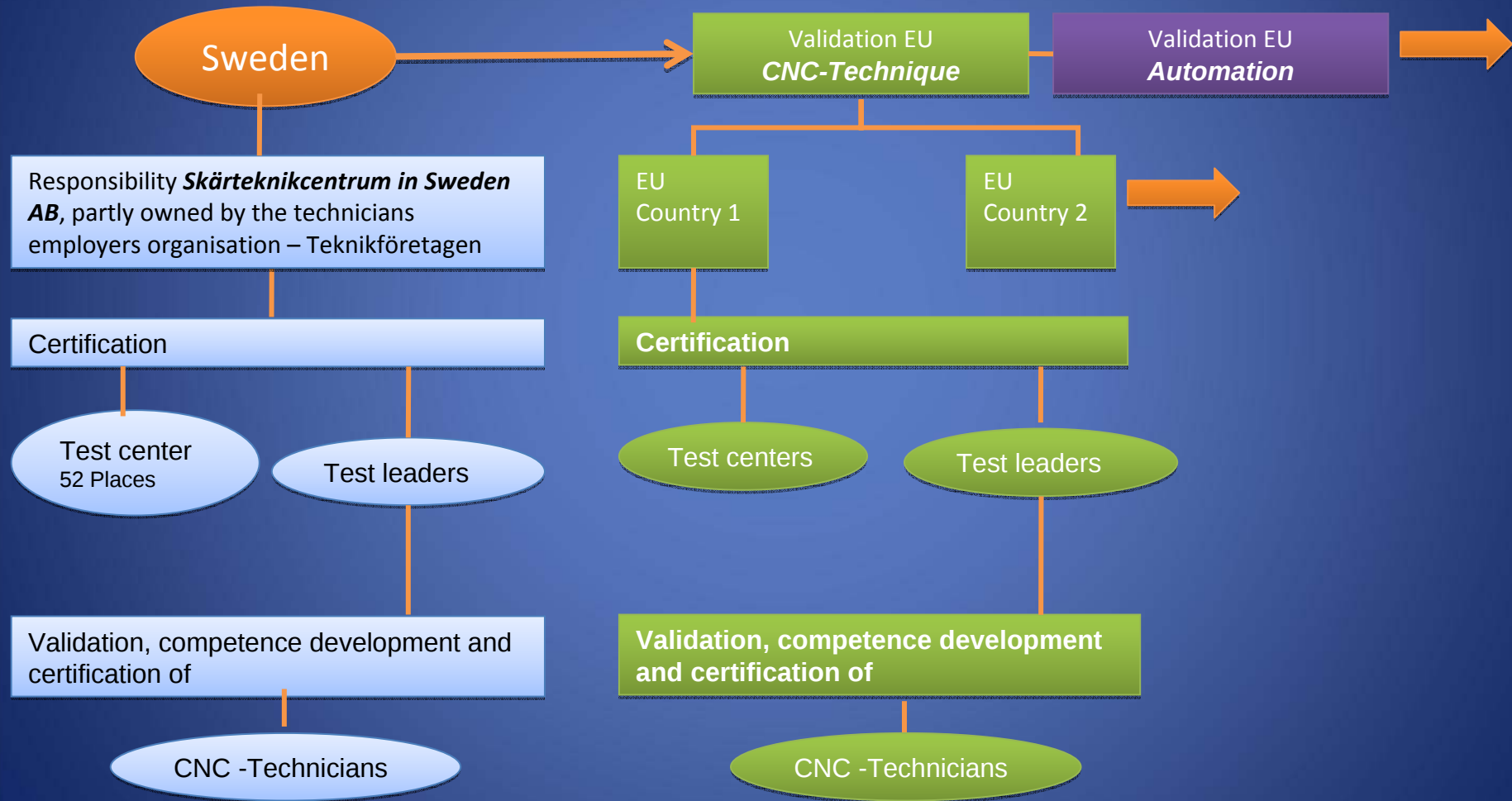
Test leaders

Validation , competence development and certification

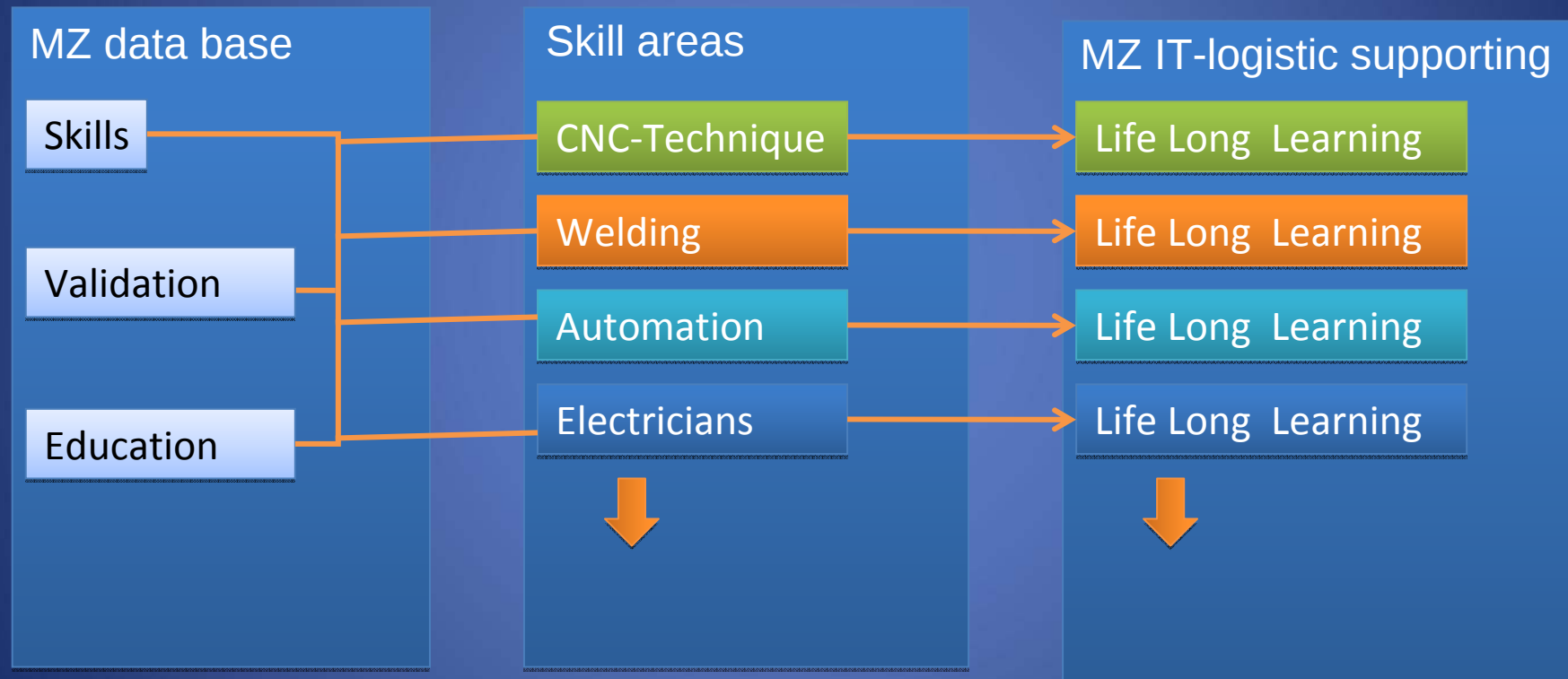
CNC -Technicians

A Swedish proposal for co-operation on the EU- level starting with new skills for CNC - Technicians

Structure , methods and content according to validation competence development and certification of CNC Technicians based on the Swedish model



Mapaz Mz: The Internet portal for co-operation



A future scenario

www.aree.de

Business model: *International Competence Transfer Network -ICTN*

"Supply chain/wheel to achieve qualified added values for the individuals"

Autonomous external content providers of models for validation and concepts for competence development and life long learning

- National organisations
- International organisations
- Individual initiatives

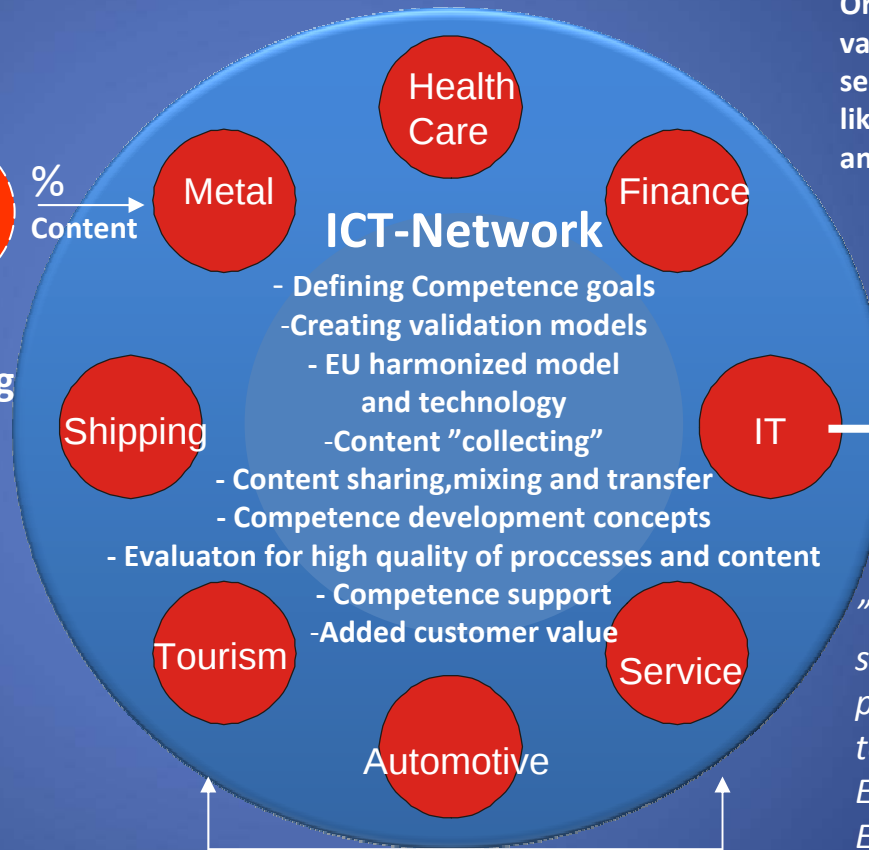
- Private

- Public

Still national and international models are missing so ICT-Network can realize a new International standard!



