

THE SKILLS PANORAMA: ACHIEVING NATIONAL AND REGIONAL IMPACT

GOOD PRACTICE COMPENDIUM

CZ, DE, UK, IT, NL and SE

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INTRODUCTION

The Good Practice Compendium is a key output of Working Package (WP) 3 of the project ARLI. The main task of the ARLI project is to support the implementation of the EU Skills Panorama (EUSP) – the EU portal providing information about recent and future trends in labour market and skill needs - by utilising the expertise of both project partners and members of the European Network for Labour Market and Monitoring (ENRLMM), interrelating the EUSP with existing skills forecasting provision, achieving greatly enhanced impact and added value for the EUSP.

The second task is to use a good practice approach to explore how existing regional and local provision of skills forecasting can be enhanced for stakeholders through interrelation with the EUSP.

The Compendium concentrates on this second task. It brings altogether 37 examples of good practice – innovative and/or well-implemented labour market intelligence (LMI) tools (or policy/action which is based on the LMI) that help establish balance between demand and supply of skills within particular region.

The question of what constitutes ‘good’ or ‘successful’ policy or practice is complex. Therefore it was vital to set specific and clearly defined criteria for selecting examples of good practice, and then, describing them.

The first goal within this WP was to develop the Definition of a Good Practice Framework. All project partners discussed and agreed a comprehensive set of criteria, which were used, in a structured format, to share their national skills anticipation exercises. The Good Practice Framework is presented in following chapter.

In the second step, project partners gathered various projects aimed at LMI development, provision or use across Europe, with special aim at those existing in project partners’ countries.

In the WP2, regional stakeholders that have been interviewed by project partners were asked to identify examples of practice that they perceived as ‘good’ or ‘successful’ and that may be worth repeating in other contexts. Partners also examined the good practices through available project documentation (websites, brochures, project records, evaluations etc.), and interviews with project promoters, funders, management and staff. The overview on Good Practice Examples is provided in the Table 1.

Table 1: Overview of Good Practice Examples gathered

Country	Number of Good Practices
United Kingdom	6 examples
Sweden	6 examples
Italy	6 examples
Netherlands	6 examples
Czech Republic	5 examples
Germany	3 examples
Poland	1 example
Ireland	1 example
Spain	1 example
Austria	1 example
France	1 example
TOTAL	37 examples

GOOD PRACTICE FRAMEWORK

The Good Practice Framework was designed to identify and assess LMI tools gathered throughout Europe. It is based on set of criteria defined by project partners. Generally, it focused on following key points:

What are characteristics of the practice?

- Name of the practice,
- Accessibility of the practice,
- Media,
- Country,
- Level of information (national/regional/local),
- Available languages,
- Focus (demand/supply side/both).

What were the needs for the LMI?

- Objectives of the practice,
- Relation to identified needs of key stakeholders,
- Relation to policy,
- Target groups,
- Area of impact.

What does the LMI consists of?

- Content,
- Activities of the practice,
- Products/outputs of the practice,
- Processes of the practice,
- Data sources,
- Data used (taxonomy),
- Methodology (qualitative/quantitative/both),
- Timeframe (current or future skill needs).

What is the use of the LMI?

- Impact of the practice,
- Quality control and evaluation,
- Stakeholder involvement,
- Transferability of the LMI in another region or country.

Summary of the LMI

- Lessons learned,
- Why we consider it a good practice?

Table 2: Good Practice Examples List (rank by frequency in countries)

Name of the practice	Country	Region	Development / Use of LMI	Good practice developer
LMI Products and Services for SDS Staff	Scotland (UK)	National (Scotland)	Development and use of LMI	Skills Development Scotland
Skills forecast	UK	West of England	Development and use of LMI	West of England LEP
Construction Skills Network	UK	National (sectoral)	Development and use of LMI	Construction Industry Training Board
LMI for all	UK	UK - National	Development and use of LMI	UKCES
Working Futures 2010-2020	UK	UK - National	Development of LMI	UKCES
Careers Wales	Wales (UK)	National (Wales)	Development of LMI	Careers Wales
UAPS	Sweden	Skåne (state/county)	Development and use of LMI	Region Skåne (regional government)
Yrkeskompassen - The Occupational Compass	Sweden	National and all regions	Development and use of LMI	Arbetsformedlingen
Örestat III	Sweden	The Öresund region (DK and SE)	Development of LMI	Region Skåne (lead partner) (Interreg IV project)
The Øresundsbalance (Jobs and Education in the Öresund Region)	Sweden	The Öresund region (DK and SE)	Development of LMI	Municipality of Copenhagen (lead partner) (Interreg IV project)
Occupations A-Z" (Yrken A-Ö)	Sweden	National/all regions (descriptive LMI)	Development and use of LMI	Arbetsformedlingen
Transfer	Sweden	National	Development of LMI	Transfer (non-profit organisation)
Web Job Vacancies	Italy	Regional/Lombardia, Piemonte, Emilia Romagna	Development of LMI	CRISP
SIS Piemonte	Italy	Regional/Piemonte	Development and use of LMI	Regional Labour Market Observatory of Piemonte
Skills monitoring	Italy	Regional/Lombardy	Development of LMI	Assolombarda

Name of the practice	Country	Region	Development / Use of LMI	Good practice developer
Profile and employment condition of graduates	Italy	National/many regions (not all)	Development and use of LMI	Almalaurea
Professions, occupations and skills' needs	Italy	National/all regions	Development of LMI	ISFOL
Information System for employment and training	Italy	National/all regions	Development of LMI	Excelsior
Baanbrekend: randstad.nl	Netherlands	national	Development of LMI	Municipalities / Randstad
Brainport human capital	Netherlands	Eindhoven	Development and use of LMI	Brainport Development
Pastiel partnership	Netherlands	Friesland	Development of LMI	Pastiel partnership
Basiset regionale arbeidsmarktinformatie UWV	Netherlands	Groningen	Development and use of LMI	UWV
Spanningsindicator arbeidsmarkt UWV	Netherlands	Groningen	Development and use of LMI	UWV
Werkgeverspunt groot Amsterdam;	Netherlands	Amsterdam	Development and use of LMI	
The Hessian Care Monitor	Germany	Hesse - administrative district level	Development and use of LMI	IWAK
Regio pro	Germany	Hesse - administrative district level	Development and use of LMI	IWAK
EQUIB - Entwicklung des Qualifikationsbedarfes in der Region Bremen (Development of Qualification Needs in the Bremen Region)	Germany	Bremen - a mini-Bundesland	Development and use of LMI	IAW - Institut Arbeit und Wirtschaft
DV Monitor	Czech Republic	National/all regions	Development of LMI	NIE/NTF
Job Vacancies database	Czech Republic	National/all regions	Development of LMI	MoLSA/NTF
Czech Future Skills	Czech Republic	National/all regions	Development of LMI	NTF
Occupational profiles	Czech Republic	National	Development and use of LMI	NIE/NTF
Regional Labour Market Observatory	Czech Republic	Moravia Silesia region	Development and use of LMI	TEP Moravia-Silesia/NTF
Occupational Barometer	Poland	Malopolska	Development and use of LMI	Regional Labour Office Krakow

Name of the practice	Country	Region	Development/Demand of LMI?	Good practice developer
Lanbide (PES) labour market information system	Spain	The Basque country	Development and use of LMI	Lanbide
Skill Needs in the Green Economy and the role of the Observatoire Régional des Métiers PACA	France	Provence-Alpes-Cote d'Azur	Development and use of LMI	ORM-PACA
Skills Ireland	Ireland	National / all regions	Development and use of LMI	Expert Group on Future Skill Needs / Forfás
QualifikationsBarometer	Austria	National / all regions	Development of LMI	AMS

COMPENDIUM THEMES

37 Good Practice Examples gathered and described in the compendium represent wide range of approaches and tools. For the purpose of the Compendium and subsequent Synthesis Report, the examples have been divided into following key themes:

- Occupation based tools
- Sector based tools
- Data mining & monitoring tools
- Skills profiles & matching
- Cooperation / Labour market actions

Many examples focus on more than one theme though. Several LMI examples even focus on four themes - these we call "comprehensive tools" and present them separately in the next chapter of the Compendium.

The abovementioned themes we consider as primary attributes of Good Practice Examples. In addition to these key themes, following additional attributes of Good Practice Examples are also presented in each profile:

- Territorial dimension (National / Regional / Local)
- Availability of forecasting
- Demand / Supply side focus
- Career guidance suitability

THEME 1: COMPREHENSIVE TOOLS

Introduction

This theme consists of eight LMIs - three from United Kingdom (of which one is from Scotland), one from Ireland, one from Austria, one from Sweden, one from Italy and one from Czech Republic. We call them comprehensive, because they usually use wider range of methodologies how to gather, analyse and publish labour market information. They often combine qualitative and quantitative techniques, sectoral and occupational view on the labour market, forecasting with recent trends analysis and are also strongly linked to policy actions. Although these tools provide some level of regional information, they are mostly oriented at national level.

Skills Development Scotland (28 sectors) and UKCES (which involves Working Futures in 22 sectors) offer wide range of sectoral analysis with detailed qualitative skills focus and rich additional cross-sectoral, occupational and regional information. These examples provide not only advanced labour market analysis methodology, but focus also on targeted actions based on key findings and recommendations.

Skills Ireland provides similar range of activities and methodologies. While UK examples tend to focus more on sector view on the labour market, Skills Ireland is particularly strong in occupational view (although many qualitative sector studies are also available here).

The occupational view is also very strong in the case of Austrian QualifikationsBarometer, which is developed by the AMS (Labour Market Services in Austria) and in the case of Italian ISFOL project. The Italian example is worth mentioning also because of its extensive mapping of skills requirements for occupation, which follows state-of-the-art approach of American O-Net.

Czech Future Skills! is another comprehensive tool, providing (on national level with some regional detail available) profiles (including forecast) of 41 economy sectors plus three very detailed skills analysis in energy, IT and electroengineering industry.

One of the tools - the Øresundsbalance - is a rare example of transnational LMI in bordering regions of Sweden and Denmark.

The AMS-Qualifikations-Barometer



EXAMPLE PROVIDED BY IWAK

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	Yes (short term)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	AMS (Austrian Labour Market Services)
Website	http://bis.ams.or.at/ (in German only)

BACKGROUND OF THE LMI

The Austrian AMS-Qualifikations-Barometer is an online tool for job and career guidance and counselling, initiated by the Austrian Labour Market Service (AMS). It was developed in the second half of the 1990s with the aim to provide young people with reliable information on the current and short-term qualification needs in the labour market. At the beginning, there was a twofold challenge:

- To join dispersed sources of information on job opportunities and job descriptions
- To focus more on competencies rather than on single vocations

However, to a large extent the instrument is still structured along the occupational and vocational lines. At the starting point, the geographical focus is on the national level, but there information is available, the regional level is addressed for the nine federal states in Austria.

NEEDS FOR THIS LMI

This information tool consolidates information from many different sources which was not available before to the stakeholders involved in offering young people a training and employment perspective. This means that more targeted activities for supporting young people are possible.

DESCRIPTION OF THE LMI

The AMS-Skills Barometer focuses mainly on current and short-term LMI on the regional level. It uses already available information from different sources:

- Structural data
- Analyses of job advertisements
- Analyses and forecasts contained in research reports (national and regional level)
- PhD and Master Theses
- Media texts
- Expert interviews

As the different sources of information display different structures (e.g. in regard to skills and occupations), the data is not always directly comparable. A lot has to be done for the collection and

validation of information, making it to fit the structure of the AMS-Skills Barometer. Also the time periods can vary which makes it difficult to combine different sources. The information provided by the different forecasting sources is validated through additional sources such as expert interviews and scientific articles.

Although the aim of the tool is to provide as much information as possible on the level of individual occupations, often information is available on the more general level such as occupational groups or economic sectors. Concerning the issue of skills, the level of differentiation is similarly varied.

The information can be accessed through the categories “occupation”, “qualification level”, “qualification” and “keywords”.

USE OF LMI

Apart from the young people, how were in the focus of the AMS-Skills Barometer when it was established, there are further target groups for the information:

- Career guides and labour market counsellors
- Decision-makers in politics, public administration and education
- Employees and job-seekers

The broad user group of the AMS Qualifikations-Barometer poses a particular challenge to the choice of data and its presentation:

- The experts and the general public need very different kinds of LMI
- The level of familiarity with LMI and the ability to analyse and use it vary to a great extent

This means that the data needs to be not just valid, but also easily accessible and comprehensible. Therefore, particular efforts were made to accommodate the needs and resources of different target groups.

The use of the LMI provided by the AMS-Qualifikations-Barometer is regularly evaluated.

SUMMARY

The AMS-Qualifikations-Barometer is a prime example of combining already existing information on the labour market and making it available to a wide user group. Once this is done, it is possible to identify the information gaps and fill them with surveys and well-defined desktop searches. The particular strength of the instrument is its user-friendly interface.

Commission for Employment and Skills: (a) “Working Futures”; and (b) “LMI for All”.



EXAMPLE PROVIDED BY MARCHMONT OBSERVATORY

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	Yes (medium to long term - up to 10 years)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	UKCES
Website	http://www.ukces.org.uk/ , http://www.ukces.org.uk/ourwork/working-futures ,

BACKGROUND OF THE LMI

The UK Commission for Employment and Skills (UKCES) is a publicly funded, industry led organisation providing strategic leadership on skills and employment issues in the UK. Its strategic objectives are to:

- Provide outstanding labour market intelligence which helps businesses and people make the best choices for them;
- Work with businesses to develop the best market solutions which leverage greater investment in skills;
- Maximise the impact of employment and skills policies and employer behaviour to support jobs and growth and secure an internationally competitive skills base.

These strategic objectives are supported by a research programme that provides a robust evidence base for their insights and actions and which draws on good practice and the most innovative thinking. The research programme is underpinned by a number of core principles including the importance of: ensuring ‘relevance’ to their most pressing strategic priorities; ‘salience’ and effectively translating and sharing the key insights they find; international benchmarking and drawing insights from good practice abroad; high quality analysis which is leading edge, robust and action orientated; being responsive to immediate needs as well as taking a longer term perspective. The Commission also works closely with key partners to ensure a co-ordinated approach to research.

This Case Study highlights two elements of the Commission’s research and dissemination programme: “**Working Futures**”- the most detailed and comprehensive set of UK labour market projections available; and “**LMI for All**” – a new initiative designed to widen access and utilisation of government funded labour market statistics.

NEED FOR THIS LMI

The Working Futures projections form a core part of the base of labour market intelligence that is available to support policy development and strategy around careers, skills and employment. While the main rationale for producing these kinds of projections is no longer that policy makers will engage in any kind of detailed, top down, planning (or anticipation) of the labour market. It is more about providing information to allow individual actors throughout the system (individuals making career choices, educational and training establishments and employers generally) to make better informed decisions.

DESCRIPTION OF THE LMI

“Working Futures 2010-2020” is the fourth in a series of labour market projections commissioned by UKCES. The results present a medium to long term view (5-10 years ahead) of employment prospects by industry, occupation, qualification level, gender and employment status for the UK and for nations and English regions. The projections are designed to answer two main questions:

- Where will future jobs emerge from?
- What are the implications for both skills supply and demand?

The projections indicate what is likely to happen to employment – disaggregated by sector, region, gender, occupation, etc. - highlighting the full impact of the recession, and indicating the likely path to recovery. They also provide new evidence on the impact of the recession on a range of other indicators, such as productivity and unemployment. They utilise the latest official employment data, as well as factoring in the consequences of the Comprehensive Spending Review (CSR), and other economic policies introduced by the Government. The projections are based on the Cambridge Econometric (CE) macroeconomic forecasts, produced in the spring of 2011 and incorporate occupational projections developed by the Institute of Employment Research (IER) based at the University of Warwick.

Estimates of replacement – as well as expansion - demand are a key feature of the occupational projections and are particularly useful in assessing education and training provisions, since they quantify the number of workers needed to enter different occupations in order to offset outflows to retirements and occupational mobility etc. It is essential, for employers, education and training providers, and public agencies to recognise the different characteristics and requirements of these two different components of future skill needs. The estimates of replacement demand are informed by data on the age and gender structure of occupational employment, and rates of outflows due to retirement (and other reasons for leaving the workforce), inter-occupational mobility and mortality.

A technical report describes the structure and composition of the model in some detail. It is based on a Keynesian structure incorporating an input-output matrix and comprising over 5,000 behavioural and technical relationships. The main components are equations explaining consumption, investment, employment, exports, imports, and prices. The projections focus on employment by occupation, cross-classified by sector and a spatial dimension down to individual countries within the UK, and regions within England. Results for employment are reported by:

- gender;
- employment status (full-time/part-time/self-employed);
- occupation (one and two digit occupational groups);

- expansion and replacement demand, as well as net requirements; and
- qualifications (6 broad QCF levels).

The analysis also considers the labour and skills supply. Consistent projections of labour supply have been generated by:

- gender; and
- age (7 broad age groups: 0-15, 16-24, 25-34, 34-44, 45-54, 60-64, 65+).

Headline projections of the highest qualifications held by the working age population, those economically active, the unemployed and the employed, have been developed.

The results from the model are presented in a series of reports. These include a main report and an executive summary, reports focussing on sectors and Scotland, and a technical report. In addition a body of more detailed sectoral and spatial analysis can be accessed via a dedicated Working Futures data portal. For reasons of data confidentiality access is only available to analysts who hold a Chancellor of the Exchequer's Notice.