%
Content



Orders and Suborders of validation- and education services from stakeholders like companies, organisations and individuals

External services & products

"Structure to achieve strategic competence provisioning according to ISO 9000 and the new EQF – EU Qualification Framework set by EU to start in 2009"

Access to infrastructure with internet services for integrated communication and process
Cisco/Mapaz

New Skills for New Jobs Workshop 2
Multitude AB, Brussels Dec 7

New Skills for New Jobs

Workshop 2: Lifelong learning

Brussels, 7-8 December 2009

Presentation by Terry Ward

Background

Common theme in all the sector studies:

- There is a shortage of high skilled labour
- Continuous advances in technology mean that the skills required are constantly changing and in general becoming more demanding
- Continuing vocational training (CVT), or lifelong learning (LLL), is essential if workers are to update and extend their skills as the needs of industries change

At the same time:

- Major differences in participation in LLL across sectors and EU Member States
- Evidence suggests that CVT is, at present, inadequate in many sectors across the EU and in many countries within particular sectors
- A number of obstacles limit the extent of CVT – both the provision by employers and the participation in training by employees
- Persistence of low level of LLL could result in widening skill gaps which would damage international competitiveness of industries
- Action is needed across the EU to ensure that LLL systems are improved in nearly all sectors

Education and Training systems

- Common agreement that a good level of general education is an essential basis for participation in LLL
- Initial vocational training system is equally important for young people to acquire key competences
- Differences between countries more than between sectors – in the features of the education system and extent of initial training provided and in where responsibility of VET systems end and that of employers begins
- Extremes of German system, where VET system provides specific as well as general training,, and UK, where specific training is much more left to employers
- In addition, more involvement of employers in influencing content of VET programmes in Germany as well as being directly engaged in training through the apprenticeship system
- Other countries in between these two extremes as regards the different features of the overall education and training system and the division of responsibilities of government, employers and individuals as well as the availability of funding and who pays
- This creates differences in the basis for LLL, in the education, knowledge and competences of young people as they enter the work force and the foundations LLL can be built upon

Continuing Education and Training systems

- These differences in the features of education and initial vocational training systems carry over in some degree to continuing vocational education and training systems – LLL
- The role of governments, employers and individuals in these systems and the division of the costs involved varies markedly across Member States and, to a much lesser extent between sectors
- The need for continuing training – both real and perceived – also varies according to the extent of initial training and of the knowledge acquired from general education system
- Variation across countries in the extent of continuing training and in rates of participation partly reflects these differences – in the extent of training employers expect to have to provide
- Evidence of expectations of employers in this regard not keeping up with increased need for continuing training because of Increased rate of technological advance and pace of innovation changing nature of jobs
- Gap between need for training and actual provision most evident in new Member States, where training traditionally provided by government, as well as in southern EU15 countries, and historically less need for updating of skills
- These country differences tend to be common across sectors making it difficult to generalise about policies for strengthening continuing training

Lifelong learning across sectors

- The extent of LLL and rate of participation of workers in continuing training varies considerably across sectors as well as between countries. For example:
- *Financial Services Sector*
 - Sector dominated by large banks and insurance companies in all EU countries
 - Traditional emphasis on importance of LLL in most EU15 countries as part of human resource development programmes
 - In Germany and France, evidence of the great majority of employees receiving continuing training each year – in France, investment in training in the sector amounts to over 5% of the total wage bill.
 - In the new Member States, provision of continuing training is less developed and rate of participation of employees in continuing training much lower

Lifelong learning across sectors

- *Textile. clothing and leather sector*
 - The sector divided between mass market, fashion and high tech specialist products. For mass market, low labour costs of critical importance though also for fashion goods
 - In EU, division of sector between high wage and low wage countries, the latter increasingly in Eastern Europe, though Portugal still important
 - In high wage countries, gradual disappearance of manufacturing processes, except in high tech textiles. Decline makes sector less attractive for young people to enter activities which remain. Weakening human resource capacity further limit growth potential
 - In low wage countries, large part of the sector dependent on decisions made by large fashion houses in high-wage countries. Independence is difficult to achieve because of weak culture of innovation. Lack of expertise in design, marketing and engineering and few training centres. Limited scope and need for training

Need for lifelong learning

- Above implies that both the scope and need for continuing training varies between sectors as well as between activities within sectors
- Since activities performed differ between countries, this also means variation in scope and need for continuing training across countries – especially between EU15 and EU12 countries
- The pace of technological change and innovation make it difficult for training programmes to keep up with changes in demand for skills – this especially the case for initial training, putting more onus on LLL
- In addition, continuing globalisation and relocation of activities it gives rise to alters the occupational structure of employment and changes skill needs of jobs
- This is most evident in *Computer, electronics and optical sector, Electromechanical engineering and Automotive industry*
- But tendency not confined to these sectors – automation and digitalisation of processes increasingly widespread in all sectors – even in *Health and social services*

Obstacles to lifelong learning

- Irrespective of the need, the structure of the industry can have an important effect on the extent of continuing training provided and participation of workers
- Sectors where SMEs account for a large proportion of output tend to have a lower level of training provision. *Textiles, clothing and leather* and *Printing and publishing* are examples – though it is difficult to determine cause and effect in this regard
- SMEs are less likely to provide continuing training in most sectors because of the costs involved and difficulties of covering for staff engaged in training as well as because of lack of in-house expertise
- In addition, the free-rider problem (the difficulty of retaining staff once trained and so recouping cost of investment) tends to reduce provision
- A high level of competition can also inhibit training, since it absorbs scarce resources – the *Distributive trades* being an example. On the other hand, it tends to increase the importance of training where innovation is key to market success – as in parts of *Electro-mechanical engineering*

Collaboration as a means of increasing LLL

- Close collaboration between all relevant stakeholders – companies, education and training providers, the social partners, sector research and training centres and public authorities – is important in many sectors to increase the extent of continuing training
- Such collaboration can also help to identify the emergent skills that are likely to be needed in future years as technology advances and the globalisation continues
- It can, in addition, increase the extent of continuing training in sectors dominated by SMEs by providing a means of sharing the cost of training
- It can equally help to overcome the ‘free rider’ problem in the sense that collaboration means not only that the costs of training are shared but that all companies stand to gain from the investment concerned – the extent of the gain depending on their competitive success in the market
- At the same time, collaboration between companies, training providers – both those part of the education and training system and private providers – and government (to the extent that it is involved in training provision) can ensure that the content of training programmes is as relevant as possible.

Examples of collaboration on training

Ship and boat building sector

- Collaboration with public bodies occurs in a number of countries to help define the training programmes most suitable for the industry's needs:
 - In Denmark, companies in the sector cooperate with local VET centres to develop specific training and re-training programmes for workers
 - In Italy, the *Fincantieri* group is helping regional public authorities to create special technological districts, specialised in shipbuilding activities and comprising research institutes and training centres as well as enterprises to further innovation and develop technological expertise

Distributive trades sector

- Collaboration between enterprises and education establishments as well as government is evident in some countries:
 - In Austria, new vocations, such as e-commerce consultant and distribution manager in e-commerce, have been developed and officially approved and continuing training at universities in e-commerce and other emergent skills, such as supply chain management is provided to high-level staff by a number of companies.

Example of sector collaboration

Collaboration is also evident within a number of sectors in some countries:

Computer, electronics and optical sector

- The Electronics Leadership Council (ELC) in the UK, representing the industry, develops action plans for the sector in the form of “work streams”, one of which is the *Skills & Education*” work stream, designed to establish a more strategic approach to training in all areas. The aims include: the better targeting of government resources, the establishment of training facilities, the auditing of training programmes and closer cooperation with colleges, universities and other education centres
- In Germany, *OptecNet*, a registered association, is a supra-regional network of nine regional competence networks for optical technologies, which have a strong focus on fostering apprenticeship, initial vocational training and continuing vocational training. An aim is to ensure that the latest technology and know-how is incorporated into training courses for employees. *OptecNet* is a partner of the Competence Networks Initiative Germany and is co-financed by the Federal Ministry for Education and Research

Example of sector collaboration at the international level

In some sectors, collaboration over training spans country borders, in particular:

Non-Metallic Materials sector

- *Initiative for a Sustainable Cement Industry:* The World Business Council for Sustainable Development (WBCSD) brings together some 190 international companies in a shared commitment to boost sustainable development through economic growth which preserves ecological balance and furthers social progress.

The WBCSD covers more than 30 countries and includes 20 industrial sectors. Part of the initiative consists on an attempt to include the latest developments in sustainable production and environmentally-friendly processes in advanced vocational training programmes for those employed in the sectors covered.

The Cement industry Initiative has two main aims: (1) to disseminate the information contained in the training programmes throughout the industry via workshops; (2) to foster LLL in the cement industry.

Barriers to collaboration

- There are major obstacles to collaboration between companies in a number of sectors
- The *Defence Industry* is an extreme example because of its nature, though similar obstacles exist in other sectors
- A feature of the industries which make up the sector is a need to protect intellectual property rights and secure technical know-how in the design of particular products and processes
- As a result, many companies have developed their own training systems, which extend even to the civilian activities in which they are engaged – examples are Airbus, in Nantes and the French Thales Group which has established a separate training company, Thales Training and Consultancy, to provide bespoke training programmes to companies generally in a range of areas.
- The specific features of defence industries means that there is greater need for in-house training and higher investment costs in this activity than in most other sectors. At the same time, the cost of losing the people trained perhaps to competitors tends to be relatively high.