LMI for All is a data portal which brings together existing sources of LMI in one place. At heart this is an open data project, which supports the wider government agenda to encourage use and re-use of government data sets. Data is brought together in order to make it easier for developers to access and use the data to create applications and websites that present LMI in an engaging way, shaped to specific audiences. Organisations are currently beginning to use LMI for All data in their websites. RCU, an education consultancy, have created a dashboard with the data to help inform curriculum strategy. The data are also being used in iCould, a careers site featuring videos and articles of people relating stories of their career journeys. The UK Commission has commissioned an example application demonstrating what can be done with the data. Career Trax has been developed to demonstrate the potential of LMI for All, and to encourage use of the data in new and innovative ways. This application draws on only part of the data and functionality available from LMI for All and there is scope to tap into the portal in a whole host of additional ways. Career Trax is best accessed using Google Chrome.

LMI for All data has now achieved Pilot level certification from the Open Data Institute, which means extra effort has gone in to supporting and encouraging feedback from people who use the open data. - See more at: <http://www.ukces.org.uk/ourwork/research/lmi/lmi-for-all#sthash.P1BpEjH1.dpu>

USE OF LMI

While no formal evaluation of "Working Futures" outputs exists the projections are fairly widely cited within national and local research documents. For example, Marchmont drew extensively on the projections when forecasting skills needs within its assessment of the evidence base for the Solent LEP Skills Strategy. As such they are a widely known, and frequently cited source among the employment and skills research and policy community.

Working Futures and LMI for all data are also used extensively by the careers guidance community.

SUMMARY

Working futures and LMI for all are critical initiatives directed by the UK government to bridge the gap between the demand for labour and the supply of qualified labour. They are different but form part of the same offer.

Working Futures is a good example of a national level forecasting approach seeking to establish what skills will be needed in the future and where there may be issues of supply.

The provision of LMI for All in its current format represents another example of the marketisation strategy of the UK government where data is made available for private sector (and others) to package and sell, as in the case of the accompanying case study from Careers SW.

Professions, Employment and Skills Needs



EXAMPLE PROVIDED BY CRISP

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	Yes
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	ISFOL
Website	http://professionioccupazione.isfol.it

BACKGROUND OF THE LMI

The project "Professions, Employment and Skills Needs" is promoted by the ISFOL - Institute for the Development of Vocational Training of Workers. The web site, which is the core services provided by the initiative, was create in 2001 to become a national system for permanent monitoring and forecast of professions and skills needs.

NEED OF THIS LMI

The project was born on behalf of the Ministry of Labour in order to provide the labour market stakeholders and single citizen quantitative and qualitative information on the topic of labour demand, professions and skills needs. The idea was that of creating a permanent system, as the evolution of professional needs are recognized to be fast and a tool becomes necessary which is capable of monitoring the demand in real time and, wherever possible, also to anticipate it. Moreover, it would have to be a "National", as the professional and training needs to be traced to a

common nomenclature in view of the growing mobility of labour, which often exceeds the regional and national boundaries.

DESCRIPTION OF THE LMI

The site provides three main kinds of information.

- (1) *Mapping of professional needs* (knowledge, skills, abilities, etc..). The site allows to browse the information on occupations from the Nomenclature of Professional Units (NUP) developed by ISFOL and ISTAT (National Statistical Office). Each Professional Unit is designed as a set of professions which are as homogeneous as possible between them, and described in detail in the light of about 400 variables which include knowledge, skills, attitudes, values, work styles, generalized work activities, work conditions, general tasks and activities.
- (2) *Forecasting of labour demand for professions*. The site provides a forecasting of labour demand, distinguished by industries, regions and professions. There are both short-term forecasts (1 year) and medium-term forecasts (5 years). The site also provides a forecasts (5 years) for the supply and demand of education in terms of level of education/training courses, and an estimate of the potential mismatch.
- (3) *Tool for the measurement and assessment of the degree of preparation for a specific profession*. Through a predefined list of knowledge and skills and based on an on-line tool, the user has the possibility to measure the level the level at which he have (or not) a certain skill. It is then possible to activate an automatic test that allows the user to check any difference (positive or negative) between the answers given and an average value for a profession.

In addition, the site is proposed as point of integration between information sources produced on the topic of professional needs in Italy. Then, on the website it is possible to find the updated results of national surveys carried out by Bilateral Bodies on profession and skills needs, forecast of labour demand produced by Unioncamere, other then documents, analysis and studies on the issues and profession and skills needs, produced by ISFOL, and other institutions, public authorities and representative bodies.

ISFOL, in collaboration with ISTAT, realizes a National Survey which aims to represent the characteristics of the Professional Units related to the worker, the work done and the work context. The conceptual model of reference for the survey and the questionnaires used were borrowed from Occupational Information Network, O*Net (<http://online.onetcenter.org>). The questionnaire is divided into ten thematic sections for a total of 255 questions related to knowledge, skills, attitudes and generalized activities; the questions explore two different and complementary dimensions: a) the importance of the question (item) in the conduct of the profession, b) the level of complexity for which the same item is necessary.

The questionnaire was sent to a sample of twenty workers for each Professional Unit, for a total of 16,000 interviews. The information is then completed by the interventions of experts from the professions and occupations analysts completing the questionnaire. The methodology for predicting trends and employment within industries and territories was developed in close cooperation with the research institutes of IRS (Institute for Social Research) and REF (Research and Consulting Economics and Finance). The forecasting model is modular: in the first stage, a "multi-sector macro-econometric model" produces the employment forecasts for the whole economy and employment

forecasts declined by sectors, on the basis of forecast scenarios of economic and labor market taken from official documents of the Government and other international institutions. The second stage addresses the estimation of employment forecasts considering both the additional and substitutive labour demand; in this case data come from the Labour Force Survey realized every quarter by ISTAT.

USE OF THE LMI

The site is designed to meet the information needs of various stakeholders, including policy makers at national and regional level, system of education and training, and individual citizens. Indeed, the project aims to support the processes of choice regarding: (1) planning of training and education for which the system provides information relating to the forecast of development of the various industries and quantitative information on the immediate needs and trends; (2) planning of training and education for which the system provides reference points concerning the evolution of the content of the work and the development of knowledge and skills; (3) orientation to the choice of education/training and orientation to career choices for which the system provides information on the characteristics of the professions and forecasts of employment in the short and medium term.

The results of the project are freely available by the individual user through the website. An online and consultable databank is provided while it is not expected any report or summary of the trend of the overall demand for labour and the professions.

All information are accessible via the website where it is possible to search for the information of interest on the home page and select one of the following three routes: "Professions", "Economic sectors" and "Territory".

The site has been active since 2001 and the first National Survey was made in 2007. Although the frequency with which the survey is implemented is not specified, ISFOL and ISTAT are currently undergoing the second edition of the National Survey.

SUMMARY

The level of innovation that characterizes the experience of ISFOL as good practice is manifold:

- it provides detailed information on the skills require by 800 different professions, detailing information about knowledge, skills, attitudes, activities and work context.
- it provided a forecasting analysis of labour demand in both the short (one year) and medium term (five years) by industries, professions and regional territories;
- results are freely usable and easily accessible by the final user;
- a tool is provided allowing to assess the own level of preparation for a specific profession and measure the gaps in terms of knowledge, skills and abilities.



EXAMPLE PROVIDED BY NTF

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

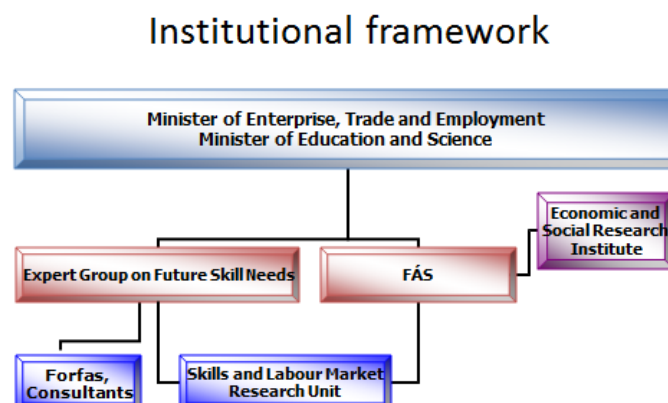
Territorial dimension	National
Forecasting	Yes
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Expert Group on Future Skill Needs / Forfás
Website	http://www.skillsireland.ie

BACKGROUND OF THE LMI

The key institution responsible for provision of LMI in Ireland is called the Expert Group on Future Skills Needs (EGFSN). It advises the Irish Government on current and future skills needs of the economy and on other labour market issues that impact on Ireland’s enterprise and employment growth. It has a central role in ensuring that labour market needs for skilled workers are anticipated and met¹. It includes representatives of the Social Partners, the relevant Government Departments (Department of Finance; Department of Enterprise, Employment and Innovation; Department of Education and Skills) the Economic Development Agencies (IDA Ireland; Enterprise Ireland;) and the Agencies involved in policy in relation to post secondary education and training. The EGFSN reports both to the Ministry for Jobs, Enterprise and Innovation and the Ministry for Education and Skills.

Figure 1: Institutional Framework of Skills Ireland



¹ Source: <http://www.skillsireland.ie/aboutus/>

Because of recent development, the chart above is not 100% accurate. FÁS - former Irish National Training and Employment Authority - has been replaced by SOLAS and training is now delivered by a network of Employment and Training Boards.

Forfás, Ireland's policy advisory board for enterprise, trade, science, technology and innovation in cooperation with SOLAS (Skills and Labour Market Research Unit), provides the EGFSN with research and secretariat support. The SOLAS delivers also data, analysis and research and manages the National Skills Database which is one of key labour market information tool available in Ireland. The labour market research requirements of the EGFSN are provided by the Skills and Labour Market Research Unit.

NEEDS FOR THIS LMI

The EGFSN was created in 1997 by the Irish government in response to chronic shortages of software programmers and developers on the labour market. Its remit was extended in 2001 as the booming economy (during so called "Celtic tiger" days) was creating shortages across many sectors and occupations.

The idea of creating a research unit and a national skills database that would supply the EGFSN with comprehensive up-to-date data in real time (or as close to real time as possible) was first mooted in 2001 and became a reality in 2002 when resources were allocated to gather a team of labour market researchers. Till this step most labour market knowledge for Irish policy makers was provided by external consulting companies and the motivation for establishing of this Unit was - in addition to goal of solving labour market imbalances - to develop "in-house" knowledge base that will serve educational and training authorities of Ireland in the long term and provide "live data" which will be continuously updated.

The "Celtic tiger" days were ended by Large recession of 2008 which hit Ireland particularly hard. Since then, the unemployment rate increased significantly and employment levels and number of vacancies appropriately decreased. Nonetheless demand for information concerning skills imbalances is still high in Ireland and LMIs they are used represent state-of-the-art in Europe.

DESCRIPTION OF THE LMI

The National Skills Database (NSD) works with significant amount of data input. The equivalent of LFS (the National Household Quarterly Survey from the Central Statistics Office is the most important of them. Every five years, there is a Census undertaken of the population and this data is also inputted into the database. There are also several sources on vacancies included - from PES, Irish Times, Irishjobs.ie and recruitment agencies. Use of all these sources help overcome significant issue of vacancy monitoring - that each source covers only part of the market and thus analyses based on just one source provide distorted view on what is happening in demand for skills.

Based on the input data, the SLMRU produces each year three reports: the National Skills Bulletin², Monitoring Ireland's Skills Supply and the Vacancy Overview Report. It also produces detailed employment forecasts every two years.

The Bulletin is the key LMI derived from the database. The main focus of the Bulletin is the analysis of employment at occupational level over the previous five years. Each occupation profile contains

² <http://www.skillsireland.ie/publications/2013/title,10965,en.php>

employment level and five year trends; the number of employment permits issued to non-EU nationals; an indication of difficulty in filling positions from the twice yearly Survey of Recruitment Agencies; movements in the number of vacancies; an estimation of the supply emerging from the Irish education and training system; other relevant findings from sector studies carried by the EGFSN or the SLMRU. By synthesizing all of the above information in the Bulletin, it is possible estimate the balance between the demand and supply for each occupation. This information is summarised in respect of over 100 occupations in a table in the Bulletin.

Figure 2: Example of Skills Database

Occupation	Number Employed (2011 Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Average Annual Employment Growth Rate, 2007-2011 (%)	New Employment Permits Issued, 2011 (Number)	SLMRU Recruitment Agency Survey	Replacement Rate (%)	Shortage Indicator
Functional managers & directors	37.1	25.1%	6.2%	Below Average	23.4%	7.6%	61.3%	-3.4%	67		-1.5%	No shortage
Production managers in manufacturing, mining & energy	11.4	25.2%	4.1%	Below Average	9.4%	3.2%	68.4%	2.7%	22		-1.5%	No shortage
Financial managers & directors	4.6	41.5%	10.1%	Below Average	12.9%	6.3%	78.4%	-0.4%	27		-1.5%	No shortage
Advertising, marketing, sales directors	4.3	25.9%	3.4%	Below Average	14.0%	10.5%	71.9%	3.3%	22		-1.5%	No shortage
Human resource managers	4.1	79.9%	5.4%	Below Average	9.1%	1.8%	79.4%	10.2%	4		-1.5%	No shortage
ICT specialist & project managers	12.9	30.2%	1.9%	Below Average	5.2%	11.4%	81.0%	4.5%	79		2.8%	Skill shortage
Financial institution managers & directors	6.2	40.3%	2.8%	Below Average	10.9%	4.7%	69.4%	1.7%	6	X	-1.5%	No shortage
Managers & directors in transport & communications												

In addition to occupational profiles, the Bulletin contains also large amount of focused analytical information on general employment trends in sectors and regions, education and training provision, vacancies and unemployment.

In addition to statistical data-based analysis there are also qualitative sector studies published on EGFSN website. They address current and future skills requirements in various sectors.

USE OF THE LMI

The LMI provide following analytical information about labour market development which is used for various purposes:

- 1) Imbalances between the demand and the supply of skills. These imbalances are often used by the EGFSN as the basis for recommendations for increased VET provision in certain key areas, such as software engineering.
- 2) Employment prospects for various occupations. The analysis from the model is used to inform school-leavers and job-seekers about the relative employment prospects associated with different occupations and qualifications.
- 3) Regional skills imbalances. Data on the supply of skills is often used as an indication of the availability of skills in certain local areas. This information is very valuable to industrialists who are deciding on where to locate a particular plant.
- 4) Monitoring of targets set in the National Skills Strategy regarding the qualifications of the workforce in 2020.
- 5) For persons living outside of the European Economic Area (EEA), Ireland has an immigration policy which is primarily based on the skills needs of the economy. One of the key functions of the research outputs of the SLMRU is to identify which skills-sets cannot be sourced within the EEA and to provide this information to those who advise the Government on immigration policy.
- 6) Evidence for active employment policy measures. The analysis provides a major input into the design of active labour market measures, especially the portfolio of training courses offered to the unemployed. The analysis identifies those types of training interventions which are most likely to achieve good employment outcomes for the participants.

SUMMARY

Irish example has four distinctive strengths:

- 1) Wide range of methodologies combining qualitative and quantitative tools for labour market research,
- 2) Very good presentation of outputs and key findings,
- 3) Strong link of labour market research and LMI to policy and decision making and
- 4) History and continuity.

LMI Products and Services for SDS Staff



EXAMPLE PROVIDED BY MARCHMONT OBSERVATORY

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Regional
Forecasting	Yes (medium to long term)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Skills Development Scotland (SDS)
Website	http://www.skillsdevelopmentscotland.co.uk/resources/labour-market-intelligence/

BACKGROUND OF THE LMI

Skills Development Scotland (SDS) is the national skills body supporting the people and businesses of Scotland to develop and apply their skills. SDS was formed in 2008 as a non-departmental public body, bringing together careers, skills, training and funding services. SDS plays a key role in driving the success of Scotland's economic future, working with partners to:

- Support individuals to reach their potential
- Help make skills work for employers
- Improve the skills and learning system.
- SDS is preparing Scotland's workforce to maximise opportunities in today's dynamic world.
- How SDS deliver their services

An all-age careers service has been operating in Scotland for a number of years. However, in March 2011 the Scottish Government launched its first Career Information Advice and Guidance (CIAG) strategy, which places a continued emphasis on the central importance of individuals developing effective career management skills and being enabled to make informed career choices.

The strategy recognises that careers advisers need to be informed about 'context' Labour Market Information (LMI) and that 'Career Management Information' (CMI) should be made available to those accessing careers guidance services. Since the strategy was launched, the Scottish Government has brought together a range of partner organisations to develop an LMI Framework. The framework, which was published in March 2012, sets out a vision for the development of labour market information and intelligence in Scotland that is robust, useful and easy to find, that can be utilized effectively by relevant stakeholders and that can achieve high policy impact.

The CIAG strategy and associated LMI framework recognises the importance of LMI and CMI to support staff and customers respectively and acknowledges Sector Skills Councils (SSCs) as a primary source. To support the use and sharing of CMI, a key part of the service redesign is Skills Development Scotland's (SDS) web-based service 'My World of Work' which aims to help people

plan, build and direct their career throughout their working lives and provides information on skills, learning and employment.

In order to meet the objectives set out in the CIAG strategy, SDS has developed a Career Management Skills Framework for the careers sector that sets out an approach to supporting individuals to develop and use what are collectively referred to as 'career management skills'. The intention is to use it to inform the professional development of SDS staff as well as the development of careers services in Scotland. The Framework includes a number of significant new products and services.

NEED FOR THIS LMI

SDS provides LMI services to their staff to ensure easier access to high-quality career-related LMI. This is based on a need identified by SDS as existing LMI for Scotland, available through a range of sources, was not always accessible to career service practitioners in a form that could be easily analysed and interpreted for Careers Information, Advice and Guidance (CIAG). The Scottish Government has recognised that the provision of robust information and intelligence about the labour market is critical to ensure effective career guidance in a flexible and dynamic labour market. Practitioners require access to high-quality LMI in a form that they can easily digest and work with in order to provide relevant advice to individuals and help them make more informed decisions about careers and learning options.

Labour market information on its own can be helpful, providing advisers with a background and context in which to consider their work³. However, to be useful in guidance, it has to be turned into labour market intelligence through interpretation and analysis. Although the LMI used by advisers to inform their practice may differ in form and content from that which they use with their clients, the LMI that both individuals and their advisers need most is career-related LMI. Career-related LMI helps individuals consider routes into, and ways around and through, the world of work both now and in the future. Career related LMI can help advisers to better understand such things as:

- Where is there growth and decline
- What is the age, gender and ethnic profile of different parts of the labour market
- What impact does all this have on availability of and competition for jobs in different areas
- What impact does this have on wage and skill levels

When providing this career-related LMI to individuals, the key questions that have to be asked are:

- What is going to be meaningful to the individual?
- How am I hoping this information/intelligence will help them in making choices?
- How might it raise aspirations, challenge stereotypes, increase job knowledge and widen career horizons?

In this, a key task is to help individuals to enhance their career management skills so that they can research and weigh-up the information that is available to them on their potential options and opportunities.

³ Using and Sharing Career Related Labour Market Information (UKCES 2012).

Skills Development Scotland distinguishes between LMI for staff and CMI (career management information) for customers. LMI for staff provides area and sector context so that they are able to understand how to mediate job choice with customers. CMI for customers is presented in a more engaging and accessible way and is occupation based.

DESCRIPTION OF THE LMI

SDS provides Labour Market Information and Intelligence (LMI) reports and resources designed around the requirements of SDS staff. The SDS LMI system is managed by the Evaluation and Research Team and brings together relevant information from a variety of sources. LMI is provided at Scottish (regional) and sub-regional levels and the language used is English. It was established in 2011 and focuses on the supply and usage of LMI.

There are a variety of LMI products that can be used by career-service practitioners to deliver Career Management Information (CMI) and support individuals in their learning and career decisions and in developing career management skills.

Activities include referencing and interpreting LMI products to provide CIAG that can assist customers in developing their skills in those areas most likely to lead to long-term employment and career opportunities. The critical products are:

- Local LMI profiles;
- Employment and unemployment reports;
- Access to sectoral LMI;
- Weekly Media Monitoring service highlighting job gains and losses;
- SDS Labour Market Focus monthly newsletter;
- Research online, web-based portal for the most recent and relevant labour market intelligence;
- LMI networking events, creating a dynamic environment in which the guidance community can engage with key stakeholders.
- Skills in Focus – events where senior representatives from organisations around Scotland can debate key skills issues

LMI for CIAG practitioners provides both an area and a sector context so that practitioners are able to understand how to mediate job choice with customers.

The LMI is collected and collated from a variety of sources - NOMIS, Scottish Government, Sector Skills Councils, IDOX information services (Research Online) – a private company providing intelligence services.

Both qualitative and quantitative LMI is used, collating data from national statistic and summarising reports and briefings. Similarly SDS utilise various data-sets and taxonomies depending on the LMI product and data source. The focus of this service for CIAG practitioners is mainly on monitoring current demand and interpreting trends through the CIAG process rather than forecasting, which is a focus for the Scottish Government LMI Framework.

To ensure the products remain up-to-date, they are reviewed on a regular basis via consultation with CIAG practitioners. An LMI group involving careers and other staff across the organisation which contributes to the ongoing development of SDS LMI resources and staff training.

The service is provided as an integral part of the SDS Evaluation and Research Team operating costs.

USE OF LMI

Evaluation and feedback indicates that the SDS LMI products and services have helped SDS staff to improve their understanding of the labour market and supported their work with customers, partners and other stakeholders.

To ensure quality, ongoing monitoring takes place via the LMI group and full staff evaluations are carried out on a regular basis. The service is for SDS staff but material is available on the SDS corporate web-site for use by partner organisations to use free of charge.

SUMMARY

A pragmatic and evolutionary approach to the development of LMI has been adopted, driven by the needs of staff. An LMI group comprising of staff, including team leaders and advisers, covering all 32 Scottish Local Authority areas has fulfilled a key role. This group has acted as a sounding board and conduit between the wider staff and the central LMI team and contributing directly to the development of resources and staff training. An important distinction between the data requirements of guidance professionals (defined as labour market information) and clients (defined as career management information) has been made and this has informed the development of systems and processes as well as a series of resources.

The approach is underpinned by a clearly defined vision and purpose for LMI within SDS. A number of success criteria have been identified⁴:

- High level strategic support within SDS for LMI development and use.
- A pragmatic and evolutionary approach, underpinned by a clear vision, purpose and parameters.
- Dedicated financial resources and a multi-disciplinary team focused on LMI.
- A recognition that a distinction between labour market information and career management information is essential.
- Working in partnership to identify and utilise existing resources so that limited resources are focused on plugging gaps.
- Development of products and services through consultation with staff; the opportunity for staff to actively shape and contribute to the development of products and services.
- Continuous quality improvement. Learn from others within and outside the organisation, capture feedback and act on it, evaluate own practice.

The principles underpinning the SDS approach to the development of LMI are transferable as are some of the systems, processes and resources.

⁴ Using and Sharing Career Related Labour Market Information (UKCES 2012).

The Øresundsbalance (Jobs and Education in the Öresund Region)



EXAMPLE PROVIDED BY ARBETSFÖRMEDLINGEN

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Regional and trans-national
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Municipality of Copenhagen (lead partner) (Interreg IV project)
Website	http://www.jobbutbildning.net/increasing-mobility-in-the-oresund-region

BACKGROUND OF THE LMI

Öresundsbalance identify occupational labour demand in the region and potential mismatches across the border. The Öresundsbalance is a part of the project Jobs and Education in the Öresund Region is seeking to increase job mobility and educational mobility across the Danish Swedish border.

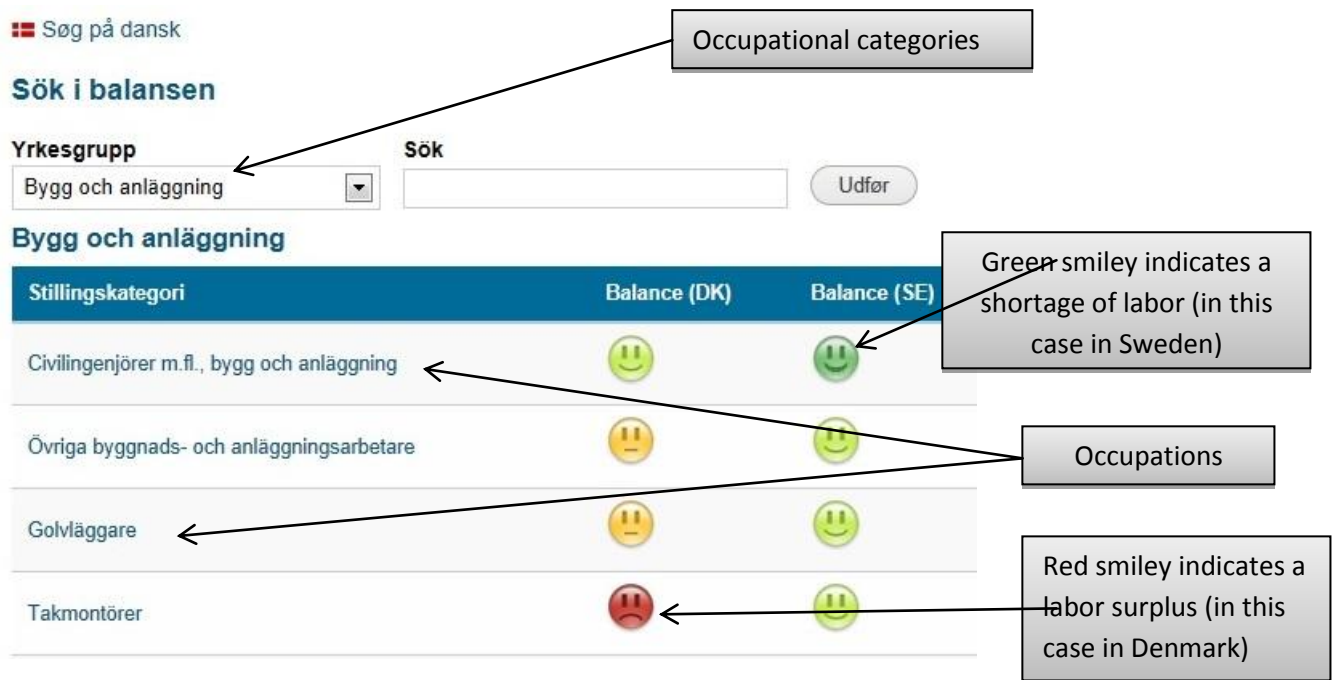
NEEDS FOR THIS LMI

The project is aiming to spur citizens to seek employment and education on the other side of the border with the long-term goal of creating a more integrated region. An integrated labour market is a key factor to attract enterprises and capital to the region. Currently, 95% of the cross border commuters live in Sweden and one of the aims of the project is to increase the number of Danes commuting to jobs or education in Sweden. Recently, Copenhagen had a surplus of craftsmen and nursery teachers while Scania in Sweden was short of these occupations. Before the project existed there was no provider of this kind of LMI. Hence, the information provided in the Öresundsbalance helps to create a more efficient matching between jobseekers and vacancies in the Öresund region..

DESCRIPTION OF THE LMI

The online tool “Øresundsbalance” uses Danish and Swedish labour market data to identify supply and demand on both sides of the border for 250 occupations. The tool provides an overview of job opportunities in the entire region and highlights the fact that looking for jobs in the entire region increases the possibility of finding a job.

Figure 3: Example of the LMI output



USE OF LMI

As the LMI is relatively new and a part of an on-going project, no comprehensive study of its impact has been carried out, it is not possible to say anything certain about, its impact so to this date.

SUMMARY

It is too early to speak of the Öresund region as a functionally integrated labour market. However, it is clear that the unemployment rate would be much higher, especially in Malmö – on the Swedish side of Öresund strait - without the extensive cross-border movement. Before the financial crises there were several cases of occupations where the Danish labour market faced shortage and need an inflow of workers, especially in the service sector. At the same time the unemployment in Malmö was relatively high and a perfect match situation occurred at the time. The cross border mobility played in this situation a central role in alleviating the mismatches on the labour market in the region, and been a major factor for the regional growth ever since. In the post financial crisis era, there are still labour shortages, even if not as severe and general as the used to be. The shortages also appear on both the Swedish and the Danish side of the Öresund strait. The shortages of today are mostly present among skilled and well-trained workers and new ways are needed to boost labour mobility.

In this context, the Öresundsbalansen constitutes a unique (?) project trying to identify supply and demand on both sides of a border region for 250 occupations. The Öresunds balance is a working example of how cross border LMI could be produced and/or presented

Czech Future Skills



EXAMPLE PROVIDED BY: NTF

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional
Forecasting	Yes (medium term forecast)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	National Training Fund, National Observatory of Employment and Training
Website	www.czechfutureskills.eu

BACKGROUND OF THE LMI

The Czech Future Skills website is concerned with forecasting medium-term skills needs in relation to national and global economic trends.

The objective is to provide information about future occupational requirements, qualifications and skills. One of the major outputs of this website is a Czech version of Job Futures (Budoucnost profesí). It makes it possible for users to get information about the current situation and the future of various occupations in the labour market. There are groups of occupations falling within a total of 28 fields which makes searching easier. An occupation can also be searched for via a full-text search engine.

NEED OF THIS LMI

This comprehensive website about labour market trends and skill needs forecasting was launched in April 2009. There are presented results from several projects under responsibility of the Ministry of Labour and Social Affairs. Examining of the future of the labour market is a relatively new topic in the Czech Republic, and therefore it was necessary to develop methodology. Therefore since 2007 there is an initiative to create a system of regular forecasts of skills needs to be used most importantly, by employment services, but also by other users in the Czech Republic. Website Czech FutureSkills shows many of outputs.

DESCRIPTION OF THE LMI

In detail, the portal provides outputs from:

- Detailed **sector studies**: mostly qualitative studies but based on results of quantitative forecasts of future employment in sectors and trends in the Czech economy. A detailed look at selected sectors of the economy and examining all factors that may affect their development in the upcoming years –related to trends technologies, processes, legislation, finance, demography, competition or macro-economy. There were presented (in the form of articles) studies on selected sectors on the website:
 - “Future Skills Needs in the Energy Supply Industry”

- “Future Skills Needs in the Electrical engineering”
- “Future Skills Needs in ICT services”
- **Job Futures:** This tool takes the form of a catalogue of occupations. It presents current and future trends of 533 occupations within 30 occupational groups. The future trends were based on quantitative forecasts of employment. Forecasts are based on quantitative model ROA – CERGE (27 education groups, 30 occupation groups). The future job prospects require aggregating the occupations into wider occupational group. Information on each group of occupations includes:
 -
 - 1. GENERAL INFORMATION:
 - Description and summary of prospects of the job,
 - Most frequent occupations in this group,
 - Information about sectors where these occupations can be found,
 - 2. JOB FUTURE:
 - Chances for finding suitable job on 0-10 scale, employment opportunities for these occupations in the 2008-2013 period,
 - Development of employment figures compared to the development of employment in the economy as a whole
 - 3. CURRENT SITUATION of each OCCUPATION within this occupational group
 - Number of graduates with qualifications for the performance of these occupations,
 - Information about ageing of the workforce in this occupation.
- **Regional benchmarking** (only in Czech): Compares regions in many indicators such as wages, graduates, unemployment rate, employment, economic activity of population
- Analyses of the **future development of 41 sectors of the Czech economy** to 2020 (only in Czech)
- Other analyses of main labour market trends.

Web-based portal www.czechfutureskills.eu is available both in Czech and English version (mostly all results are translated, some regional information are only in Czech). Most of the website is still up to date but the part about occupational prospects in Job Futures ends with 2013 and it will be updated in 2015 accordingly to new forecasting model.

USE OF LMI

The website is important information source for professional community, policy makers, labour market specialists, regional authorities and public. The website has monthly 3,000 – 5,000 unique visitors. This is also first web side focused directly on the topic of future trends in labour market in the Czech Republic. Two of Czech job portals have their advertisements of job vacancies on the pages of relevant occupations.

SUMMARY

The quantitative and qualitative analyses of trends on labour market are concentrated in one information tool – website. There are used many points of view – regional benchmarking, national trends on labour market by occupations, detailed information about future development in sectors, job futures - description of LM development of selected occupation, employment opportunities for occupations.

Figure 4: Czech Future Skills Website

Job futures - Budoucnost p... x

Site map Portal In professions Keyword... search

Home page → Czech future skills → Administration → data entry operator

You searched for occupation: data entry operator

The occupation searched for is part of the occupational group: **Secretaries, accounting clerks, receptionists and social work associate professionals**. Information about the future concerns the entire group.

The future situation of the occupational group on the labour market

The employment prospects for this occupational group in the 2009-2013 period will be as follows:

The chances of finding employment for this occupational group in 2009-2013 are below average. As compared to the development in the 2003-2008 period these chances will remain about the same. People in this occupational group most often find employment in service industries (professional services, hotels and restaurants), public administration and healthcare. Due to the economic crisis these are the very occupations that are the target of 'downsizing'. The development of electronic services in various service industries as well as public administration and healthcare represents another threat for the future employment of these individuals. Even without implementation of electronic services public administration is expected to lower the number of employees. There will be a sufficient number of graduates with suitable qualifications at the labour market in the upcoming years. This will also unfavourably affect the overall position of this occupational group in terms of employment prospects.

Development of the employment in the occupational group (in thousands):

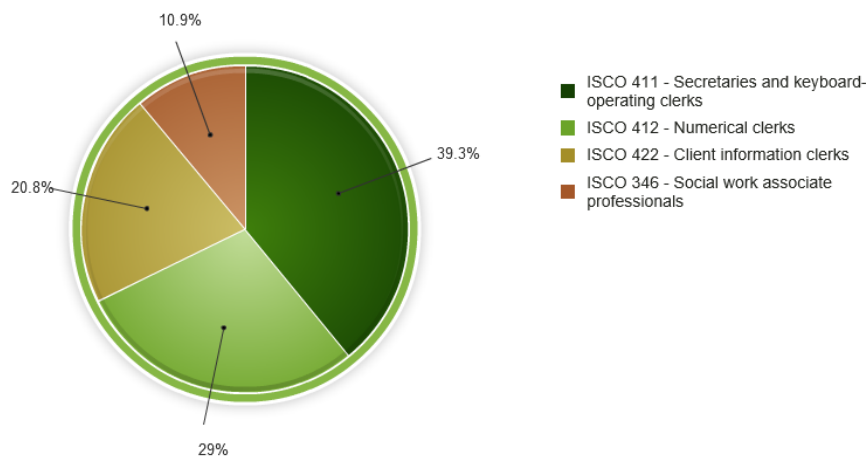
Year	Total employment (thousands)	Development of employment in this occupational group (thousands)
2001	138	4723
2002	146	4771
2003	142	4747
2004	134	4723
2005	146	4771
2006	154	4842
2007	170	4889
2008	183	4937
2009	170	4913
2010	166	4889
2011	179	4960
2012	183	4984
2013	187	5008

Legend:
 -○- Total employment
 -○- Development of employment in this occupational group

As a result of economic development **the number of jobs** within this occupational group will increase by 4 % by 2013. The number of jobs in the economy as a whole will increase by 0,2 %. A total of **20 % of workers** in this occupational group will leave their jobs (e.g. retirement). Some of these jobs will cease to exist, some will have to be filled. **Overall, 16 % of current employment will have to be filled, i.e. 22500 new workers will have to be hired.**

The current situation of the occupational group at the labour market:

The occupational group consists of the following subgroups:



THEME 2: OCCUPATION-BASED TOOLS

Introduction

This group of Good Practice Examples consists of eight LMI tools – three from Sweden, two from Czech Republic and one for Netherlands, Poland and Germany.