Collaboration at EU-level

- There are few training programmes which extend across national borders, except within multi-national companies or in relation to generic skills or know-how not specific to individual sectors, such as in respect of environmental protection or EU regulations
- The scope for such programmes is limited because of:
 - Differences in national regulations and education and training systems
 - Lack of international certification of skills and competences.
- This particularly the case in sectors where there are barriers to collaboration between companies, such as in *Defence*, but also in other sectors where competition between large companies in the form of know-how is intense (e.g. *Electromechanical engineering, Automotive industry and Computing, electronics and optical sector*).
- In sectors where SMEs predominate, difficulties of organisation
- The main role of EU-wide initiatives has mainly been to provide EU level certification of skills (through the European Qualification Framework), though the limited success demonstrates the difficulties of overcoming deeply entrenched national qualification systems (and education and training systems underlying these)

Main recommendations

- There is a need for increased investment in continuing training in order to extend and update the skills and know how of the work force in virtually all sectors and in nearly all countries
- Lifelong learning, therefore, needs to be encouraged and strengthened throughout the EU with particular emphasis on continuing training
- Consideration needs to be given to the funding of this, which has to take account of the differences between Member States in the way both initial and continuing education and training is financed and the division of the cost between government, employers and individuals
- In some sectors and in some countries, awareness-raising schemes are required to point out to both employers and workers the potential gains from training
- There needs to be more interaction between companies and education and training providers on the content of programmes to ensure that they are relevant to current and future skill needs and provide a suitable basis for LLL
- The continuing VET programmes provided by education and training systems across the EU need to be more modular in form to respond to cover particular skill shortages

Main recommendations, cont

- More cooperation is required between government and industry in many countries in order to encourage and support LLL.
- Consideration needs to be given to the scope for introducing or increasing financial incentives to encourage an expansion of LLL and the to the possible ways of doing this, which will tend to differ across the EU
- Consideration should also be given to the possibility of implementing or extending legislation and regulations relating to LLL to the same end
- The social partners should cooperate in developing joint programmes of continuing training in cooperation with government, training providers, universities and so on in countries and sectors where this does not occur at the moment (most of them)
- Special consideration should be given in each sector to the specific needs of SMEs in relation to training which may well differ from those of large companies which in many cases have their own schemes
- LLL should not only be about technical – or hard - skills but should extend to social, or soft, skills, such as the ability to communicate, motivate or work in a team, which can be equally important in many areas
- Special attention should also be given to the involvement of older people in continuing training, since the need to do so will increase as the population throughout the EU ages



Kompetenzmanagement bei der Deutschen Bahn

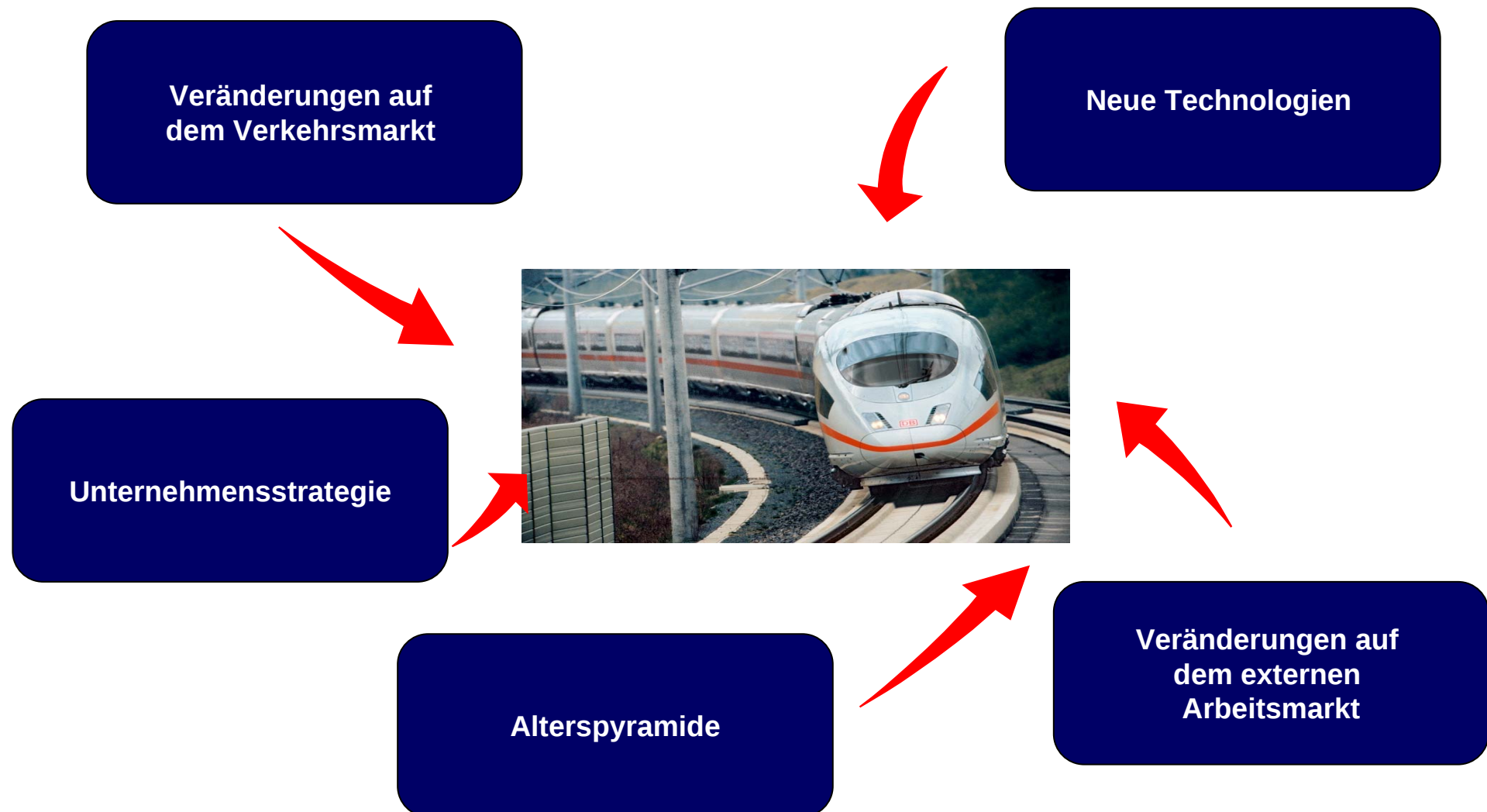
DB Mobility Logistics AG

Joachim Bullmann

New skill forum - Brüssel

07. / 08.12.2009

Wachsende Herausforderungen an Unternehmen und Mitarbeiter erfordern systematische und individuelle Qualifizierungs- und Entwicklungsmaßnahmen



Das Kompetenzmanagement der DB begegnet den gestiegenen Anforderungen an die Qualifizierung und Entwicklung im Konzern

Kernziel:
Verfügbarkeit eines ganzheitlichen und systematischen Ansatzes zur Qualifizierung und Entwicklung der Mitarbeiter



Strategisch orientierter Kompetenzaufbau



Steigerung der individuellen Leistungsfähigkeit



Durchführung einer systematischen Qualifizierung



Ermittlung des individuellen Qualifizierungsbedarfs



Transparenz durch Definition eindeutiger Anforderungen

Der Kompetenzmanagementprozess ist das Kernelement der Qualifizierungs- und Entwicklungsphilosophie der DB AG



Die Mitarbeiterqualifizierung und -entwicklung im Rahmen des Kompetenzmanagement Bahn bringt Nutzen für Mitarbeiter, Führungskräfte und Unternehmen gleichermaßen

Nutzen für die Mitarbeiter



- Klare Definition der Anforderungen
- Transparentes Aufzeigen von Entwicklungsmöglichkeiten
- Steigerung der Handlungssicherheit durch gezielte Schulungen
- Steigerung der Eigenverantwortung

Nutzen für die Führungskräfte



- Unterstützung eines anforderungsgerechten und effizienten Personaleinsatzes
- Eindeutige und funktionsspezifische Anforderungskriterien

Nutzen für das Unternehmen



- Transparente Anforderungen und transparente Entwicklungsmöglichkeiten
- Konsequente Bedarfs- und Zukunftsorientierung
- Systematischer Prozess der Personalentwicklung und Erhebung des Bildungsbedarfs

Das Kompetenzmanagement Bahn setzt den Handlungsrahmen für die tätigkeitsgruppenspezifischen Kompetenzmodelle

Kompetenzmanagement Bahn

Tätigkeitsspezifische Kompetenzmodelle definieren

- Inhalte
- Fach- und Methodenkompetenzen
- Ausprägung der Verhaltensindikatoren

Kompetenzmodell
Triebfahrzeug-
führer

Kompetenzmodell
Personal

Kompetenzmodell
Bordservice

Das Kompetenzmanagement Bahn definiert

- DB Mitarbeiterkompetenzen
- Prozesse
- Methoden
- Instrumente

Kompetenzmanagement Bahn im Detail



Mit dem Kompetenzmanagement Bahn wird ein ganzheitlicher und systematischer Ansatz zur Qualifizierung und Entwicklung von Mitarbeitern verfolgt

Wozu?

Bedarfsgerechte Qualifizierung und Entwicklung von Mitarbeitern

Womit?

An Soll-Kompetenzprofilen orientierte Kompetenzgespräche zur Erstellung eines Ist-Kompetenzprofils

Für Wen?

Mitarbeiter in den großen und strategisch relevanten Tätigkeitsgruppen

Durch Wen?

Führungskraft (unmittelbar) und Personalentwicklung (mittelbar)

Wo?

Kompetenzgespräch

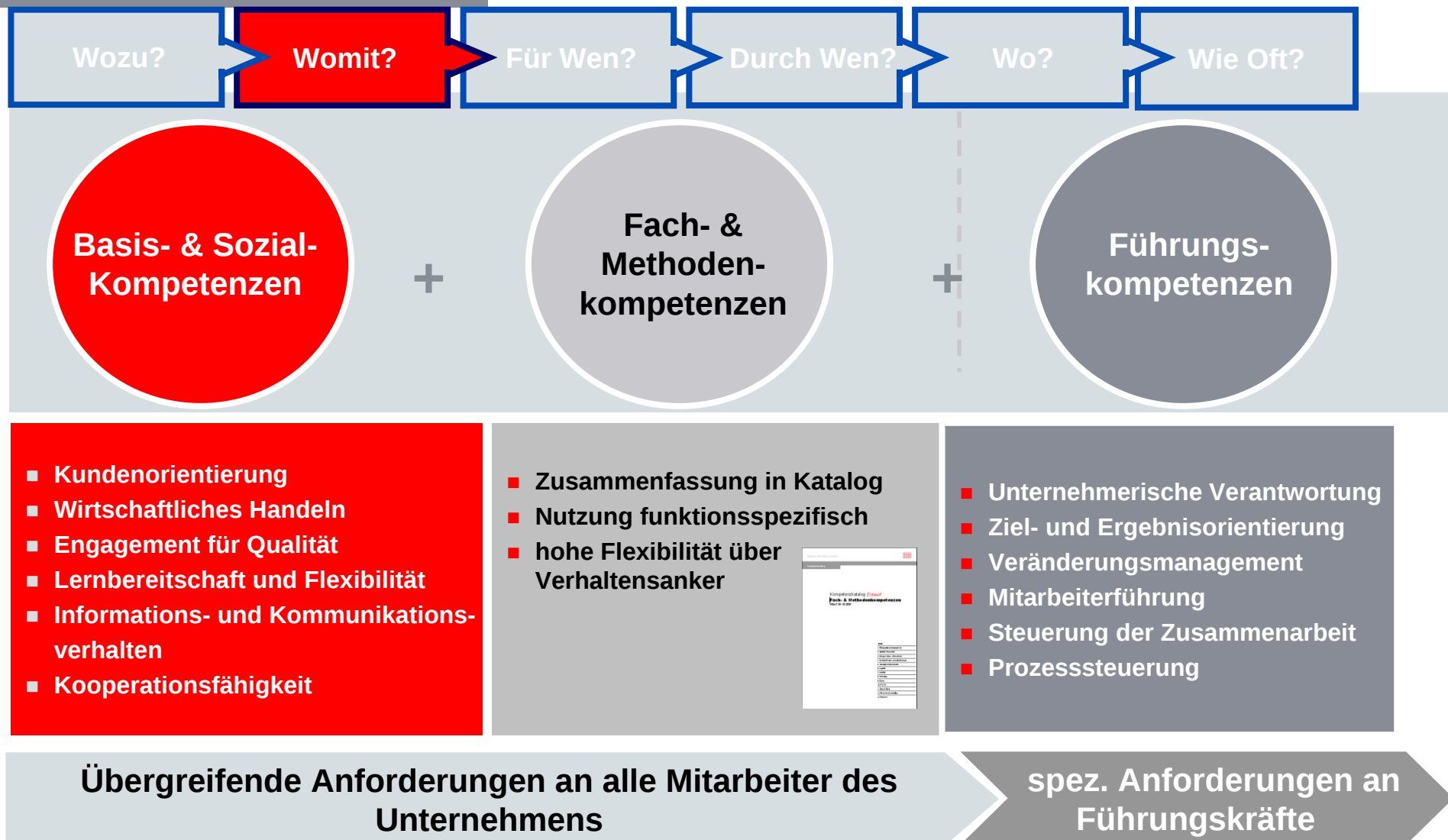
Wie Oft?

Jährlich bzw. 2-jährig in Verbindung mit MAG/ FÜG oder getrennt

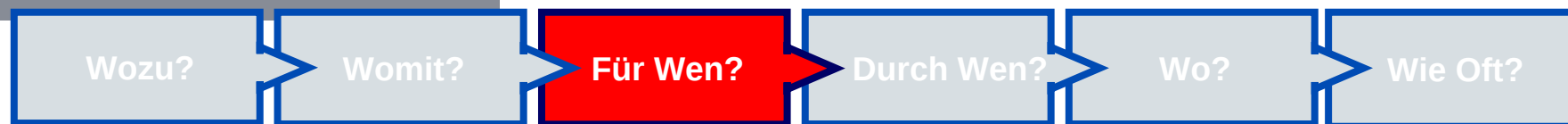
Die Mitarbeiterqualifizierung und -entwicklung steht im Zentrum des Kompetenzmanagement Bahn



Das Kompetenzsystem besteht aus Basis-/Sozial- und Führungskompetenzen als Standard und funktionsspezifischen Fach- und Methodenkompetenzen



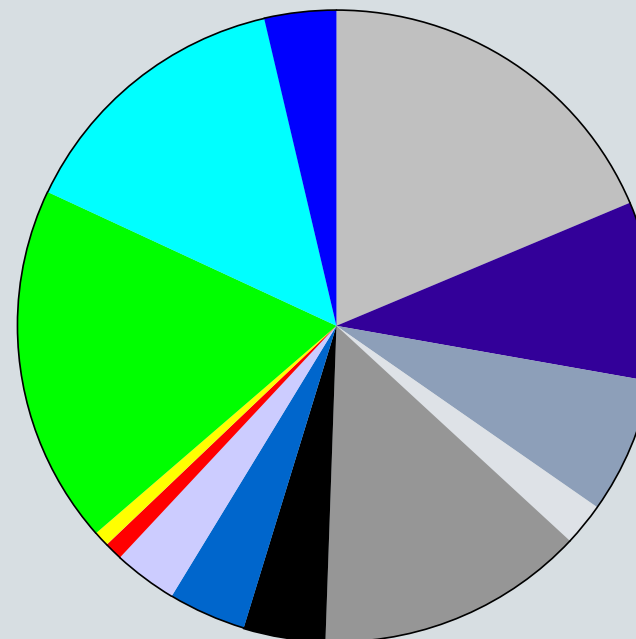
Große und strategisch relevante Tätigkeitsgruppen stehen im Fokus des Kompetenzmanagement Bahn



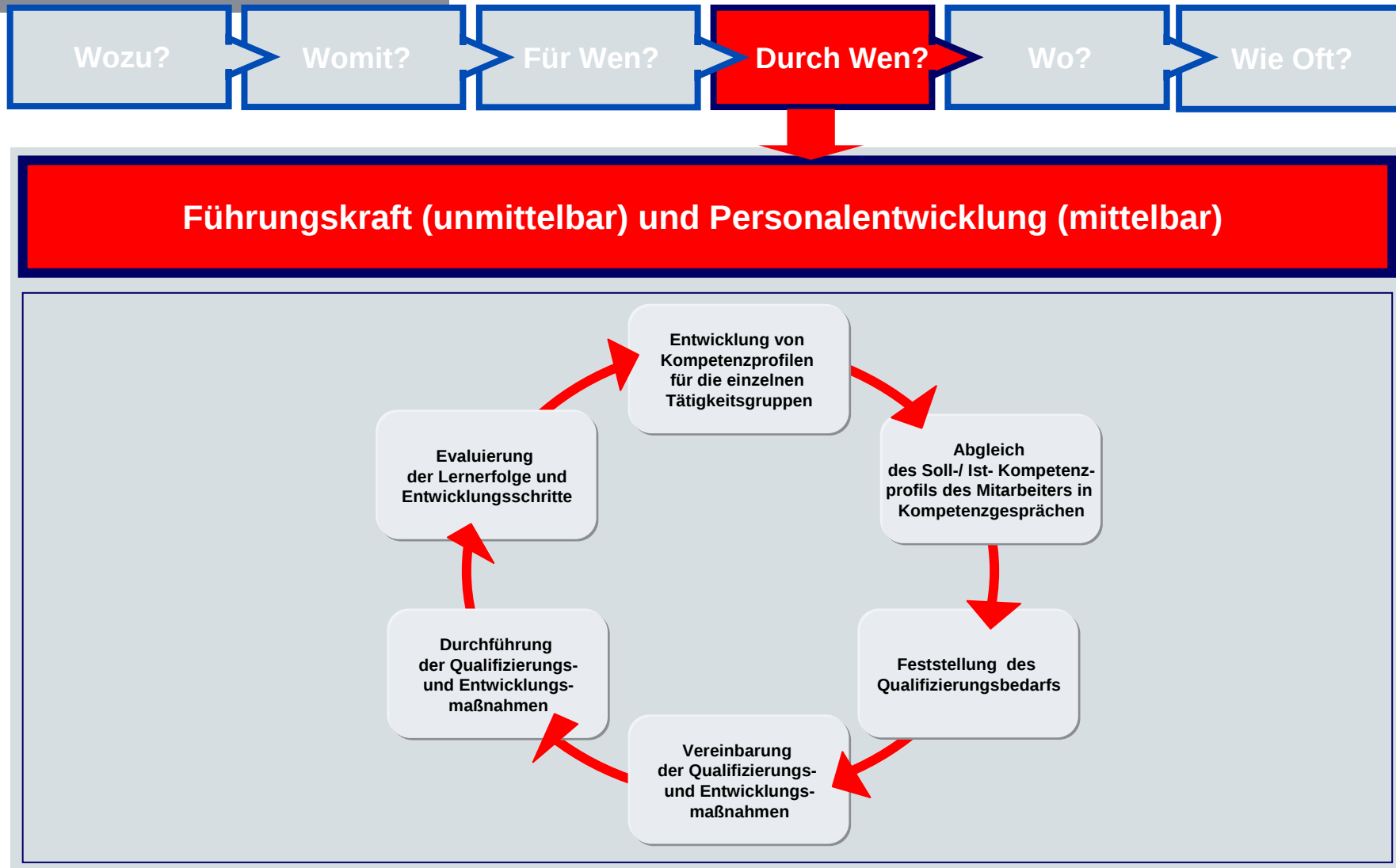
Mitarbeiter in den großen und strategisch relevanten Tätigkeitsgruppen

Mitarbeiter in den großen und strategisch relevanten Tätigkeitsgruppen: über 100.000