Occupation-based tools are generally most suitable for use in career guidance counselling. Examples from Sweden, Netherlands and Poland also show this approach has very close to public employment services (PES) – tools are either developed by PES (or together with PES) or intensively used by them. Therefore matching of demand and supply of skills is a significant attribute of these LMIs as well.

Although occupational based tools are mostly used in career guidance, there are examples in which the occupational approach also serves as a basis for specific labour market actions – notably in Germany Regio pro and Czech regional occupational profiles.

Regio Pro



EXAMPLE PROVIDED BY IWAK

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Region Hesse
Forecasting	Yes (short term, 12 months)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	IWAK
Website	www.regio-pro.eu (in German)

BACKGROUND OF THE LMI

Regio pro is a skills forecasting system which was established in 2007 to identify the need for skilled labour in the 26 administrative districts in the Federal State of Hesse. The forecasting period is either five or seven years. This labour market monitoring instrument is based on structural data delivered by the pivotal providers: regional branches of the Federal Statistical Office and the Federal Employment Agency. This quantitative data is validated with qualitative methods: since 2009, selected experts are asked to interpret the data by fill in a semi-structured online-survey. In 2012, focus groups in administrative districts were introduced for validating the structural data – they act as an additional source of information, but also as quality control of the results of the labour market monitoring process.

The last update of regio pro was published in autumn 2013 and contains a forecast for 2018 (calculated on the basis of 2011).

NEEDS FOR THIS LMI

Through identifying future demands for single professions, strategies for certain target groups of labour market policies can be identified (women, youth, unemployed). That means that career guidance officers, job advisors or providers of further training and education can adjust their products and strategies according to the labour market needs in their administrative district.

DESCRIPTION OF THE LMI

Regio pro is an initiative of the Hessian Ministry for Economics, Infrastructure and Development which was developed by IWAK in close cooperation with the Hessian Social Ministry. It is a web-based tool where:

- The development of availability of skilled labour can be displayed for single professions until 2018 (three-digit codes of the German Federal Employment Agency),
- The general level of skilled labour shortage/surplus can be displayed on administrative district level which enables to compare the situation in different administrative districts.

In addition, reports are published on a regular basis. The last reports included skills development profiles for all

USE OF THE LMI

The forecasts of regio pro are used to start negotiations on labour market development strategies in the administrative districts. At the round table, the relevant labour market stakeholders are gathered with the aim to interpret and analyse the data and develop a common strategy on the basis of the deliberations. Depending on the view adopted by the local authorities, the forecasts can be used for developing strategies for meeting the future skills needs in established sectors or for devising strategies for attracting businesses from different sectors as an attempt to diversify the economic structure in the region. These processes are often initiated by IWAK and it takes on the role of a moderator and sometimes mediator between different interest groups. The experience has shown that if the stakeholders are involved at an early stage of data interpretation and strategy development, it is easier to commit them to further participation in the process where their concrete contributions to the regional labour market developing strategy in their specific field can be negotiated.

SUMMARY

The main aim of the Hessian Ministry for Economics, Infrastructure and Development is to motivate all administrative districts in the Federal State to start labour market strategy development processes in their district. In the long run, labour market strategies should become part of regional development processes, which means that the focus of regio pro will have to be extended accordingly. This process is at the first stage of preparation.

The approach at the basis of regio pro could be used also in other regions; the data and forecasts it provides would be compatible with LMI from other European regions, since it has a broad coverage of groups of professions.

Occupational profiles



EXAMPLE PROVIDED BY NTF

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (1 region)
Forecasting	Yes (5 years, national level only)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	NTF
Website	http://www.nuov.cz/folder/51/ - national (in Czech only) http://msobservator.cz/profesni-skupiny/ - regional (in Czech only)

BACKGROUND OF THE LMI

The Occupational Profiles are an LMI tool providing detailed and concise information about labour market prospects for major occupational groups on national and regional level.

This LMI has been developed by National Training Fund (NTF) in 2010-2012. Similarly to DV Monitor (see first Czech Good Practice example) the "national version" of occupational profiles is the output of the Koncept (Concept of Continuing Education and Training⁵) project carried out by the National Institute for Education in 2010-2011.

The "regional version" of the product has been developed on demand of Moravian-Silesian region in 2012. Both products use ISCO/NACE taxonomy, try to be "light on text, heavier on analysis" and provide sectoral, skills and age related analysis for each occupational group in question.

OCCUPATIONAL PROFILES AT NATIONAL LEVEL

NEED FOR THIS LMI

The goal of the project Koncept was to support development of adult education in the Czech Republic by actions on a system and national level. Of eight key activities, one was aimed at matching training provision with labour market needs by developing information tools for various use groups. The occupational profiles were designed specifically for developers of National Qualifications Framework (NQF) and sectoral skills councils (SSCs).

⁵ See English summary of the project at: <http://www.nuov.cz/koncept?lchan=1&lred=1>

First Czech SSCs were set up already in 2007 to focus on sectoral skill needs. Many of SSCs were based on existing institutions, like industry associations. Their establishment was a response to growing dissatisfaction of employers with the quality and quantity of graduates, so their task was to develop up-to-date occupational profiles that would become the basis for changes in school programs (especially in upper secondary education). Their second task was to develop sectoral labour market strategies to deal with major skills mismatches – by so called Sector Skills Agreements (SSAs).

Although SSCs were intended to be able to develop their own labour market analyses, it was not possible to finance such activity across the board for all SSCs. As a result, the SSCs do not do much, if any, research on anticipated future skill needs or mismatching. SSCs have had to concentrate on their major task – development of the NOF and design and carrying-out of SSAs.

For that purpose the SSCs needed very targeted type of information presented in a concise way which can provide a quick information for decision without unnecessary burden of complex background information on methodology or with the need to look up, study and compare data from different information sources.

The occupational profiles that were developed in close cooperation with SSCs provide answers to their needs.

DESCRIPTION OF THE LMI

This LMI is based on ISCO on 4-digit level. Following SSCs demand, occupational profiles cover all 4-digit occupations in major ISCO groups nr. 3-8 with limited number of profiles developed for professionals (ISCO 2 group) and auxiliary workers (ISCO 9 group). Altogether 180 profiles were developed.

Each profile covers only two pages - conciseness was one of major request from users. It consists of 9 parts:

1. Group description (ISCO code, name and synonyms used in vacancies advertising)
2. Employment development analysis (total employment, trends in employment since 2000 and employment forecast for 3 years)
3. Labour market opportunities analysis (number of vacancies and job seekers, unemployment rate, share of hard-to-fill vacancies and share of job seekers per 1 vacancy)
4. Sectoral employment analysis (key employment sectors for the particular group and analysis and forecast of employment for these sectors)
5. Qualification analysis (suitable field of education, share of persons with other-than-recommended qualification, level of education)
6. Earnings analysis (used also as a proxy for occupation attractiveness on the labour market both for graduates and for adults, providing information on wage median, wage growth and comparison with similar occupations)
7. Graduates (number of graduates of the most suitable field(s) of study, forecast of graduates for next 3 years, unemployment rate of graduates and its development)
8. Age structure (% of young and old workers) and
9. Summary of key findings.

The LMI works with data from various sources, namely the Labour Force Survey (LFS), administrative data on graduates. statistics of earnings, statistics and databases of vacancies (for methodology of information gathering on vacancies see previous GP example) and other sources.

Figure 5: Example of the profile

Name of the occupational group		ENGINEERING TECHNICIANS
ISCO code		3115
Employment development		Occupational group size (cross-group comparison) VERY LARGE
Number of people employed (2011)	50 800	
Longterm employment development (2000-2010)	SLIGHT INCREASE	
Medium term employment development (2005-2010)	STABLE	
Development in recession (2008-2010)	SLIGHT DECREASE	
Future employment prospects (2014)		ABOVE AVERAGE
Labour market opportunities		How are these opportunities in comparison with similar occupations? SIMILAR WORSE WORSE
Job vacancies (October 2010)	287	
Unemployment rate (October 2010)	4,8%	
Share of hard-to-fill vacancies (October 2010)	0,06	
Job seekers per one vacancy (October 2010)	8,9	
Key employment sectors		
Metal processing industry		See details on www.budoucucnos.tprofesi.cz
What part of this group jobs is created by this industry (2009)?	24%	
What is the industry medium-term employment trend (2010-2015)?	SLIGHT DECREASE	
What is the industry long-term employment trend (2015-2020)?	SLIGHT DECREASE	
Automotive industry		
What part of this group jobs is created by this industry (2009)?	21%	
What is the industry medium-term employment trend (2010-2015)?	STABLE	
What is the industry long-term employment trend (2015-2020)?	STABLE	
Mechanical engineering industry		
What part of this group jobs is created by this industry (2009)?	21%	
What is the industry medium-term employment trend (2010-2015)?	SLIGHT DECREASE	
What is the industry long-term employment trend (2015-2020)?	SLIGHT DECREASE	
Field of education recommended		
Prevailing field of education	Engineering	See details on http://katalog.nsp.cz
% of workers with different field of education (2010)	30%	
Level of education (2010)		
Elementary education	0%	
Upper secondary vocational education (ISCED 3C)	17%	
Upper secondary education (ISCED 3A-4)	69%	
Tertiary education (ISCED 5-6)	14%	

Earnings		
Wage median (2q 2010)	29 107	See details on www.ispv.cz
Wage growth in comparison with similar occupations (2005-2010)	SIMILAR GROWTH	
Wage comparison with employees on same qualification level (median wage for all employees on this level = 100)	124	
Graduates (recommended field of education)		
Number of graduates (2005-2010)	SLIGHT DECREASE	
Forecast of graduates (2011-2015)	SLIGHT DECREASE	
Unemployment rate of graduates (2010)	12,2%	
Unemployment rate of graduates development (2009-2010)	SIGNIFICANT INCREASE	
Age structure		Average for similar occupations
% of young workers (less than 35 let)	31%	33%
% of older workers (55+)	15%	14%

USE OF LMI

The LMI was used by SSCs to identify key skills mismatches and set priorities for targeted actions on the labour market. It was very well received - not only because its content and structure matched user group needs, but also because it was designed in close cooperation with key stakeholders. It proved that use of LMI depends not only on its quality, but also on the process during which it is developed. Users take it as something they helped to create and therefore are much more opened to take the information it brings and shape it into action.

SUMMARY

Occupational profiles became the most successful LMI tool developed in the Koncept project. The tool will be developed further for the career guidance and counselling at public employment services; moreover it served as a basis for other tools developed on regional level (see example 4b) and even abroad (Lithuania, Poland).

OCCUPATIONAL PROFILES AT REGIONAL LEVEL

NEED FOR THIS LMI

This LMI has been developed in order to improve labour market balance in Moravia-Silesia region, where unemployment level is second-highest in the whole Czech Republic. Since the Velvet Revolution the region strongly suffers from structural changes in the economy - the shift from heavy industry to "lighter" sectors like automotive, electronics or knowledge-based services was long and difficult here. The unemployment rate in the region exceeds 12 % and labour market policies needed evidence to better focus on key problems of employability.

The LMI was designed and developed under the umbrella of Moravian-Silesian Territorial Employment Pact within so called Moravian-Silesian Competitiveness and Labour Market Observatory. Data and analyses published on the Observatory website help identify priorities for Pact actions aimed at improvement of labour market balance, relevance of initial and continuing education to labour market needs and quality of career guidance.

DESCRIPTION OF THE LMI

The Observatory provides sets of indicators describing major trends and developments in 4 thematic areas: Innovation, Business, Human resources and Region (consisting mainly of indicators related to infrastructure and environment).

Human resources part brings in addition to major time series also database containing profiles of major occupational groups in regional labour market. This tool - LMI - is a regional mirror of national occupational profiles, presented in previous example.

This LMI is based on ISCO too - but occupational clusters are designed by mixed approach, combining 2, 3 or even 4-digit ISCO groups. Profiles of 50 most important occupational groups on the regional labour market were created in the LMI. Once again they consist of sets of indicators describing employability (trends, sectoral structure, unemployment rate, job seekers, vacancies), earnings, qualification (skills needed, graduates forecast, graduates unemployment) and age structure.

Indicators are based also on the LFS, Public Employment Services statistics (job seekers, vacancies), Ministry of Education statistics on students and graduates by field and level of study, forecasts of graduates, forecast of sectoral employment (national level only) and Information System on Average Earnings).

When compared to national version of the product, the Observatory profiles add graphic indication of trends and comparison of indicators with regional average:

Figure 6: Example of the profile

REGIONAL LABOUR MARKET OBSERVATORY OF MORAVIA-SILESIA			PAKT ZAMĚSTNANOSTI MORAVSKOSLEZSKÝ
Name of the occupational group		Founders and welders	
Number of people employed (2011)		9600 person	
Employment trend (since 2005)		NO CHANGE →	
Employment by industry in region			
Industry	What part of this group jobs is created by this industry (2011)?	What is the industry employment trend within the region (2008-2011)?	What is the industry forecast (for whole country) till 2020
Metallurgy and metalworking industry	48%	SMALL DECLINE ↘	SMALL DECLINE ↘
Automotive and mechanical engineering	38%	SMALL DECLINE ↘	NO CHANGE →
-	-	-	-
Other industries	14%		
Labour market opportunities for the occupational group			
Indicator	This group	Region average	
Job seekers (2011 average and trend during this period)	517 ↘	-	
Job vacancies (2011 average and trend during this period)	243 ↑	-	
Job seekers per one vacancy (2011 average)	2,1	12,8	
Unemployment rate (2011)	5,1%	11,9%	
Median wage (2011)	27 500 Kč	19 500 Kč	
Qualification			
Level of education for workers within this group		Best suitable field of study	
Share of employees with tertiary degree		Engineering and metal processing	
Share of employees with secondary degree		Secondary (ISCED 3c)	
Number of graduates of best suitable field of study in the region		738 persons	
Forecast of graduates for this field of study (2011-2016)		SIGNIFICANT DECLINE ↓	
Age structure			
Share of persons in the group aged 50+ in the region	Share of persons in the group aged 50+ in the country	Ageing index (region vs. national average)	
18%	24%	0,73	
Summary of key findings			

USE OF LMI

The LMI is a tool for implementation of regional Joint Action Plan aimed at matching skills provision with labour market needs in medium term, also for in career guidance and counselling (public employment services, schools). Feedback gathered by stakeholders and users representatives is used for improvement and update of the Observatory.

The Pact and the Observatory are supported by the Association for the Development of Moravian-Silesian Region which consists of almost 200 key players on regional labour market (regional authorities, PES, employers, education and training providers and other relevant stakeholders).

SUMMARY

The main added value of the tool is that it follows the whole "LMI lifecycle" - it starts with detailed identification of user needs in the region of the impact, combines both qualitative and quantitative approaches to data and information gathering and analysis, it provides simple and understandable outputs and it is used by stakeholders to concrete and practical measures.

Malopolska Occupational Barometer



EXAMPLE PROVIDED BY NTF

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Region Malopolska
Forecasting	Yes (short term, 12 months)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Regional Labour Office Krakow
Website	http://www.wup-krakow.pl

BACKGROUND OF LMI

Labour Market and Education Observatory of Malopolska is a part of Regional Labour Office, which is responsible for carrying-out the employment policy, monitoring situation on regional labour market and implementing programs aimed at matching of skills provision with demand on the labour market. The Regional Labour Office is a part of self-government at the regional level in Poland.

There are currently four Observatories in Malopolska Region - for Development Policy, Regional Economy, Social Policy and Labour Market and Education. The Observatories serve as analytical facilities of region self-government authorities. In the future, their network should develop into a regional think tank, reinforcing process of research, public debate and decision-making.

The Malopolska Labour Market Observatory (LMO) has been launched in pilot project in 2006. Its mission was to provide high quality and reliable information on the labour market in order to inform regional development policy. During the first stage - the pilot project - the LMI methodology has been developed. In the second stage - so called "system project", which is carried out in 2008-2015 period - the LMO already produces outputs for regional policy makers and at the same time it develops new tools and approaches to improve quality and range of its analytical work. It is expected its development will continue in years to come.

Current activities of the LMO include regular studies, one-off studies responding to identified information needs and Synthetic cross-sectional analyses of current issues (through desk research). Analytical work of the LMO is based on data from public statistics (Statistical Office), administrative data from local labour offices, results of research carried out by other institutions and LMO own surveys and research.