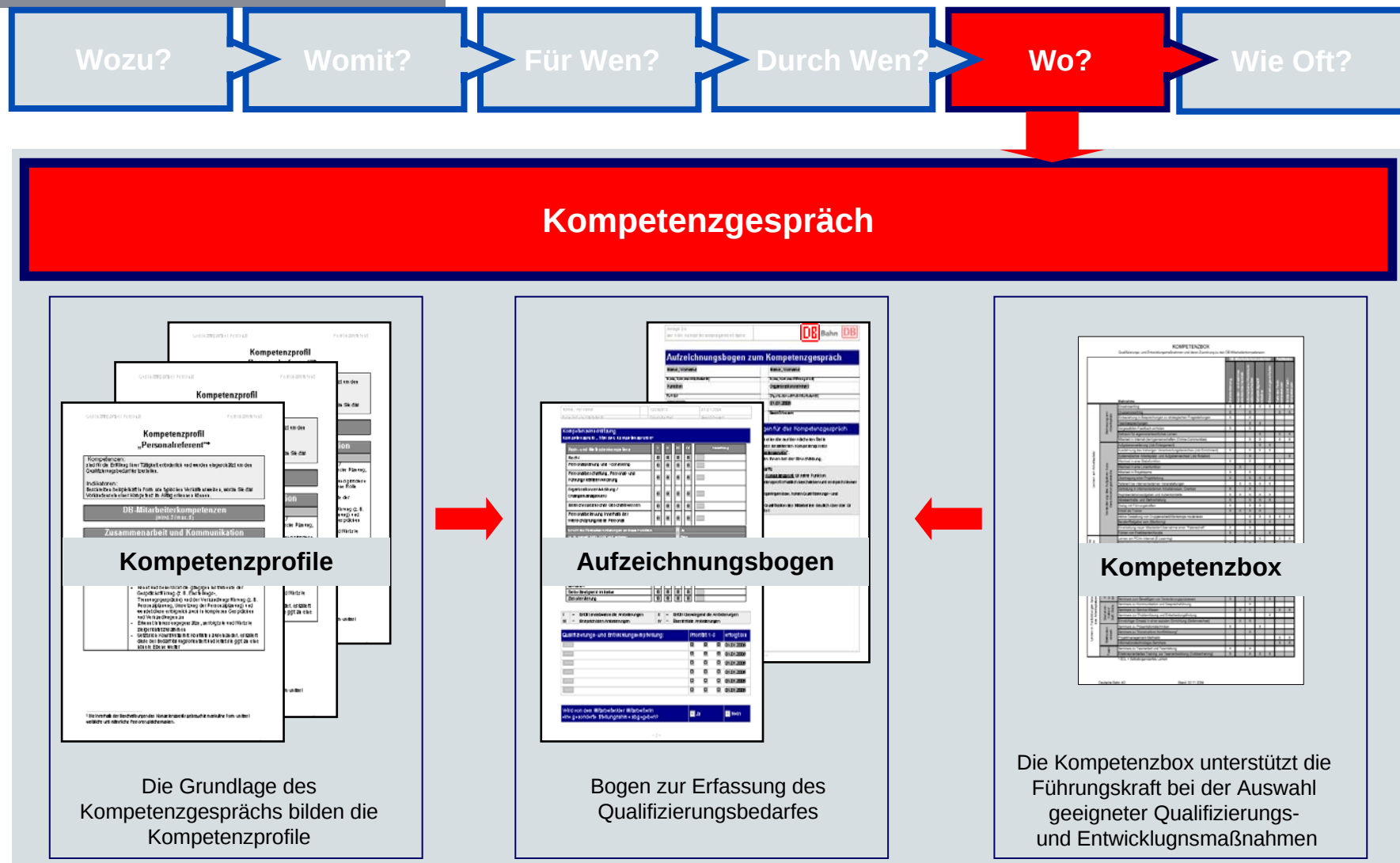
- ☐ Triebfahrzeugführer
- ☐ Rangierer
- ☐ Fahrdienstleiter
- ☐ Service am Bahnhof
- ☐ Vertrieb Güterverkehr
- ☐ Instandhaltung Fahrzeuge -Werke und Werkstätten
- ☐ Bauprojekte/Bauleitung
- ☐ Zugbegleiter
- ☐ Wagenuntersuchung
- ☐ Weichenwärter
- ☐ Vertrieb Personenverkehr
- ☐ Vertrieb DB Dialog Telefonservice GmbH
- ☐ Instandhaltung Anlagen - Netz inkl. Bahnbau



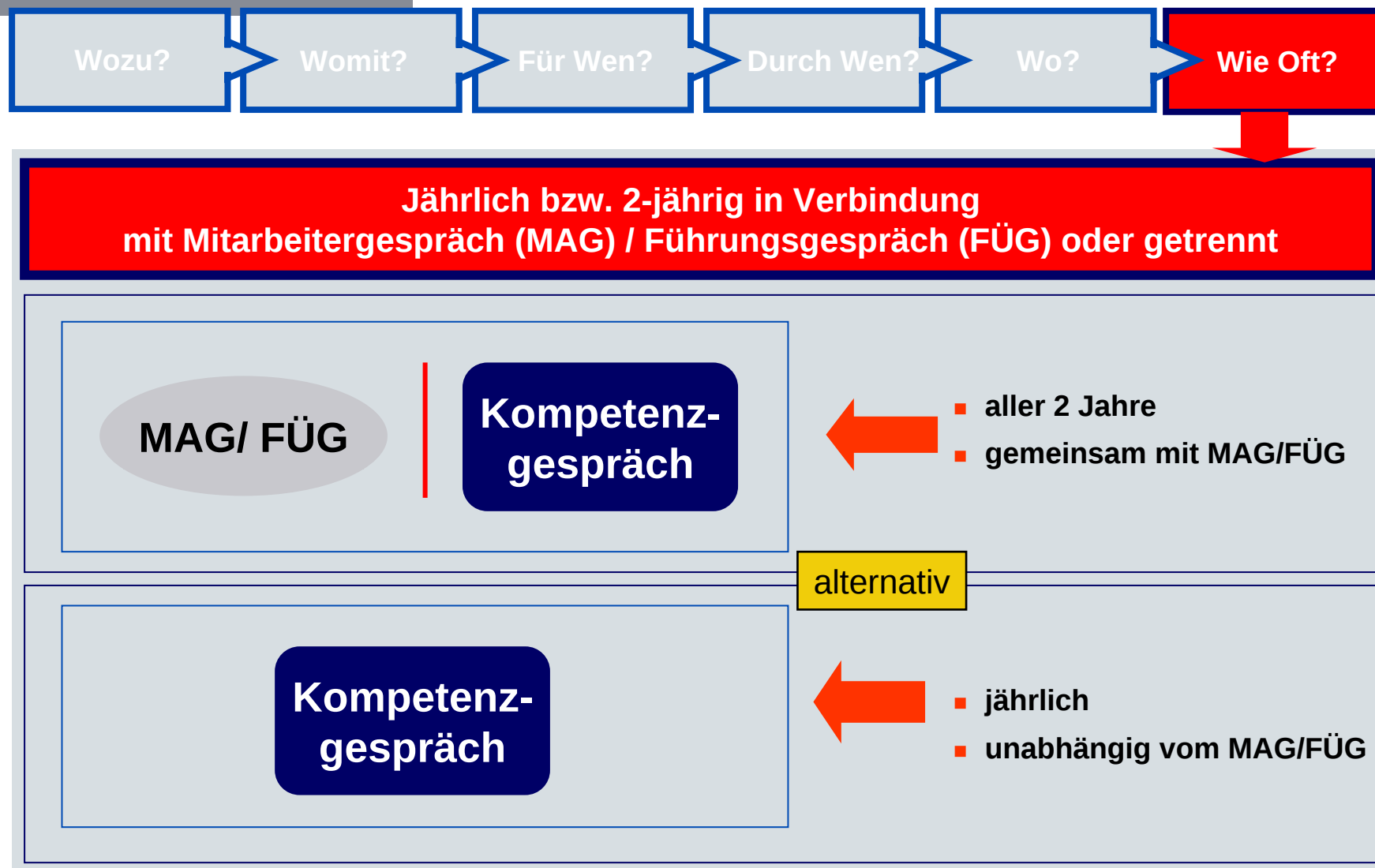
Die Erhebung des individuellen Qualifizierungs- und Entwicklungsbedarfs erfolgt in einem konzernweit verbindlichen Prozess



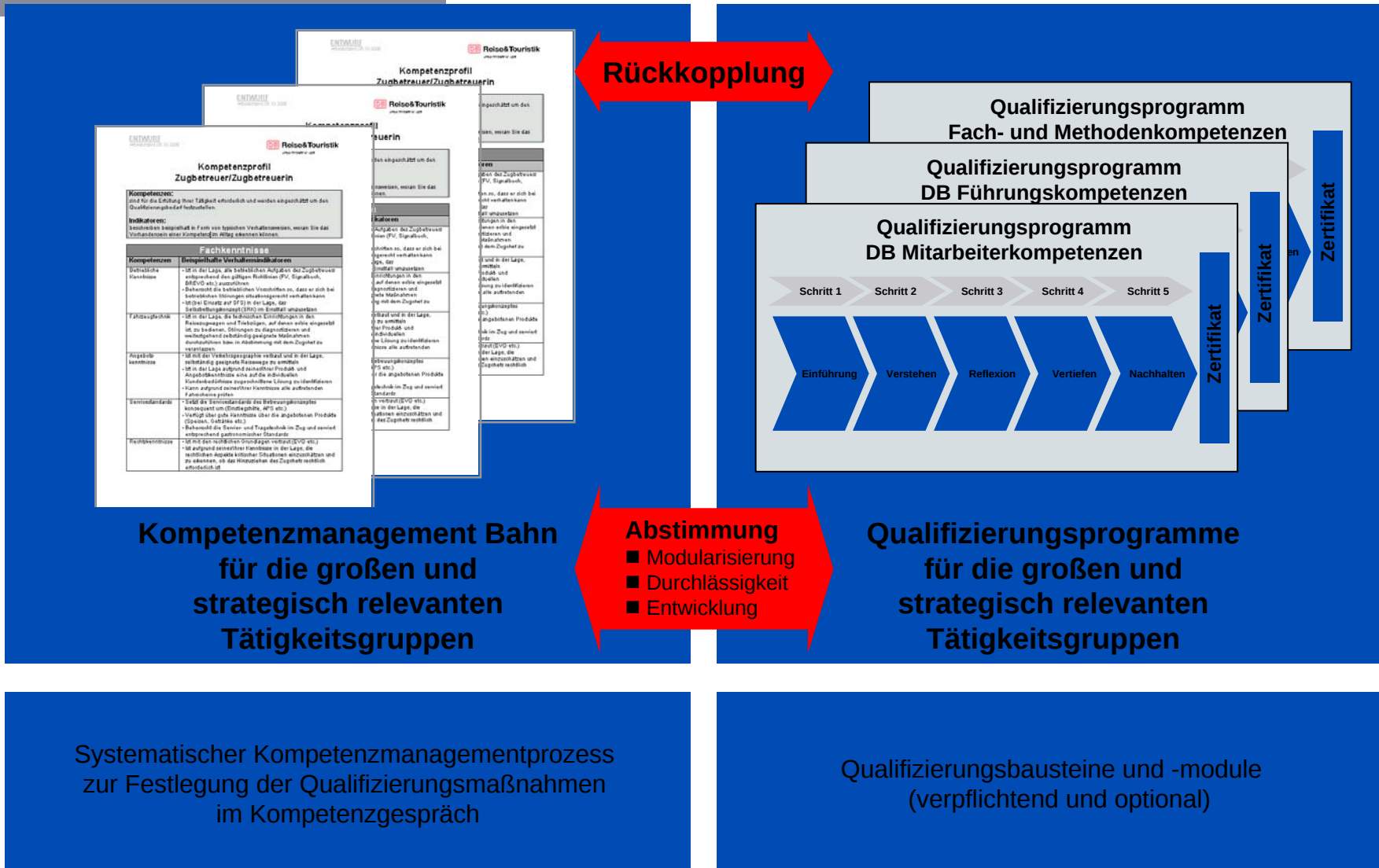
Kompetenzprofile und Kompetenzbox unterstützen die Führungskraft im Kompetenzgespräch



Das Kompetenzgespräch kann mit konzernweit verbindlichen Führungsinstrumenten flexibel kombiniert werden



Das Kernelement der Mitarbeiterqualifizierung und -entwicklung bildet die enge Verknüpfung von Kompetenzmanagement und Qualifizierungsprogrammen



Die vereinbarten Qualifizierungs- und Entwicklungsmaßnahmen werden tätigkeitsspezifisch und praxisnah durchgeführt

Qualifizierung

Lernen am Arbeitsplatz



z.B.