Based on these sources, LMO produces various LMI in form of reports, brochures and leaflets, individual data and web based tools. Most important of them is the Occupational Barometer, followed by Vocational school leavers survey, Survey of employers and Business sector analysis.

NEED FOR THIS LMI

The Occupational Barometer brings important information about labour market development which is needed for efficient guidance and counselling provided by local labour offices (both by career counsellors and placement officers), for promotion of occupational, sectoral and territorial mobility of workers and for development and support of adult education.

The Vocational school leavers survey is second important LMI tool developed and used by the LMO. It shows the course of educational and occupational careers of young people leaving the vocational schools and thus helps its users - namely school governing authority and Regional Employment Council - to understand trends in employability of young people on the labour market and thus better shape regional educational policy.

The third "leg" of LMI in the region is represented by the Survey of employers, which shows trends in demand for human resources, difficulties related to finding staff and level of skills of people employed in businesses. Major users of survey results are the Regional Labour Office as well as Regional Board.

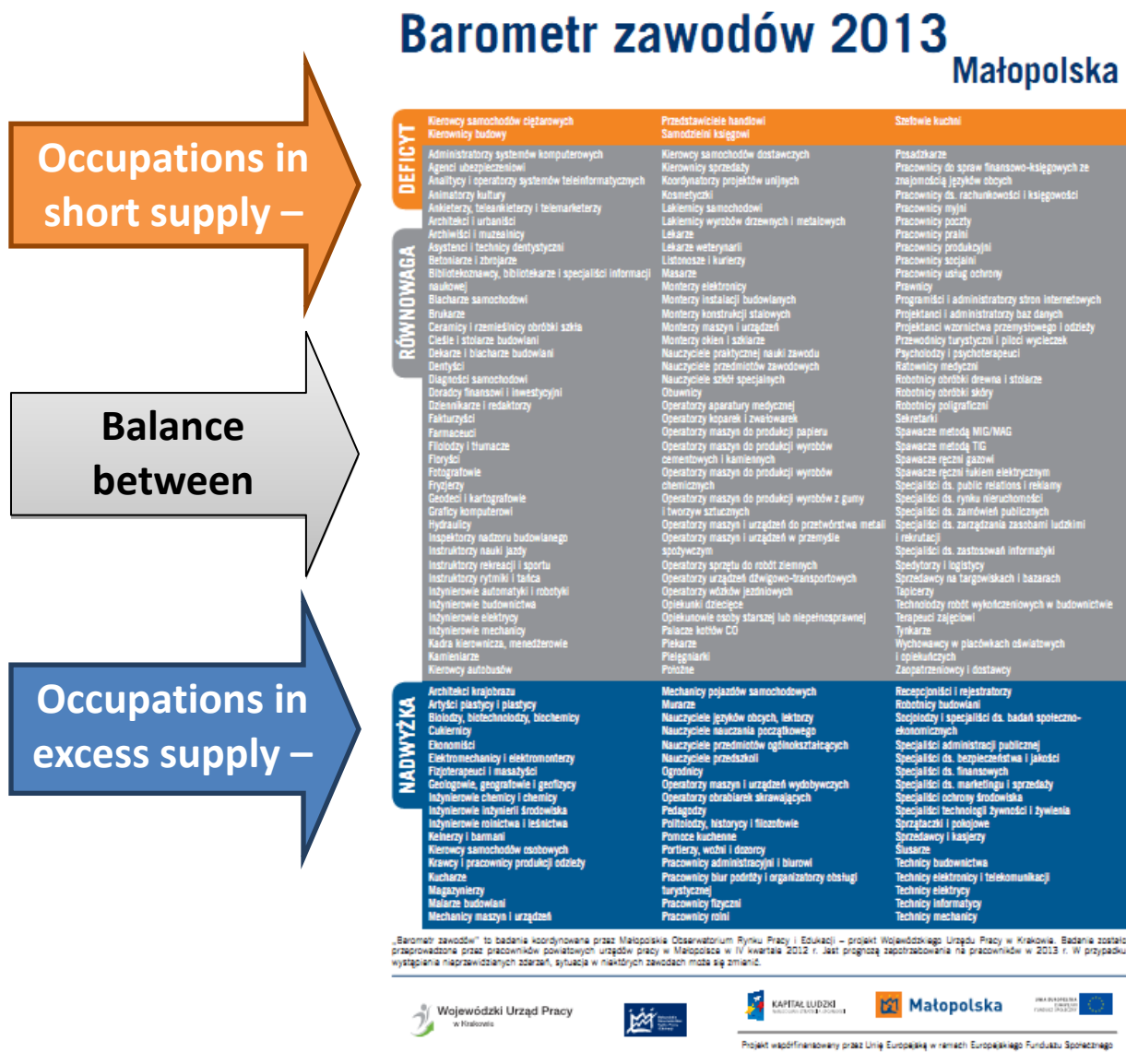
Finally the Business services sector analysis describes the status and prospects of development of the economy sectors in Malopolska in terms of employment, including current and expected demand for skills. Its major users are again the Regional Labour Office, but also the Regional Parliament.

The important task of the LMO is also to develop its own knowledge base and tools for labour market monitoring; this is a necessary step if the LMO wants to act as abovementioned regional think tank influencing policy and decision making.

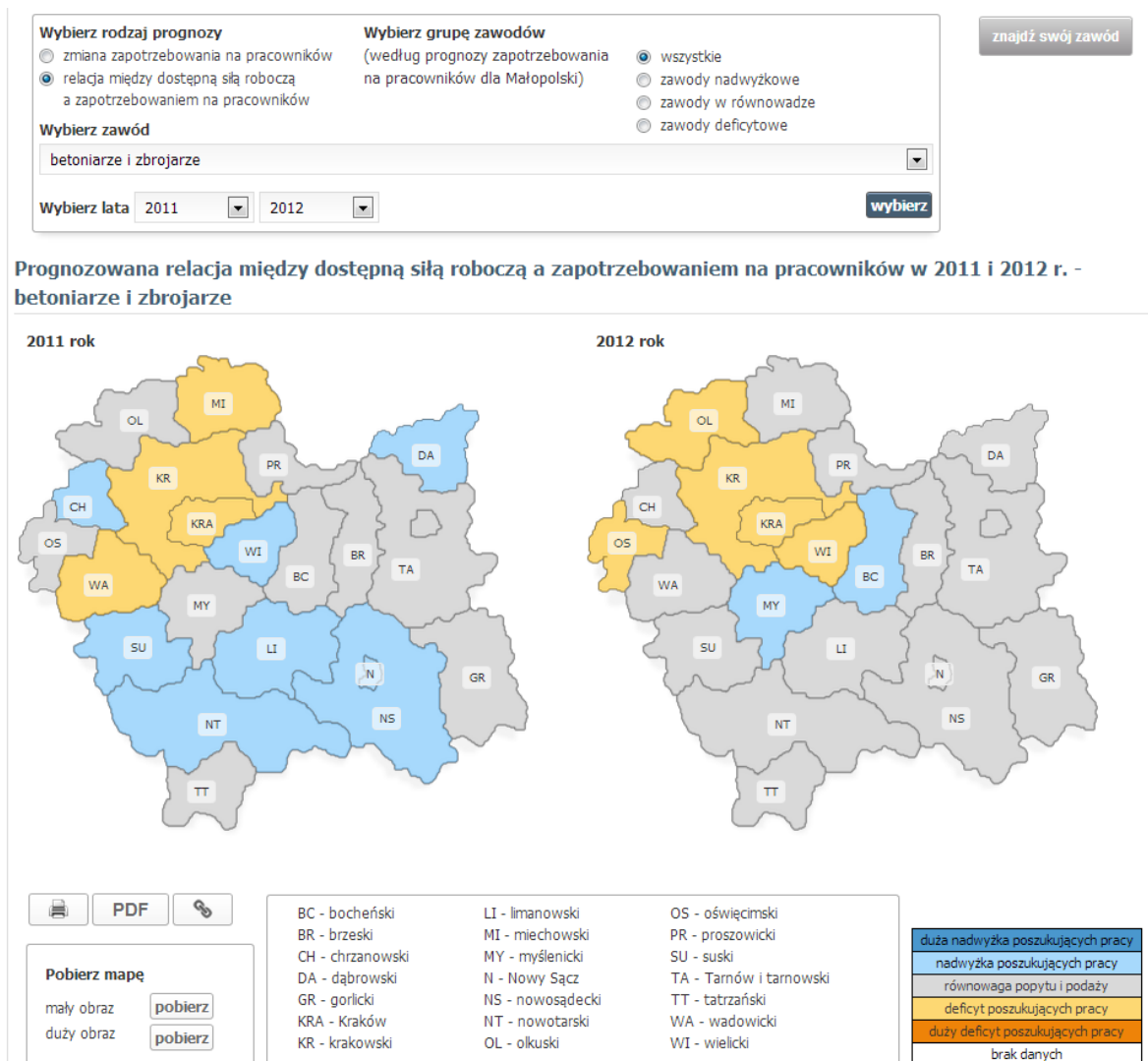
DESCRIPTION OF THE LMI

The Occupational Barometer monitors labour market prospects of around 170 occupations. They are based on Polish classification of occupations, which is similar (but not 100% identical) to ISCO. The output of the Barometer is simple - one page with list of occupations showing those in (expected) short supply, with balanced demand and supply and those in excess supply:

Figure 7: Malopolska Occupational Barometer



The web-based tool for presenting of Barometer outputs shows also county level of information which is - considering lower geographical labour market mobility - very important from the end user point of view.



Forecasts for each occupation are developed for every county in Malopolska Region by labour office staff, consisting of representative of placement officers, career counselors, officers responsible for relations with entrepreneurs and officers responsible for training. For Krakow (region capital) the forecast is developed jointly by employees of the labour office and representatives of private employment agencies.

Discussion panel takes place every year in November/December and data on number of jobseekers and vacancies by occupation (collected by local LOs) are used as a baseline information. Questions discussed in the expert panel include:

- How is the demand for workers in given occupation going to change in next 12 months?
- How the relationship between demand and supply will evolve in the next 12 months?

The Barometer provides qualitative forecast of labour market development. It is supplied by hard data provided by other LMIs used by the labour office (data on job seekers and vacancies, employer survey, school leaver survey and business sector survey). In the next stage additional tools should be added - occupational profiles, providing information about employment, recent employment trend, number of job seekers and vacancies for each occupation, sectoral level of information and other useful indicators.

USE OF THE LMI

The Barometer is used for a variety of purposes. It is a source of information both for job seekers and those interested in reskilling courses provided by the labour office. It is used for career guidance and counselling at schools and for work of placement specialists in the labour office.

SUMMARY

The Malopolska LMO achieved success - the interest in its LMI is quite strong. The output is simple - it provides only one key information about each occupation - but it is the information users need and they are satisfied with. The qualitative-based forecasting approach may be less credible than model-based approaches, but the LMO balances that with regular assessment of forecast outputs and their accuracy. Other key lessons from the LMO development show that it is important to build knowledge within institution instead of outsourcing all analytical tasks, and careful supervision of work that still needs to be outsourced. The reliability of LMI depends also on established cooperation with local experts and key users - partnership principle becomes as important as the tool development itself.

Yrkeskompassen (YK) – The Occupational Compass



EXAMPLE PROVIDED BY ARBETSFÖRMEDLINGEN

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	Yes (short term, 12 months)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Arbetsförmedlingen
Website	http://www.arbetsformedlingen.se/For-arbetssokande/Yrke-och-framtid/Yrkeskompassen.html

BACKGROUND OF THE LMI

“The Occupational Compass”. Forecasts on occupations at local, regional (county) and national level throughout the country, provided by the Swedish Public Employment Services (*Arbetsförmedlingen*, AF). Website only, at <http://www.arbetsformedlingen.se/For-arbetssokande/Yrke-och-framtid/Yrkeskompassen.html>, but the input (*Yrkesbarometern*, “The Occupational Barometer”) is used to deliver forecasts (full length and flyer) at the regional (county) level which are included in bi-annual reports on the regional and national labour market. Established in 1989. The report is in Swedish. YK is linked to a complementary LMI, *Yrken A-Ö* (“Occupations A-Z”) (<http://www.arbetsformedlingen.se/For-arbetssokande/Yrke-och-framtid/Yrken-A-O.html>), which provides descriptions of each occupation. Besides a description of the occupational group, it includes

relevant skills, interests and physical requirements, links to additional information, and required or suitable education. For a limited set of occupations, there are videos provided to complement the text with a “real life” dimension (<http://www.arbetsformedlingen.se/For-arbetssokande/Yrke-och-framtid/Yrken-A-O/Yrkesfilmer.html>).

NEEDS FOR THIS LMI

Counselling service with forecasts targeted to support the occupational choices of individuals as well as the work of professionals working with counselling. Extensively used and appreciated by counsellors at AF and by jobseekers, according to internal study. School counsellors also seem to use this LMI widely but it is only at AF that it constitutes a formal part of the organisation’s activities. Most extensively, YK is used at AF in relation to counselling activities towards jobseekers, but the occupational forecasts are also disseminated through AF’s bi-annual forecasts at the regional and national level (see “Description”). At the regional level, this LMI is targeted to support more informed decisions on the short run, which is the relevant time perspective for the educational programs administered by AF (normally no longer than six months). YK is, however, rather comprehensive in its cover of the labour market, and a large part of the occupational forecasts concern educational choices at the medium and short term. A problem thus is that the short time perspective of the forecasts is often irrelevant. As a complement, at the national level forecasts are provided at the medium and long term (5-10 years).

DESCRIPTION OF THE LMI

Short term forecasts (next 12 months) of about 200 occupations (covering about 80 per cent of the employed) at sub-regional level (“labor market regions”, normally defined on the basis of commuting figures) and regional level (county). Main input is the assessment of surplus/shortage (5-grade scale, from “considerable surplus” to “considerable shortage”) of local PES:s, which is based on contact with the labour market through ongoing matching activities and through interviews with employers within the scope of AF:s bi-annual forecast. This input (*Yrkesbarometern*) is provided at the local (municipality) or sub-regional (several municipalities) level, twice a year and during a limited time period of about six weeks. The set of inputs are weighted up to provide assessments at the sub-regional, regional (county) and national level. The quality of the assessments is controlled by analysts at three levels the least, namely the sub-regional, county and national level. Data and external qualitative assessments complement the main input.

The taxonomy is based on ISCO (SSYK). Expensive to sustain as extensive manpower required, which is spread locally around the whole country. On the other hand, the model exploits the national structure of PES offices which are already settled to provide matching services at the local level. This structured use of labour market information and intelligence which is gathered at the local (office) level is probably the most notable example of “Good Practice” regarding YK. At the national level, forecasts are delivered on the medium to long term (one single time period, 5-10 years). These, however, do not cover as many occupations and the assessments rely more heavily on data. As such, it is not expensive to sustain, yet these assessments do rely significantly on the short term assessments.

USE OF LMI

See above on “needs” and “control”. No systematic evaluation, however. Systematic inclusion of all PES offices within each region. Analysts at the regional and national level are responsible for controlling the quality of the assessments yet no systematic integration of external stakeholders. However, AF organizes Industry Associations which often serve as a platform for external input.

SUMMARY

GP as (i) forecast with comprehensive occupational and geographical coverage (from the local level to the national level), and (ii) systematic exploitation of the information and knowledge which is constantly collected by PES offices through their ongoing matching activities. The Good Practice Example is already recognized by the EUSP, but there are serious problems of consistency, even within a specific region.

Utbildnings- och arbetsmarknadsprognos för Skåne – med sikte på 2020 (UAPS)



EXAMPLE PROVIDED BY ARBETSFÖRMEDLINGEN

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Region Skåne
Forecasting	Yes (till 2020)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Region Skåne (regional government)
Website	http://skane.se/uaps

BACKGROUND OF THE LMI

Forecast on training and educational choices and the labor market for Skåne, from 2012 up to 2020. Covers the region of Skåne and was established in 2012. The report is in Swedish.

NEEDS FOR THIS LMI

Objective to improve cooperation on skills supply and better short and long term planning on training and education. Established following the national government’s directions (December 2009) to the regional governments (*Region Skåne* in the case of the county of Skåne) to establish regional “Competence Platforms [*Kompetensplattformar*] for interaction on skills supply and education planning on the short and long run sight”. An “important part of that mission is about providing a basis of knowledge and needs as most of the regions in many Western countries face great challenge”, where “many leave the labour force and [where] there has been considerable shifts from industry to service sector”. The regional governments in the three largest regions of Sweden, *Region Skåne* (including the third city, Malmö), *Västra Götalandsregionen* (including the second city,

Gothemburg), and *Stockholms län* (including the largest city, the capital Stockholm), have worked out a common methodological basis for delivering three separate “Forecast on training and educational choices and the labor market”, together with Statistics Sweden (the Swedish statistical bureau, SCB).

The target group is related to the explicit purpose of “contributing to increased matching on the labour market by providing a better basis for taking informed choices regarding the planning of education and the implementation of labour market policy”. Put differently, the target group includes all those involved in policy making and planning on these issues. This group has been addressed at an early stage, before publication. In part, this has been done through early contacts with key actors to receive input on specific issues. Considering the approach, however, UAPS carries potential to reach broader groups, in particular through guidance counsellors, with the final aim of supporting more informed educational choices at the individual level. Following a press release, the release of UAPS was thus accompanied by a press conference and a number of activities related to the subject during the course of a whole day, with a broad scope and a large number of participants (100-200 people). The report was made available both in paperback format and through USB sticks, and is always available at Region Skåne’s homepage.