- Job Rotation
- Übertragung der Projektleitung

Lernen nahe des Arbeitsplatzes



z.B.

- E-Learning
- Mitarbeit in einem Qualitätszirkel

Lernen in Seminaren



z.B.

- EDV-Seminare
- Outdoortraining zur Teamentwicklung

Bei der Umsetzung der Qualifizierungen müssen die Belange der ältern Mitarbeiter (sog. Mitarbeiter 50+) berücksichtigt werden

Lehr- und Lernmethoden

- **Teilnehmerorientiert**
(Kommunikativ, Frontalunterricht, aufgaben- und Fallbezogen, sowie Lehrer-Schüler Verhältnis vermeiden)
- **Erfahrungsorientiert**
(Problembearbeitung auf Grundlage von Erfahrungswissen)
- **Praxisorientiert**
(learning by doing)
- **Lernen in Gruppenarbeit**
- **Sinnbezogene Darstellung**
(Einsatz audiovisueller Medien, Verwertungsbezug herstellen)
- **Sozialer Kontext und Statusbezug**

Motivation

- Erfahrungswissen wird ernst genommen
- vorhandene Problemlösekompetenzen werden aufgegriffen und alternativ ergänzt
- Kritisches Aufarbeiten der Erfahrungen
- Sinnhaftigkeit des Lernens ist erkennbar

Workshop 3

Collaboration between stakeholders

Summary of findings from 18 sector studies

by Kim Møller, Oxford Research

Most required emerging competencies

Social/cultural

- Intercultural skills
- Team work
- Self management
- Entrepreneurship and innovativeness

Technical

- ICT and E-skills (both at user and expert level)
- Skills/knowledge related to new materials
- Skills/knowledge related to new processes
- Health and green skills (related to health and climate and environmental solutions)

Managerial

- Intercultural management
- International value chain management
- International financial management
- Green management (managing climate and environmental solutions)

+ Multiskilling and new combinations of skills

Most required emerging competencies

In service sectors

- Intercultural skills
- Conflict solution
- Multiskilling

All sectors

- ICT and E-skills (both at user and expert level)
- Health and green skills (related to health and climate and environmental solutions)
- Entrepreneurship and innovativeness
- Team work
- Self management
- New combinations of skills and competencies

Production sectors

- Skills/knowledge related to new materials
- Skills/knowledge related to new processes
- International value chain management

Recommendations (1)

- **Adapt and modernise VET:**
 - nationally and/or EU-level
- **Promote modularisation to enhance flexibility**
- **Joint training networks/-facilities and enhanced apprenticeships**

Recommendations (2)

- **Flexibility in learning forms:**
 - e-learning and blended learning
- **Continuos vocational training: multi-skilling, re-training, upskilling**
- **Focus on improving company-education collaboration – e.g. on a clusterbase**

Recommendations (3)

- **Inter- and multidisciplinary competences**
- **Image and awareness of education and training among SMEs and microenterprises**
- **Improved supply of information to trainers → train-the-trainer**
- **Career guidance for labour market entrants and employees**

Summing up

Mind the gap

- Improved collaboration of stakeholders:
 - nationally – internationally?
 - modularisation – mutual recognition?
- New role of e.g. Structural Funds?



Regional Skills Forum, Brussels 7-8 Dec 2009.

Advanced work related technical education

Lejla Gros, Östsam Regional Development Council, Sweden.

Sune Karlsson, IUC Öst, Sweden

Östergötland, Sweden

TEKNIKKOLLEGE



421,000 inhabitants

2 hour journey from Stockholm

13 municipalities

Linköping & Norrköping

Fourth largest metropolitan region in Sweden



The Teknikcollege concept – a link between companies and schools



Teknikcollege represents a methodology where upper secondary school, adult education and vocational educational institutes work together with local and regional companies.



Who started Teknikcollege?

TEKNIKCOLLEGE



The initiative was taken by companies and social partners within the Swedish engineering industry in 2003.

Today the social partners in the entire industry are supporting Teknikcollege.



Why?

TEKNIKCOLLEGE

Ageing workforce in industry

Imbalances between competencies and qualification requirements

Improve quality and efficiency in vocational and educational training

Improve skills and competence of the students

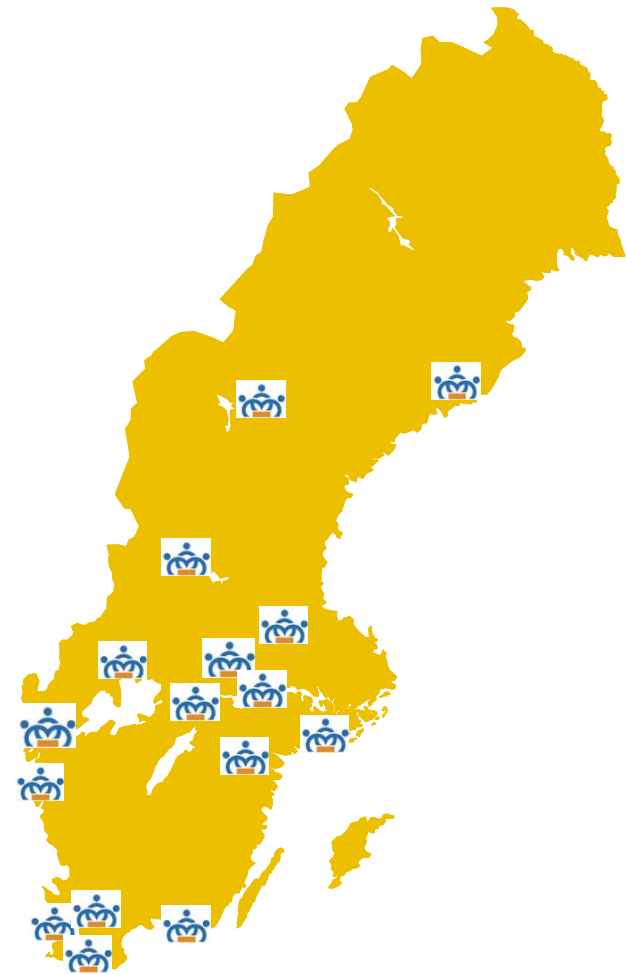
Improve the image of education within the industry



Teknikcollege in Sweden (I)

TEKNIKKOLLEGE

Through Teknikcollege
a new form of cooperation
on regional level was established
between municipalities, schools,
social partners and companies.



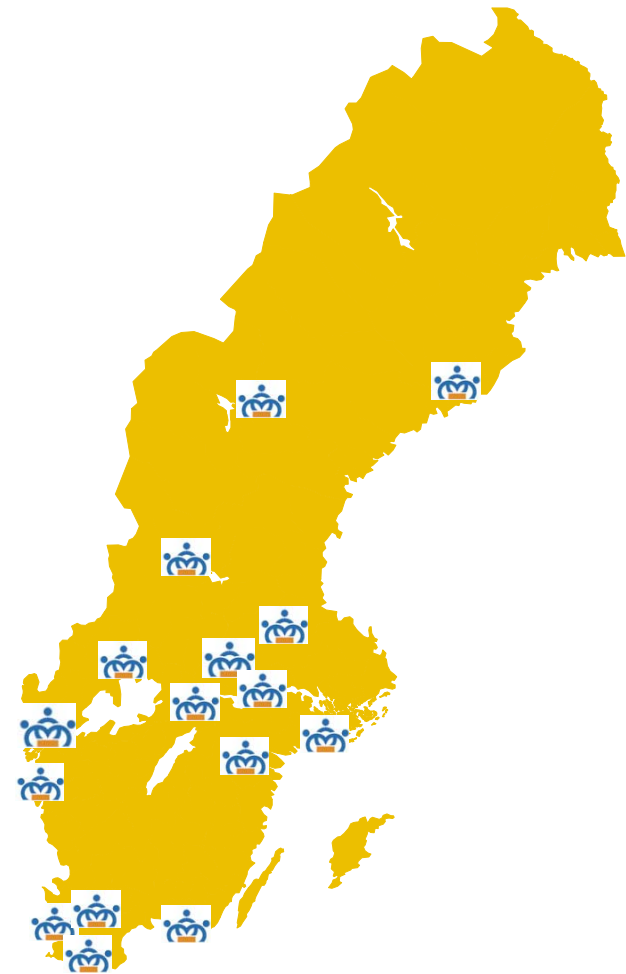
Teknikcollege in Sweden (II)

TEKNIKKOLLEGE

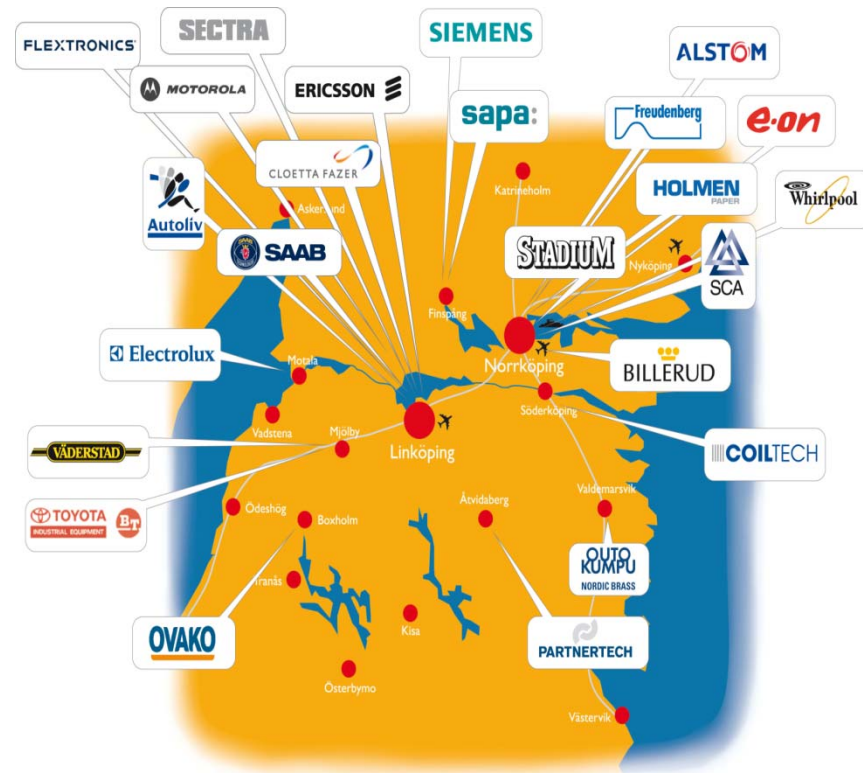
The National association of Teknikcollege in Sweden was established in December 2007.