DESCRIPTION OF THE LMI

Forecasts of about 50 educational choices related to occupations, including two within “General education”, six within “Pedagogy and teaching”, two within “Humanities and arts”, six within “Social sciences, law, trade, etc”, four within “Natural sciences”, 15 within “Technology and industry”, two within “Agriculture and forestry”, 11 within “Health care and social care”, and two within “Services”. The report also provides comprehensive description of overall recent developments and trends. The latter includes the thematic areas “The role of the urban areas”, “The structural change 2000-2008”, “Development of the labor market”, and “The educational system”. These descriptions may take in national and even international trends yet the focus of the report is on the Skåne region. Each specific forecast includes information on the occupations related to the educational choice considered, as well as brief analysis of both the supply and demand side complementing each particular numeric forecast. This is illustrated with a diagram covering the period 2000-2020, thus including de facto outcomes on the labour force and employed, respectively, as well as forecasted figures for each year over the period 2010-2020.

Quantitative output, and SCB is main provider of data. Based on ISCO-taxonomy (SSYK). The quantitative methodology is rather advanced and expensive to develop, yet may not be very expensive to sustain. It builds on SCB:s model for corresponding forecasts at the national level, “Trends and Forecasts”, and has been applied to the regional level using rAps (“Regional system of analysis and forecasts”). UAPS will be provided on a regular basis. The next delivery is planned for 2015, and the intention is that *Region Skåne*, *Västra Götalandsregionen*, and *Stockholms län*, the three regional governments of the three larger urban areas in Sweden, will produce regional forecasts every three years, adjacent to the publication of “Trends and Forecasts”. A limited problem is that the technical consultant which has been involved to develop the method has competence (rAps) which the rest of the participants crucially depend on. UAPS is delivered and funded by Region Skåne.

USE OF LMI

As the LMI is relatively new and no comprehensive study of its impact has been carried out, it is not possible to say anything certain about its impact. In the interviews carried out for the Swedish Country Report, however, several Stakeholders addressed the importance of this LMI. It is also suitable for career guidance counsellors, and one of two such Stakeholder stressed that they use UAPS. Region Skåne, the provider of UAPS, involved Stakeholders in the region during the work with UAPS but have also stated (interview) that they would like to have more such “bottom-up” quality control and evaluation. No systematic evaluation, however.

SUMMARY

GP as (i) it provides (much needed) forecasts ranging from the short to the long term on a broad set of educational choices related to actual occupations, (ii) uses a common method developed for three similar regions with the input from qualified external actors (technical consultant and Swedish Statistics), and (iii) includes an attempt (which can be further developed) to introduce a “bottom-up” element in the method as well as an inclusive element in the approach regarding regional stakeholders.

ADDITIONAL INDICATORS

Methodology: Training and educational choices is used as proxy for “skills”. Some sectoral data and analysis is provided, mostly at the 2-digit level (SNI 2002). General demographic trends are described. EUSP: not identified. The output may have potential to be linked to the EUSP as it is well structured and largely following the international taxonomy. In addition, the method is explicitly worked out to forecast larger urban areas.

Occupations A-Z” (Yrken A-Ö)



EXAMPLE PROVIDED BY ARBETSFÖRMEDLINGEN

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	National and regional (all regions)
Forecasting	Yes
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Arbetsförmedlingen
Website	http://www.arbetsformedlingen.se/For-arbetssookande/Yrke-och-framtid/Yrken-A-O.htm

BACKGROUND OF THE LMI

Occupations A-Z provides detailed descriptions about 200 occupations.

NEEDS FOR THIS LMI

The target group for this information are unemployed persons, jobseekers, students looking for information about future jobs, career counsellors searching for information in their line of work and also counsellors at the PES. The site is the only one of its kind in Sweden and a reference for all occupational information. It is also commonly used by media and other channels spreading information about occupations.

DESCRIPTION OF THE LMI

Besides some general information the Occupations A-Z present a lists of prerequisites, i.e. which educational background that is required and physical requirements as well soft skills like ability to work in a team etc. for each occupation. Occupations A-Z also provides, links to additional information links to relevant unions, and printed interviews with people working in the occupation. For a limited set of occupations, there are videos provided to complement the text with a “real life” dimension. There are also links to forecasts about the occupation and links to current vacancies in the occupation. In the following picture shows the design of the page, it has a very basic and straight forward design, but the *information* on the page is regularly updated

Figure 8: Example of LMI interface

Shortcuts to information about education, skills needed, forecasts, supplementary info, similar occupations

Ingenjörsvrken

[Arbete](#) [Utbildning](#) [Kompetenser](#) [Framtid](#)
[Att tänka på](#) [Mer info](#) [Liknande yrken](#)

Arbete

“What does an engineer do?”
 Vad gör en ingenjör? Ingenjörer arbetar inom alla branscher, inom små och stora företag och vid myndigheter. De ser tydliga resultat av sitt arbete; ett hus, en bro, en ny produkt, ett nytt sätt att kommunicera, ett läkemedel, en radiosändning. Med tekniska kunskaper söker de bästa lösning på ett problem eller för att effektivisera produktionen.

Vad gör en ingenjör?

Gemensamt för ingenjörer är att de på olika sätt arbetar med teknisk utveckling. Till exempel kan ingenjörer arbeta med att ta fram nya produkter eller vidareutveckla befintliga, göra produktionen mer effektiv, de leder byggprojekt, skapar nya sätt att kommunicera. De söker lösningar som gör förbättrar arbetsmiljön för de som arbetar i produktionen, som gör produktionen mer miljövänlig och kvalitetssäkrar produktionen och produkterna. Ingenjörer arbetar också med inköp, försäljning, marknadsföring och logistik.

Många ingenjörer arbetar i projektform där ingenjören också kan vara projektledare. **Projektledare** planerar och samordnar projekt mot önskat mål, arbetar för att tidsplanerna ska hålla och samverkar internt och externt. Inom olika branscher och företag används olika benämningar



Utskriftsvänlig sida

Skriv din söktext

Sök på yrkestitlar

Sök i hela texten

Sök yrke

Tillhör yrkesområde

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Data/IT »

Tekniskt arbete »

Film

Att arbeta som ingenjör inom bygg

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Att arbeta som maskingenjör

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Arbeta som ingenjör på stålverk

[Se film »](#)

Att arbeta som ingenjör inom medicin

[Se film »](#)

Links to movies about the occupation

USE OF LMI

The one evaluation of Occupations A-Z (internal study) reveals that it is very widely spread and very frequently used by career counsellors, counsellors working at the PES and jobseekers looking for occupational information.

SUMMARY

Occupations A-Z is a widely used web-site that provides detailed occupation information. This is a basic LMI that (should) exist in every EU-country as a source of information. The website isn't complex and the concept could easily be transferred.



EXAMPLE PROVIDED BY KWIZ

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	UWV
Website	http://www.arbeidsmarkt cijfers.nl/panorama/ai_portal_si.asp

BACKGROUND OF THE LMI

An online tool that shows the tension between supply and demand per occupational sector, group and region over time. Tool accessible at

http://www.arbeidsmarkt cijfers.nl/panorama/ai_portal_si.asp. Covers whole of the Netherlands, divided into 35 regions.

NEEDS FOR LMI

The objective is to provide up-to-date information about the tension between demand and supply in the labour market.

There is need for transparency of the labour market and up-to-date information on regional level for jobseekers and employers. This information is useful for policy-makers. Also there is need for users to get information based on own selected criteria. An older indicator had difficulty covering the wide range of vacancy-suppliers with the increasing number of online presented vacancies. For this reason there was need for better up-to-date and inclusive information of vacancies and that's why the Spanningsindicator is developed.

The UWV provides this information in order of the Ministry of Social Affairs and Employment to match as much jobseekers to a new job.

DESCRIPTION OF THE LMI

An online tool that shows the tension between supply and demand in the labour market over time. The tool (indicator) provides information about the number of new vacancies per occupational sector, occupational group (129 groups) and region per quarter (3 months) in comparison to the number of jobseekers. On account of this ratio is determined whether the labour market is narrow or not. Because it is an online tool, the user can select the criteria he/she wants. An overview of vacancies and jobseekers can be generated, but the user can also zoom in to regional level or to occupational level.

The practice uses own data of people looking for a job and data of vacancies from Textkernel (Jobfeed) and Centraal Bureau Statistiek (CBS).

By developing this tool UWV started to create a methodology, in cooperation with research office Panteia for the number of vacancies per sector, occupational group and region. The Jobfeed-data is modified (because in some sectors more vacancies are posted online than in others sectors) and compared to data of the CBS about the number of vacancies to give a more precise estimate. UWV tries to link this data with jobseeker-information. Then the tool calculates the ratio between vacancies and jobseekers by dividing the number of vacancies by the number of jobseekers (who lost their jobs within 6 months) and determines the narrowness of the market per occupational sector, group and region. The narrowness is measured on a 5-level scale:

- 0 till 0,5: very wide
- 0,5 till 1,0: wide
- 1,0 till 1,5: moderate
- 1,5 till 2,0: narrow
- 2,0 or more: very narrow

USE OF LMI

UWV is the only company with almost exact numbers of jobseekers, so many people use this practice. This practice is evaluated by others in reviews and investigations online and people think it is the best indicator (tool) there is at the moment. The numbers provided are very reliable.

SUMMARY

With this tool it is very easy to compare different regions and occupational sectors in the labour market . Also, the information given is very reliable and up-to-date. Therefore we consider the Spanningsindicator a really good practice.

The data the practice provides would be compatible with LMI from other European regions, since it has a broad coverage of groups of professions. The idea is pretty simple. The hardest part is to match the methodology considering reliable vacancy-information and jobseeker-information of the countries to each other.

THEME 3: SECTOR BASED TOOLS

Introduction

This theme brings profiles of three LMIs – one from United Kingdom, one from Germany and one from France. Unlike occupation-based tools (where the methodology is more or less bound by availability of occupational classifications), variety of sector approaches can be much wider. Therefore there are big differences in sector approaches to labour market intelligence.

Some sector-based tools follow the NACE (or similar) classification, but other specific sectoral views are also quite common – IT sector (or rather IT skills in the economy or e-skills), science and engineering, green sector, life sciences and many others.

These three LMIs focus on one sector only – France offers example of green sector skills analysis in PACA region, Germany provides labour market monitoring and forecasting in the care sector of Hesse and UK Construction Industry Training Board (CITB). Focus on one sector allows to go even deeper in analysis of what the labour market balance and skill needs are; and there is also even stronger connection between labour market intelligence and action aimed at matching of jobs and skills within the sector.

Construction Industry Training Board (CITB)



EXAMPLE PROVIDED BY MARCHMONT OBSERVATORY

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National
Forecasting	Yes (short term, 12 months)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Industry Training Board for Construction
Website	http://www.citb.co.uk/

BACKGROUND OF THE LMI

The CITB is the Industry Training Board for Construction and a partner in the Sector Skills Council for the construction industry⁶. It is a social enterprise devoted to building competitive advantage for the construction industry and the people who work in it. It collects a levy from construction employers and uses this to provide:

⁶ In partnership with the Construction Industry Council (CIC) and CITB Northern Ireland. The Sector Skills Council is responsible for developing training strategy and influencing supply and funding for the whole construction sector.

- Employer support
- Information, advice and guidance for those seeking Careers in construction
- Research including labour market forecasting to anticipate and plan for skills needs
- Qualifications & standards for the industry

The CITB also sells and delivers training and skills related products and supports or manages services on behalf of other organisations (such as the industry card scheme). It receives funding from the UK Commission for Employment and Skills to fulfil functions of the Sector Skills Council (for example, strategic planning⁷).

The CITB's main vehicle for the provision of market intelligence and insight is the Construction Skills Network (CSN)⁸. The CSN has two principal components: forecasting models, designed and managed by a private research company, Experian; and a membership body of 700+ representatives drawn from government, federations and employers whose primary role is to validate and test the forecasts and assumptions produced by the CSN.

NEED FOR THIS LMI

The CITB has a long history of using labour market intelligence to inform its work. Today, market intelligence (or 'insight') is primarily used: to provide career-related information for people considering or developing careers within the industry; to help employers become more competitive through skills development (i.e. offering more and/or better training) and to help the skills infrastructure respond swiftly to changing and emerging areas of skills demand (including, for example, within industry re-training to correct imbalances in supply and demand and identifying the training implications of emerging markets, technologies or practices).

The CITB and Construction Skills also draw heavily on labour market intelligence to inform their own (internal) business and strategic planning. For example, the joint CITB and Construction Skills "Construction Skills Strategy 2012-2017" draws on CSN intelligence to identify industry-wide education and training needs and help shape organizational direction to ensure the industry has the right skills at the right time in the right place. CSN intelligence also underpinned the development of an awareness raising campaign, articulating the impact of the industry to Central Government at a time of intense competition for funding.

More specifically, CSN intelligence and trend insight is designed to:

- Pinpoint the associated, specific, skills that will be needed year by year
- Identify the sectors which are likely to be the strongest drivers of output growth in each region and devolved nation.
- Track the macro economy
- Understand how economic events impact on regional and devolved nations' economic performance

⁷ Including the production of the joint CITB and Construction Skills "Construction Skills Strategy 2012-2017".

⁸ <http://www.citb.co.uk/research/construction-skills-network/>

- Highlight trends across the industry such as national and regional shifts in demand
- Plan ahead and address the skills needs of a traditionally mobile workforce
- Understand the levels of qualified and competent new entrants required into the workforce.

DESCRIPTION OF THE LMI

The CITB's research needs are determined by its role at SSC and ITB and are influenced by economic drivers, immediate and emerging policy issues and industry skills challenges. To meet these needs, the CITB harnesses a research process that includes:

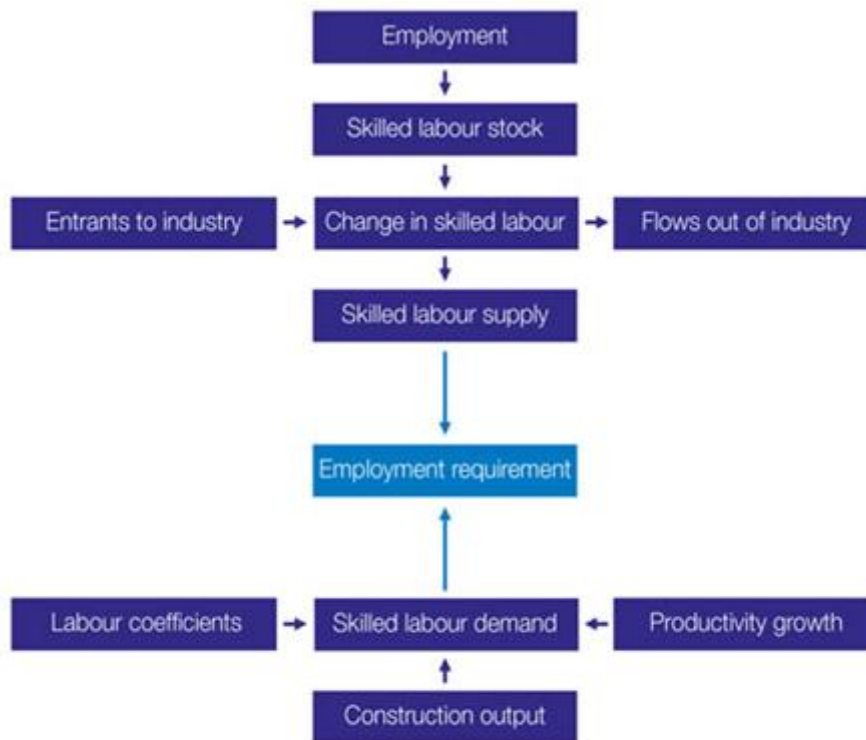
- Continuous labour market intelligence
- Analysis of industry change – economic, demographic and technological
- Forecasting labour and skills requirements
- Bespoke primary research
- Evaluation work

The CITB deploys an evolving but highly effective model for generating and validating its labour market intelligence – the Construction Skills Network (CSN). The CSN has two primary components: a skills forecasting model; and a 700+ strong membership body that supplements and validates the results generated by the model.

The membership network functions at the regional and national level. It comprises of a National Group, Observatory Groups operating across the English regions and devolved administrations; and a Technical Reference Group. The groups are made-up of representatives from industry, Government, education and other SSC, all of whom contribute knowledge and views on training, skills, recruitment, qualifications and policy.

The forecasting models generate forecasts of employment within the industry for a range of occupational groups. The models are designed and managed by Experian under the independent guidance and validation of the Technical Reference Group, comprised of statisticians and modelling experts. The forecasts for total employment are derived from expectations about construction output and productivity: essentially, estimating ‘How many people will be needed to produce forecast output, given the assumptions made about productivity?’. Demand and supply of workers are forecasted separately, with the difference between the two representing the number of new employees that need to be recruited into the construction each year in order to realize forecast levels of output. A summary of the model is shown in Figure 7.

Figure 9: The CSN forecasting model.



Source: Experian

The final CSN outputs are a set of authoritative forecasts, scenarios and findings, published annually, that spells out the challenges facing the industry over the next five years. The main “Blueprint” report covers the UK but supplementary reports are also published for Northern Ireland, Scotland and Wales, and for each of the nine English regions).