So far 21 TC-regions are certificated

About 75 schools have been approved so far in the different regions.



Teknikcollege
Östergötland is a
cooperation between eight
municipalities, schools,
social partners and over
150 companies in the
region.



The TC Criteria (I):

TEKNIKCOLLEGE



1. Regional Perspective

Common understanding among local municipalities within the TC region.

2. Broad educational structure

Education on upper secondary level has a link to further vocational training and education on university level.

3. Clear Profile

The Profile of the education has a clear correspondence to the structure of the industry within the region.

The TC Criteria (II)

TEKNIKCOLLEGE



4. Cooperation with the industry

Education and company representatives cooperate within a joint steering committee.

5. System of quality assurance

A common recognised quality definition and methods to obtain the quality are developed.

6. Stimulating and creative learning environment

The pupils are entitled to high quality schools.

7. Up-to-date machinery and equipment

In the schools or as a part of the education in workplaces

The TC Criteria (III)

TEKNIKCOLLEGE



8. Coherent studying schedules

The schoolday should be kept together in order to simulate the work life.

9. Teamwork and integration between subjects

Specialist teachers working together to integrate and combine different subjects in order to get a training that is more adjusted to the industry.

10. Learning in workplaces

Learning by doing. A part of the training is taking place in the companies.

Positive effects

TEKNIKKOLLEGE



Companies in the region are influencing and contributing to the content of the training.

Municipalities share costs for unusual and expensive education programmes.

Improved skills and competence of the students.

Increased employability.





Thank you for your attention!

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Fédération Syndicale Européenne Textile, Habillement, Chaussures et cuir



FORUM RESTRUCTURATION

Sector's new skills for new jobs

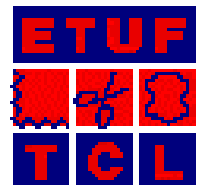
Bruxelles, le 7 décembre 2009



Introduction

1. THC UE en mutation depuis longtemps

- 2008 > CA: 210 mia euros// emploi direct: 2,6 mio;
- Un des 1ers secteurs globalisés;
- Echanges libéralisés totalement 1/01/2008;
- Pertes de +/- 3% emplois/an entre 1970-1993 (départs naturels) >> 5,8% en 2006 et 2007 !
- ET Malheureusement, en terme d'emplois THC LES secteurs + touchés par crise 2008/09 (e.a aspect PME) (sur base 1^{er} sem 09: - 300 à -350.000).
- Secteurs THC donc depuis longtemps confrontés mutations



2. Le DSS THC

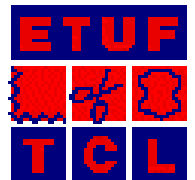
- DS = « moteur de réformes économiques et sociales réussies »(Com); (+ facile si négocié que imposé);
- 3 CDSS :
 - Chaussures (1991)
 - Textile-habillement (1992)
 - Cuir (1998)
- e.a permis de dégager visions communes défis/opportunités/solutions pr avenir secteurs (Livre Blanc Bangemann 1996, GHN 2004,.....)
- .. de signer ACE s sur respect NFT ou de mener projets de CB des PSS dans les NEMs et PCs >>>
- Actions selon 2 axes ds le domaine anticipation, gestion, accompagnement mutations



I Anticipation/accompagnement/ gestion des mutations industrielles (2006-2008)

1. Recherche-action” conjointe [avec experts]

- “Bonnes pratiques”:
 - *dans/ hors secteur;
 - *branche/région - bassin/ entreprise;
 - *innovation/ anticipation (GPEC)/ gestion;
- 2 tables rondes; Conférence finale 25/04/07;
- Rapport experts >>> Recommandations >>> OK
PSS 27/11/07 >>> Signature formelle en marge
Assemblée Générale employeurs Euratex
31/05/08 .

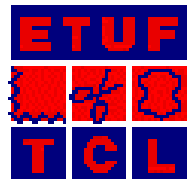


2. Recommandations conjointes

- 1 : Améliorer l'image du secteur
- 2 : Promouvoir l'innovation et la réactivité
- 3 : Agir sur la formation/ les parcours professionnels
- 4 : Construire un dialogue social de qualité
- 5 : Développer l'employabilité dans bassins d'emploi
- 6 : Eviter les suppressions d'emplois brutales
- 7 : Aider les PME
- 8 : Construire une approche intégrée
- 9 : Etablir un réseau européen de centres de ressource

>> *1/ PREMIERE EVALUATION SUIVI EN COURS
(DSS 12/09) [30%?] CONTROLE PROCESSUS!!!*

>> *2/ Par ailleurs: PROJET DE DECLARATION
COMMUNE THC EN DSS SUR IMPACT CRISE.*



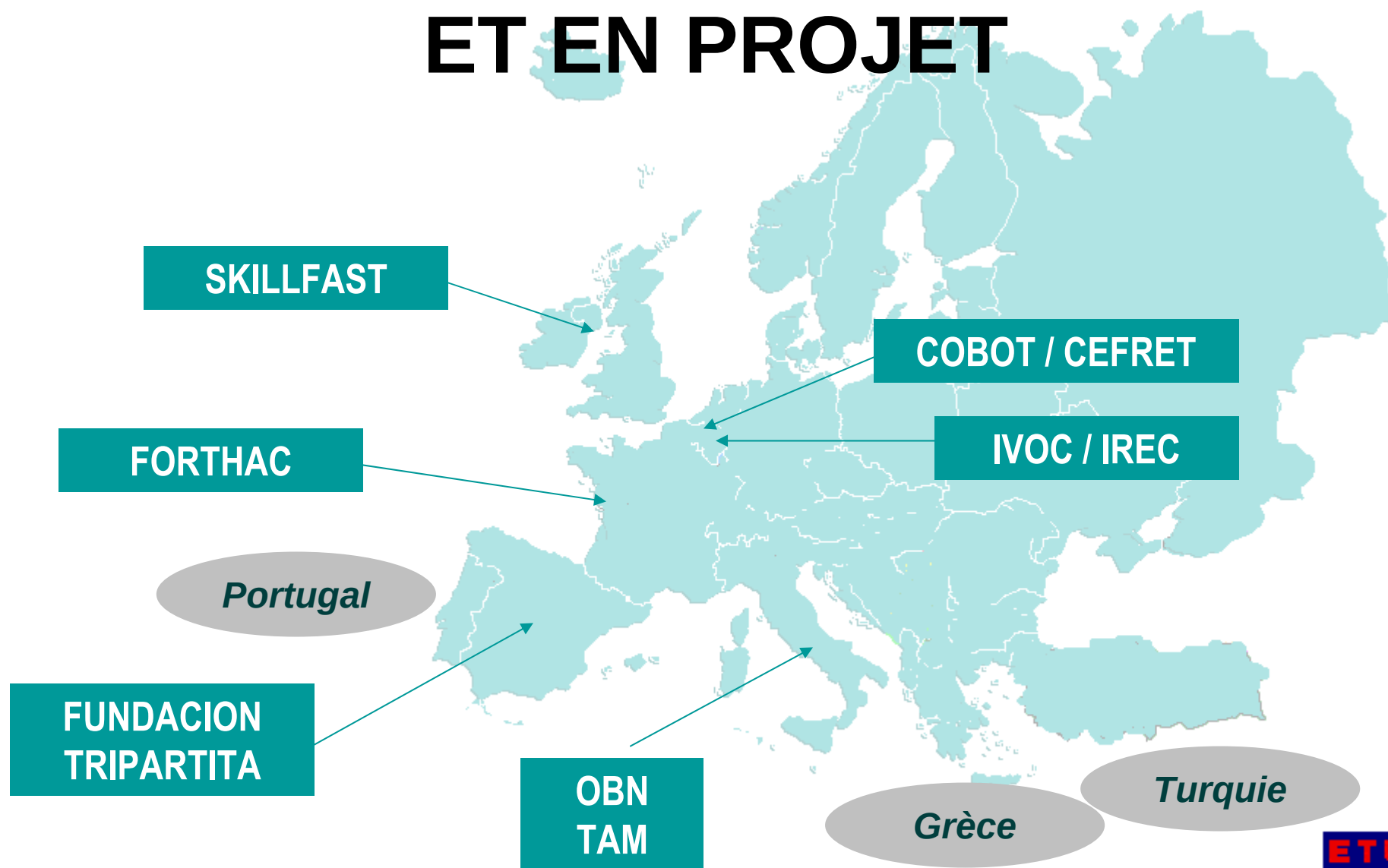
2. “Observatoires” THC (2008-2010)

1. Etude de l'existant (IFM)

- GHN >> Projet conjoint >>> 6 + 2 + 2 “organismes” paritaires (sauf UK) ds UE-15;
- Financés par prélèvements obligatoires entreprises (sauf UK) [fonds souvent non-épuisés];
- Missions: *éclairer* les acteurs (dynamiques marchés, stratégies, conséquences besoins emplois et compétences, formation,..) - surtout PME - et mettre des *outils* à disposition des entreprises (formation, gestion RH, accompagnement, ...);
alimenter DSS;



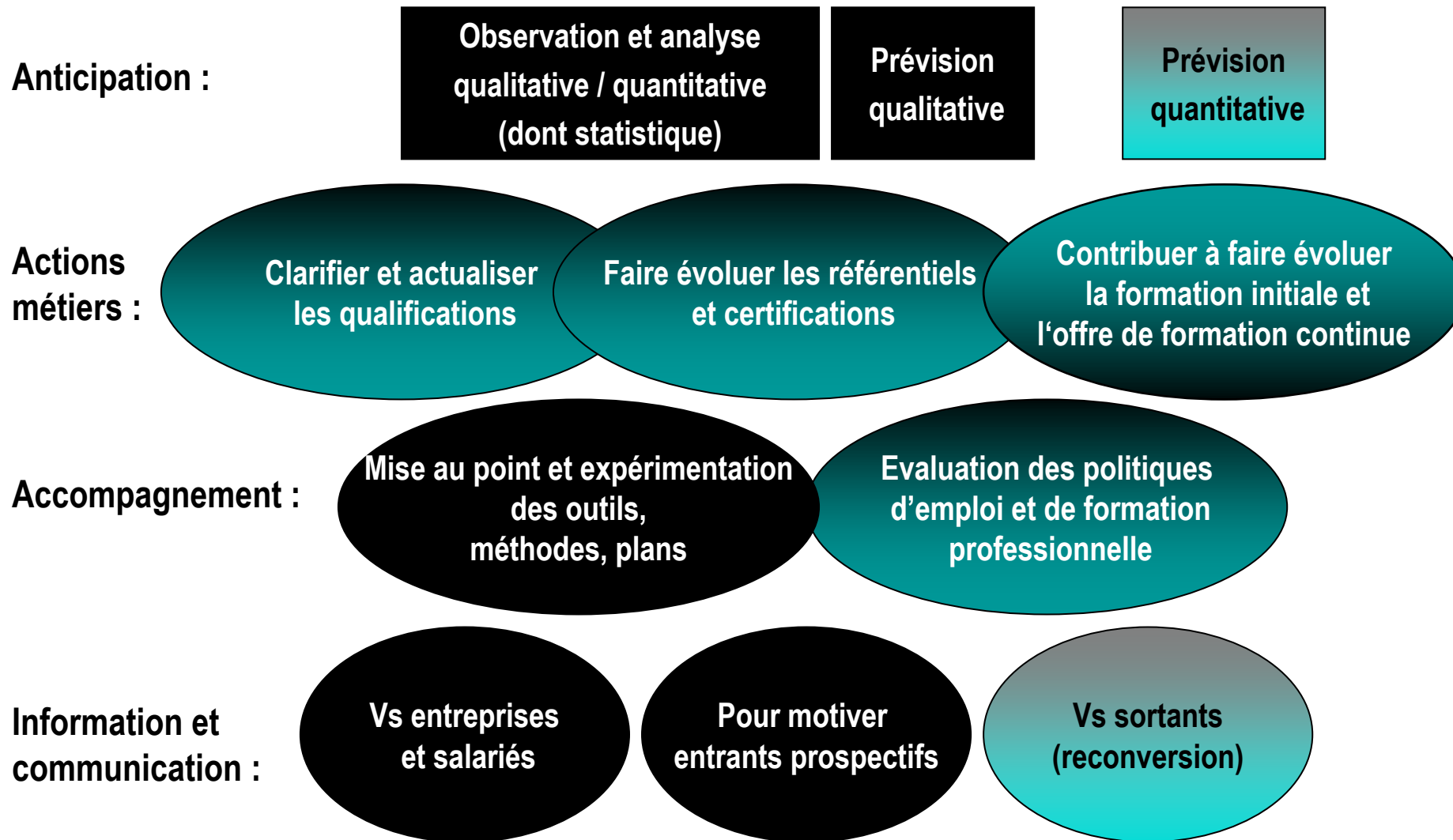
OBSERVATOIRES EXISTANTS ET EN PROJET



May 5. 2009



LES DIFFERENTES MISSIONS DES OBSERVATOIRES TH



DES CONDITIONS CLES DE REUSSITE

La sensibilisation des acteurs : un niveau minimum nécessaire

Un accord paritaire à la base de la constitution de l'observatoire

Un dialogue social de qualité

Le bipartisme, voire le tripartisme

L'implication des partenaires sociaux mais sans rôle direct dans le fonctionnement

Une structure à part entière avec son autonomie



2. Transférabilité? >>

Mise en réseau européen et transferts know-how.

- Observatoires (à 1 exception ponctuelle près) ne communiquent pas entre eux;
- Conférence finale 5/05/09
- Or un vif intérêt pour un partage des connaissances en matière :
 - d'évolutions besoins en emplois des entreprises
 - d'évolutions des métiers et des qualifications
 - d'évaluation des pratiques, outils et méthodologies d'observation, d'anticipation et de gestion au sens large des RH.

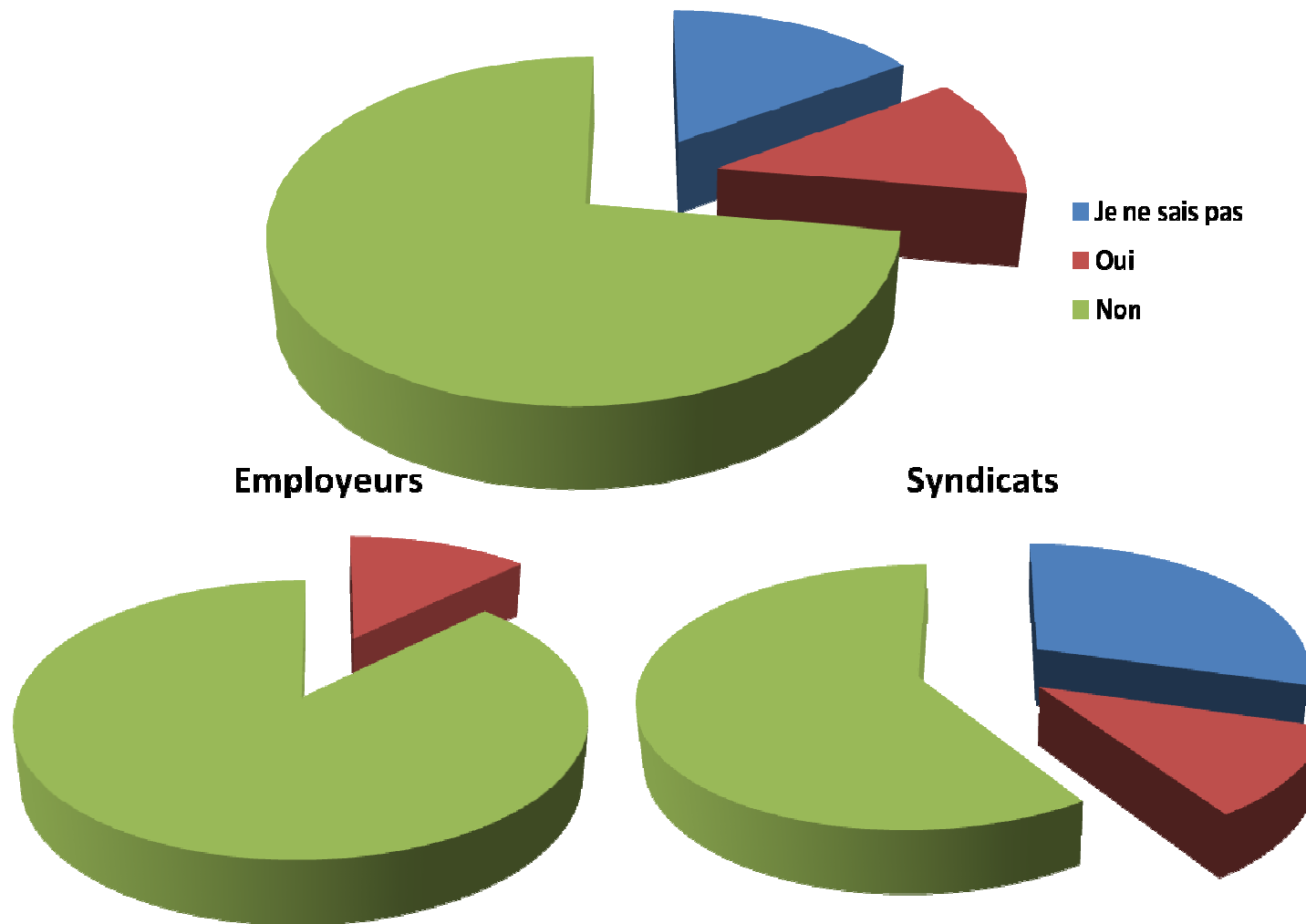
>> 1/ CREATION D'UNE COMMUNAUTE
D'ACTEURS DANS UE-27 + /IMAGE

>> 2/ CONSEIL SECTORIEL (Commun. Com)



Problème (de l'absence) de lien entre « stratégies » et GPEC qd existe

Existe-t-il un référentiel des emplois futurs ?



LE RESEAU DES OBSERVATOIRES (OU “COMITES”) : CARACTERISTIQUES PRINCIPALES

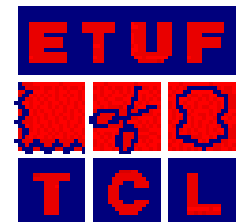
- Principes et valeurs fondamentaux
 - croyance forte en l’avenir du secteur TH européen
→ l’objectif premier n’est pas d’aider les travailleurs à sortir du secteur
 - dans toute l’Europe, un besoin absolu d’investir dans les compétences des travailleurs
 - les acteurs du textile et de l’habillement doivent coopérer plus encore qu’auparavant
 - bipartisme au sein du dialogue social = pierre de touche du projet en cours
 - le bon champ d’application comprend l’UE des 27 + les voisins, dont la Turquie

3. Conclusions

THC avenir certain, mais emplois moins nombreux,
plus qualifiés, mieux payés;



- Nécessité investir dans formation, éducation ainsi que dans anticipation; nouveau rôle Fds Structurels;
- Restructurations impliquent coûts (trop) élevés pour travailleurs, mais aussi pour l'économie locale/régionale (COM 2005/120); emploi ne peut être « la » variable d'ajustement;
- Encadrer la transition « juste » pour éviter que plus vulnérables ne paient une fois de plus!





Merci

www.etuf-tcl.org