The CITB has also commissioned or undertaken a range of supplementary research. This has included:

- (with the Sector Skills Councils) an annual Sector Skills Assessment exploring drivers of skill demand, current skill needs; anticipating future skill needs and geography⁹.
- A survey¹⁰ exploring current skills needs/deficiencies and commitment to workforce development in the UK (‘Skills and Training in the Construction Industry’).
- Specific studies exploring: the impact of the recession on Construction Professional Services; UK training provision; the number of people entering construction; workforce mobility; employment by occupation; and Nuclear New Build Employment scenarios.

⁹ See http://www.citb.co.uk/Documents/research/evidence-report-65-construction-building-services-ssa_tcm17-33271.pdf for 2011/12 report

¹⁰ This covered output constraints, recruitment activities and difficulties, skills gaps and upskilling, training and apprenticeships. See http://www.citb.co.uk/Documents/research/Training-Skills-Survey-Reports_tcm17-27270.pdf for the 2011 report.

USE OF LMI

The CSN website contains a number of testimonials or case studies describing how CSN data has been used to help the UK construction industry. These are re-produced below:

Association for Consultancy & Engineering : “The CSN data we use is primarily macro-economic, construction and employment forecasts. In general all market intelligence at both the supply and demand level is very useful.

“We use the CSN data for essentially enhancing our comprehension of where the market is going, combined with providing key market intelligence to our member firms through our economic bulletins and other such outputs.”

Scotland Funding Council: “We use the CSN recruitment requirement forecast to brief the Scottish Funding Council skills committee on construction sector training requirements and skills shortages in the future.”

Glasgow Caledonian University: “We use the CSN workload and recruitment forecasts to plan intake of students and to identify trends in demand for particular professions.

“We also use it to develop and support business cases for academic programme developments.”

Cross River Partnership: “We have used both the CSN construction output and its breakdown into sectors (i.e. commercial) and recruitment requirements.

“We run a project which works with unemployed and economically inactive people to recruit, train and facilitate access to employment opportunities.

“This data has been used to understand where gaps will be in the industry and where opportunities will still exist, which is particularly useful in the current economic climate.”

Preston College: “The CSN output we use is the skills forecast from the UK Blueprint for Construction. We identified from the skills forecast the following two areas as key skills needs in terms of annual recruitment requirement to the industry:

- Carpentry and Joinery
- Electrical Installation

This helped us to plan growth in these two areas. We have also increased the number of Electrical Installation apprentices and the number of Site Carpentry apprentices this year.”

Oldham & Rochdale Metropolitan Borough Council: “We have utilised the CSN forecasts to ensure funded training and funded support into employment meets the demands of the industrial sector.

“There is a fundamental difficulty in ensuring long-term training will meet employment needs of companies, when employment opportunities arise at short-notice. The CSN helps to address the short-term visibility of employment opportunities that are a consequence of short-term subcontract packages being awarded.

“CSN forecasts, for example, evidence the demand for chartered surveyors and site managers. This would not necessarily be evidenced by potential new entrants with little direct experience of construction but possessing significant transferable skills. Similarly, employers might have no employment opportunities on average, and then suddenly have vacancies for roles requiring long-term training.

“The CSN forecasts have meant that J21 can work with the University College Oldham Construction School and the Chartered Institute Of Building to provide information, advice, and guidance and partnership working on an informed basis.”

Newport Construction Initiative: “We use the CSN data that informs where the strongest growth is expected so that partner companies of the initiative can plan their business recruitment needs and see where gaps in the skilled labour force are evident.

“We have used the CSN data to project training needs and in seeking funding to provide appropriate skills training. We also use the data when working with construction companies to meet their skilled workforce need and identify where recruitment difficulties would be expected.”

Lincoln College: “The CSN data we use is mainly the recruitment requirement, to plan new and existing curricula. The data is used in the School's business planning cycle. This helps us plan both new and existing curricula.

“The data is also circulated amongst partners including both training providers and employers and is used at our employer network meetings.

“For example, as a result of the data we have significantly increased our OSAT and technical and professional training as these are two areas that were identified as potential growth areas.”

SUMMARY

The CITB have a long history of LMI use and have developed a sophisticated and integrated model for generating and validating the intelligence drawn from their flagship research project. The contribution of industry experts and employers is integral to the model and there is strong representation from the devolved administrations and English regions, reflecting differences in the construction industry across the UK.

The Hessian Care Monitor (HPM) (Hessischer Pflegemonitor)



EXAMPLE PROVIDED BY: IWAK

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Region Hesse
Forecasting	Yes
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	IWAK
Website	www.hessischer-pflegemonitor.de (in German)

BACKGROUND OF THE LMI

The concept for the HPM was developed in 2002 and the first collection of data was carried out in 2005. It provides data on the current situation in the health and elderly care labour market (both on supply and demand), forecasts (up to 30 years) and analyses of the data. The subsequent survey waves have been carried out every other year and the methodology has been continuously enhanced. The last update of the HPM was released in autumn 2013. Apart from the short analysis of the data on the website, no additional

NEEDS FOR THIS LMI

The HPM was initiated by the Hessian Social Ministry since it wanted to enhance the transparency on the developments in the health and elderly care labour market: it had realised that the Federal State of Hesse would be experiencing a shortage of skilled labour in this field and wanted to establish a reliable data basis for the stakeholders' planning activities related to the health and elderly care labour market. The labour market monitoring and forecasting instrument was developed by IWAK. A series of initial workshops with the relevant stakeholders showed that a better picture of the current problems with matching differentiated by levels of qualification and sectors was needed. In addition, there was a need for prognostic knowledge of the developments in this sector. Especially the representatives of the (political) administrations on the Federal State, regional administrative district and administrative district expressed their interest in small-scale regional data.

DESCRIPTION OF THE LMI

The HPM is an initiative of the Hessian Social Ministry. It focuses on the health and elderly care labour market and is based on data delivered by the pivotal providers: regional branches of the Federal Statistical Office and the Federal Employment Agency. These statistics are combined with administrative data and representative survey results among different types of health and elderly care providers: stationary elderly care, mobile elderly care, hospitals and rehabilitation centres. The information is differentiated according to the qualifications of the employees: managers (university

degree), specialists (VET degree after three years), aids (VET degree after one year) and helpers (no formal qualifications). Especially important for the forecasting aspect is the data section on VET and higher education participation and final degrees. The geographical focus of the HPM is on the Federal State of Hesse and the LMI is provided on the level of administrative districts (26 in total).

USE OF THE LMI

The HPM covers a segment of the labour market which is going to face serious shortages of skilled labour in the future, so the relevant stakeholders are likely to look for LMI on the current and future developments in the health and elderly care labour market and use it in their line of work. Over the years, a stable pool of stakeholders has been built who have been able to bring in the topics relevant for their specific line of work. The Hessian Social Ministry had defined the initiation of the discursive process as one of the preconditions for the setting up of the HPM in order to ensure its development into a widely accepted information tool with a wide-ranging pool of users. Most of the key stakeholders represent the trade union of the service sector, the (political) administration, the professional associations, the education providers and the public employment services. The instrument is well known also among other actors who are not represented in the advisory board, such as politicians or representatives of administrative districts involved in health and social planning. Over the years, the forecasts provided by the HPM have proved even more popular than the description of current matching problems.

SUMMARY

The last workshop with the stakeholders showed that the level of information provided by the HPM is sufficient for the mobile elderly care sector whereas the stationary health and elderly care providers need more specific LMI for their sector in order to meet the future challenges of skilled labour shortages. Therefore, the HPM will be supplemented with a module for the stationary health and elderly care sector.

The HPM has a very specific focus on the different qualification levels (congruent with professions) in the health and elderly care sector. Therefore, it is relatively complicated to compare the results with other European regions: the data interpretation is made difficult by different qualification paths, levels and tasks performed by the health and elderly care professionals in other countries.

Skill Needs in the Green Economy and the role of the Observatoire Régional des Métiers PACA (Provence-Alpes-Cote D'Azur)



EXAMPLE PROVIDED BY: MARCHMONT OBSERVATORY

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Region of PACA
Forecasting	Yes
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Observatoire Régional des Métiers
Website	http://www.orm-paca.org/

BACKGROUND OF THE LMI

The ARLI Project is grateful to the support of l'Observatoire régional des métiers PACA (ORM PACA) for this good practice example which focuses on the training and skills needs in the green economy. This example focuses on the activities of the ORM PACA in the field of jobs, skill requirements and training needs in the green economy.

NEED FOR THIS LMI

The ORM has been deeply involved in this topic since 2008 when it was asked by its Regional Council (and several of its partners) for a study, the aim of which was to consider the establishment of a regional education and sustainable development institute in the field of engineering and environmental projects (IRFEDD). The requirement for the work was therefore driven via policy makers and professional (expert) partners and supported by their own knowledge of the labour market in their region.

DESCRIPTION OF THE LMI

Since the establishment of the IRFEDD, ORM has participated in several interagency projects examining the supply and demand for skills in green jobs, particularly with a view to anticipating future skills needs (e.g. participation in a project funded by the European Social Fund exploring women's jobs in the green economy in the PACA region).

They have produced several statistical and / or qualitative publications on employment and / or training in the green economy in the region, including *Green Economy in the PACA region: essential employment and training information* (Economie verte en région PACA : l'essentiel sur l'emploi et la formation).

This particular good practice example focuses on the work of Regional Training Institute of the Environment and Sustainable Development (IRFEDD), created in 2009, has the following general objectives:

- Better identification of "green" jobs in the region;
- Better understanding of the needs of a changing regional economy;
- Better anticipation of sectoral mobility and transition into ecological jobs;
- To contribute to green innovation through developing skills in all sectors.

To achieve this, the IRFEDD derived an original concept, focusing on the following:

1. The regulation of the supply of existing training in the field of green economy, in conjunction with relevant institutions including the Regional Council, National Education and the social partners;
2. Identifying new training needs and accompanying training projects (the incubation of new businesses in fields such as the development of technological, pedagogical and sociological innovation);
3. The undertaking of skills training as well as social and occupational integration including activities:
 - targeted at young people, job seekers and employees:
 - as part of the apprenticeship, alternation or continuing education,
 - with training provided either directly or through agreement with other training providers
4. The provision of information on careers and training green economy actions aimed at the general public (as part of the educational and vocational guidance), but also professionals and other institutional or socio-economic stakeholders (including through the organisation of conferences).

The IRFEDD operates in 4 groups (families) of occupations related to the green economy:

1. Management and protection of resources (management of public services, energy efficiency, renewable energies etc);
2. Risk prevention and treatment of pollution (natural hazards, industrial hazards, waste management, sanitation and water management);
3. Eco-construction and eco-recovery/repair;
4. Environmental services (eco-design, environmental management, specialized legal activities, research and development, education and counselling, training, environmental education, etc).

Governance model for the IRFEDD

IRFEDD was created in October 2009 with regional economic actors distributed within five colleges:

- Regional public Actors = Regional Council, Regional Development Agency and Regional Environmental Agency
- Consular Chambers = Regional Chamber of social and solidarity economy, Regional Chamber of Trades and Crafts, Regional Chamber of Commerce and Industry
- Clusters supported by the Regional Council in Wood Construction, Marine etc...

- Businesses = Including, Veolia, Dalkia, EDF, CNR, GDF SUEZ, Marseille Water Company, etc;
- Resource Centers = Regional Association of Local Missions (which deals with youth employment), Cité des métiers de Marseille et PACA (which deals with the information about trades) , Observatoire régional des métiers (ORM) etc

The ORM is administrator of the Policy Board of the IRFEDD.

USE OF LMI

LMI Support from ORM

the ORM has been involved in the IRFEDD since its formation. Currently, as well as the reports and intelligence it produces, the ORM is preparing support directly for the IRFEDD strategy meetings:

- The ORM prepares annual information and data on different themes.
- The Observatory contributes to the publication "Cahiers du Conseil d' orientation IRFEDD". This periodic publication informs the Board of Directors enable IRFEDD to focus on the most appropriate sub-sectors and activities and to direct training provision and the development of new training content.

In addition, ORM is involved in information campaigns on careers and training in the green economy. These activities, organized under the leadership of IRFEDD, are now available across the entire region, in partnership with other institutions, such as the job centres.

The ORM has developed expertise on issues of nomenclatures, including participation in several professional bodies and / or communities of practice on the observation of jobs in the green economy:

- Working Groups set up by the National Observatory of employment and jobs in the green economy (Onemev);
- The Workshop Network CARIF OREF (association of all regional employment training observatories France).

The last publication of the ORM in the field of green economy *Green Economy in the PACA region : essential employment and training intelligence (November 2013)* (Economie verte en région PACA : l'essentiel sur l'emploi et la formation) is an example of the processing and analysis of statistical data produced by the Regional Observatory trades to help the decision policy of employment and training related to the green economy. This publication includes:

- Definitions (green jobs / green sectors);
- Methodological notes (particularly on the operating limits of classifications and mapping between them);
- Some general characteristics and essential statistics/data on jobs and training in the green economy in the PACA region (including a detailed analytical section in each chapter).

SUMMARY

This good practice concerns the direct support for a new and important sector within the regional economy and how an Observatory has responded to this through publications and reports and

through direct support for the policy makers and those involved in supporting growth within the sector. The role of ORM PACA has been proactive rather than re-active and has maintained a focus on looking outwards at partners and those whom it can support. This combination of impacting upon both practices and policy is essential in helping to bring together the demand and supply of labour in an emerging sector.

Since 2008, ORM has made a dozen works on the broad subject area of job training in the green economy and most of this work has resulted in publications. Their observations in this field enable partners and users of their data to understand the difficulties inherent this emerging field.

THEME 4: DATA MINING & MONITORING TOOLS

Introduction

Theme 4 brings nine examples of what we consider as good practice – three from Italy, two from Czech Republic and one for Sweden, Netherlands, Germany and Spain. The theme focuses on advanced tools for gathering, analysing and publishing of primary data.

Italian Crisp and Czech National Training Fund focus interesting topic of monitoring of job-vacancies on web-based sources and – in Czech example – also on merging of public and private job vacancies data on the basis of ISCO classification. Second Italian example – Excelsior has also very close to demand side monitoring because it focuses on hirings and training requirements of employers.

Other examples provide thematic monitoring databases. Czech DV Monitor focuses on adult education sector and monitoring of all data sources relevant for development of this sector in detailed national and regional comparison (14 regions). Dutch Basisset regionale arbeidsmarktinformatie provides similar level of detail, covering whole of the Netherlands, divided in 35 regions.

Last three examples focus on providing of detailed monitoring of development of labour market and/or education system within specific region. Swedish Örestat III provides in-depth view on border-regional statistics for the Öresund region including demography, housing, employment and work. Similar approach to systemic monitoring of education and labour market is provided by Italian Piedmont Region Statistical Information System, which also includes tools for analysis and presentation of statistical information service to various user groups. Finally the Regional Monitoring of Qualification Development in the region Bremen provides labour market intelligence through combination of expert pool, business survey and secondary data sources analysis.

Skills Demand through the Web Job Vacancies



EXAMPLE PROVIDED BY CRISP

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (3 regions)
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	CRISP
Website	Not available

BACKGROUND OF THE LMI

The project “Skills Demand through the Web Job Vacancies” is a research study which has been realized for the first time in 2013 by the CRISP – Interuniversity Research Centre on Public Services – and was founded by Obiettivo Lavoro, which is one of the largest Italian private employment agencies. The project was realized in collaboration with three Regional Labour Market Observatories – Lombardy, Piedmont and Emilia Romagna - which gave access to their administrative data on labour market. The project aim was to analyze the occupations and skill demand through a representative sample of web job vacancies, which are the insertions published by private and public companies on the major job sites.

NEEDS FOR THIS LMI

The initiative is part of the projects that CRISP realize as scientific partners of some Regional Labour Market Observatories. The idea to use web data to analyze the labour demand and skills needs was born as consequence of two different considerations. The first is that the web is increasingly being used by companies and job seekers to spread the demand and supply taking advantage of the high heterogeneity and the enormous potential of its communication channels. The second is that the traditional methods used to monitor labour, profession and skills, and then the skills surveys, have some problems. Surveys are costly, considering direct (implementation) and indirect (opportunity) costs; their implementation is not easy, thus they cannot have a high frequency; and they have a top-down approach, i.e. soft skills and occupation-specific skills are generally pre-defined. Accordingly, analysis of web based vacancies are less costly after their set up, they substantially reduce the time-to-market and information provided are related to really open job vacancies, and they allow a bottom up approach, as the skills come directly from the employers insertions outlining many specificities to industries and territorial levels

DESCRIPTION OF THE LMI

The objectives and information provided by the research project are threefold:

1. *Analysis of the dynamics of labour market through the data of the web job vacancies.* The information on the web vacancies are analyzed by territories (regional and local), economic sector, type of contract and educational level and are used to provide an innovative monitoring of labour demand within the three involved regions.
2. *Evaluation of the relevance and significance of data collected on the web comparing this informative source with data which come from the regional administrative database.* In this regard, a comparison between data collected on the web and the Mandatory Communication (COOB) is provided. The latter are administrative data that the Regional Labour Market Observatories use to carry out the analysis on the labor market and offer a timely insight about the recruitments occurring within the territory.
3. *Monitoring of the skills needs associated with the vacancies published by the companies through the web.* The project provides information about the professional needs, in terms of knowledge, skills and abilities, derived from the web vacancies. The skills derived from natural language are classified in three main groups: basic skills (they are standard and often transversal abilities which are acquired through formal education channel), professional skills (they are specific skills which are mainly acquired through the working experience and professional training) and personal skills (they are mainly related to transversal skills and personal attributes).

Data sources are identified through a selection of the most important websites for job offers. Researchers in particular have chosen to investigate three main groups of sources:

- Specialized websites of job vacancies;
- Websites of the largest employment agencies;
- Websites of the major national newspapers.

The web crawling was carried out for three months, from February to April 2013. It was carried out by software (crawlers) that automatically scans a network and reads its content. In that period 177,189 web based vacancies were extracted and processed. The most (54%) comes from the web sites of the private employment agencies, the 36% from the specialized job sites and 10% from the newspaper web sites. The variables considered for each web based vacancy are type of contract, sector of employment, occupation, region/area, and skills; they were viewed as a valuable source of information on the characteristics of the job offer. Due to the typical problems that occur in dealing with web data, some specific techniques were used. Normalization activities were conducted in order to reduce the heterogeneity of data sources, including as much classification of employment contracts, skills, professions, etc. Specific statistical techniques were applied to reduce the problem that the same offer can be posted on multiple sites or repeated several times on the same site. Then taxonomies have been created to classify the information - about educational level, occupational groups, contracts, sectors, and skills - which comes from the natural languages.

USE OF LMI

The “Web Job Vacancies” is a recent pilot study and then there are not evidences about its effective use by the labour market stakeholders. However, the analysis of labour demand through the web job vacancies will probably become part of the regular activities of the Regional Labour Market

Observatories involved in the project, as it is considered a valuable informative source for unemployed people, companies and the training systems. The initiative would be very useful for persons looking for a job, who would better understand which are the skills required by the specific profession, for companies, which would render more effective the recruiting process on the web, and for training agencies, that could apply the results of the project in order to design or redesign their learning services.

The results of the pilot study are included in a book which was published in October 2013 as part of the “2nd Report on Labour Market”, which include all the researches founded by Obiettivo Lavoro in 2013. The project “Web Job Vacancies” has been presented in a media-conference organized in Rome in October 2013, and in a local seminar organized in Torino (Piedmont). In 2014 it will be presented also a seminar organized in Milano (Lombardy) and one in Bologna (Emilia Romagna).

This year the access to the results of the project is exclusively through the chapter published in the “2nd Report on Labor Market”. Alternative modes of dissemination and accessibility of data have not yet been defined

The first edition of the project was in 2013 and it will be replicated and disseminated in a similar way in 2014.

SUMMARY

The level of innovation that characterizes the experience of Web Job Vacancies as good practice is manifold:

- The data from the web show a good meaningfulness even if they are partial; then they can be used as a valid alternative data source to monitor labour demand for profession and skills;
- The skills analyzed come directly from the declaration of employers overcoming the problem recognized by many stakeholders concerning the existing nomenclatures and classifications on the skills;
- The development processes are fairly standardized, and after the set-up time, analysis are cheaper than those made with traditional methods;
- Stakeholders will get information on labour and skills demand in real time and in a systematical and less costly way.

Advanced job vacancies monitoring



EXAMPLE PROVIDED BY NTF

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
-------------------------------	--------------------	------------------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	NO
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	National Training Fund – National Observatory of Employment and Training
Website	Not available

BACKGROUND OF THE LMI

The aim of the research project under the auspices of the Ministry of Labour and Social Affairs (MoLSA) was to provide comprehensive information about the labour market and to monitor short-term trends in the demand for labour. The only investigator was the National Training Fund (NTF). One of new initiatives within this project was monitoring of vacancies from public and private sources. Implementation of this initiative included research of available sources, their evaluation, comparison and finding of possibilities of their future usage for anticipating of trends on labour market. After that new methodology of creating comprehensive database about vacancies was piloted. Results of this activity had both informative and methodological contributions. Other parts of this project included e.g. modelling of cyclic trends of the labour market and the indicators which could help to forecast its short-term trend.

NEED OF THIS LMI

There are still reserves in usage of information about vacancies in the Czech Republic. In the beginning of this project the MoLSA considered to cancel employers' duty to report job vacancies to labour offices. It was needed to find out how many job vacancies are covered by Public Employment Services (labour offices, PES), and to what extend and content with comparison to private advertising. It was one of the background papers for the MoLSA. It was already known that mainly the low qualified job positions are offered through the PES. The situation closely resembled voluntary cooperation because of low or rare sanctions to employers. The position of labour office (LO) as duty enforcer and simultaneously institution of job placement and related services was pointless. As expected, cancelation of reporting duty had little impact on demand for the PES services and reporting. Therefore the analytical information about vacancies from public and private sources still have a similar distribution.

The main reason of mapping this type of data sources was need of “very current data” about demand for workers in the labour market. More over data about vacancies from private and public sources cover all levels of qualifications and can be matched with occupational classification. The final database describes short-term demand for labour force by occupational groups (according to ISCO-88 and ISCO-08). After development of methodology the process from collecting data to final results can be carried out during one month which is much more efficient in comparison with expensive employer surveys.

DESCRIPTION OF THE LMI

The monitoring of job vacancies had several phases:

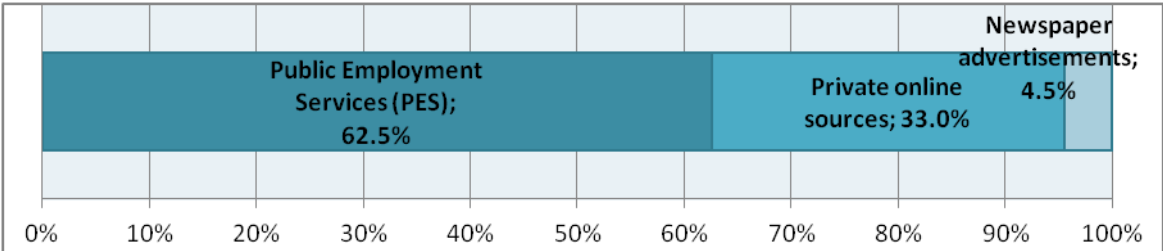
1. Mapping of data sources about job vacancies, their relevancy and structure
2. Agreements with data suppliers
3. Collecting data, development of methodology for merging databases
4. Developing of methodology for matching individual vacancy offer with occupational classification
5. Computations and analysis of demand for labour force

Mapping of data sources about job vacancies, their relevancy and structure

The first phase was focused on assessment of data sources. The PET data about vacancies were available directly through the MoLSA (as higher authority of LO). It was needed to understand the structure of internal system of labour offices, than formulate requirements of data transport. After that system administrator generated customized output from the internal database.

In the case of private suppliers the situation was more complicated. It was not clear how the cooperation would be established. The number of big players on the market of job portals was over 5. Firstly the number of job vacancies covered by them was identified. Than it was important to identify overlaps among them because employers usually advertise the same job on more than one portal or on the other hand portals take over job offers from each other. Thus, three main portals were chosen of about 80 % market coverage and it was succeeded to establish cooperation with them. It was important to set the cooperation effectively because benefits of smaller portals are comparable to the Pareto principle (20 % energy brings value added but 80 % implies only extra work). The private sources also included collecting data about job vacancies from newspapers (in the same specified period).

Figure 10: Distribution of job vacancies within public and private sources



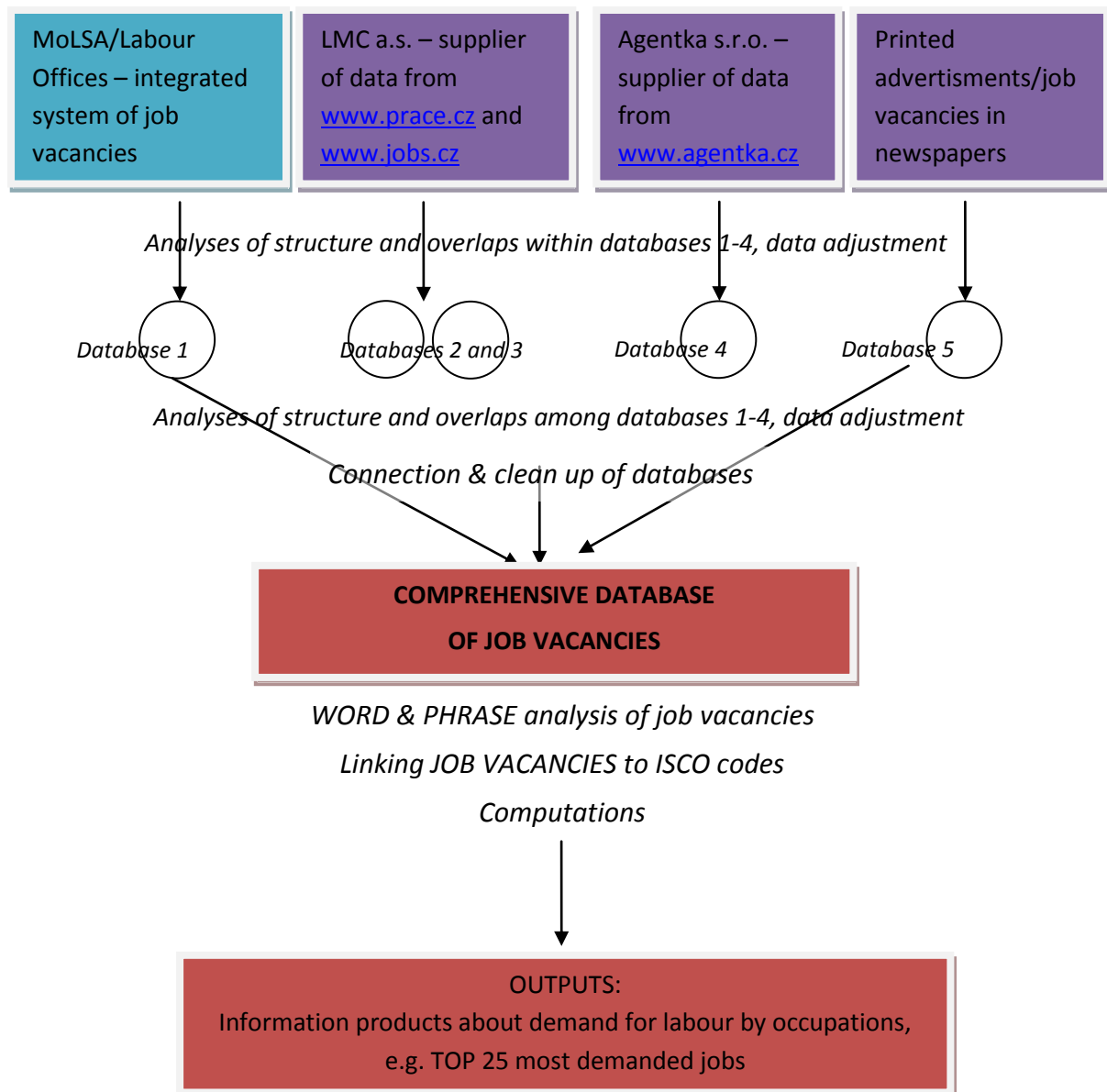
Agreements with data suppliers

There were two main sources to negotiate future cooperation:

- database of MoLSA/Labour Offices integrated information system,
- databases of web portals (three job webportals, two of them owned by one legal entity)

Cooperation with both kinds of suppliers was established with long-term perspective. The private suppliers gave their data for purposes of anonymised job vacancies analyses (e.g. not to identify and describe requirements of specific employers). In return their interactive banners were hung on the project leader website (focused on job future¹¹). The follow-up project has not been started yet but the cooperation in this way still lasts.

Figure 11: System of job vacancies monitoring



¹¹ CzechFutureSkills.eu

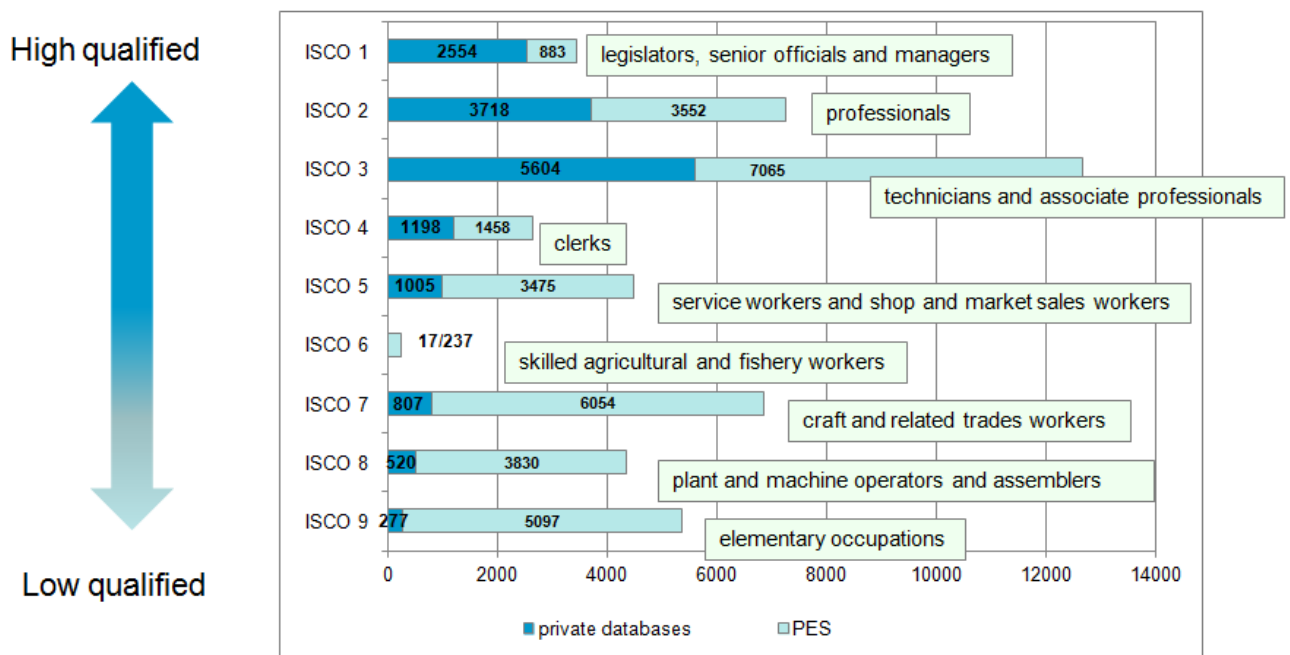
Collecting data, development of methodology for merging databases

After receiving the data the analysis of their structure continues. The data are usually described by ID, name of the job position, place (of work), number of employees required, wage/salary, required qualification or level of education, etc. The portals also use their own system of categories. Therefore the databases differ in used categories. The researchers have to ensure complementarity of databases and reduce overlaps. The reduction of overlaps is based on testing of right combination of factors for identification of duplicated item. This phase is completed by connection of databases to a single database of job vacancies without duplicate records.

Developing of methodology for matching individual vacancy offer with occupational classification

On the base of the comprehensive database the team of NTF developed methodology which used word content analyses of job vacancies and matching it with ISCO classification. It included creation of special words and phrases dictionary linked to ISCO. It was based on words in job advertisements, in classification, and other background materials, but more than 50 % of this dictionary was newly created. This dictionary was designed for automatic matching of job vacancies with ISCO classification and it was tested many times to avoid pitfalls of Czech grammar.

Figure 12: Distribution of major occupational groups by ISCO within public and private sources



Computations and analysis of demand for labour force

The SPSS programming/syntax was used for computations and analytical outputs. The 4-digit level was available for qualitative analyses, the 3-digit level for quantitative overviews, e.g. Top 25 most demanded jobs, or distribution of major occupational groups by ISCO within public and private sources (see example 1-3).

Figure 13: Top 25 most demanded jobs

341 Finance and sales associate professionals
512 Housekeeping and restaurant services workers
342 Business services agents and trade brokers
123 Other specialist managers
241 Business professionals
931 Mining and construction labourers
712 Building frame and related trades workers
311 Physical and engineering science technicians
213 Computing professionals (Computer systems designers, analysts and programmers)
343 Administrative associate professionals
214 Architects, engineers and related professionals
832 Motor vehicle drivers
521 Shop and market salespersons
913 Helpers and cleaners
222 Health professionals (doctors)
312 Computer associate professionals
932 Manufacturing labourers (in production)
828 Assemblers
722 Blacksmiths, tool-makers and related trades workers
422 Client information clerks
122 Production and operations managers
721 Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers
713 Building finishers and related trades workers
131 Managers of small enterprises
724 Electrical and electronic equipment mechanics and fitters

USE OF LMI

The initiative was piloted with very satisfactory results. Its methodology has been developed further than expected and pilot results from 2010 have been widely quoted. The outputs could be generated and analyzed regularly. Unfortunately follow up project has not yet been initiated due to process of changes in the PES integrated system of job vacancies and also because of governmental changes.

SUMMARY

The initiative is focused on information on job vacancies as readily available data. The project included assessment of information from the Public Employment Services data, and from private advertisements (web portals, daily press and advertising) which describe the labour market complementary. There was developed methodology which allows collecting and analyzing data regularly. The methodology was based on mapping of the biggest internet job portals, mapping structure and overlaps among sources, creation of one comprehensive database and matching vacancies with ISCO code. The output brings current data on demand for labour and information about the most demanded jobs. The initiative has potential to be used for anticipating of short term trends on the labour market.

DV Monitor – Monitoring of continuing education and training



EXAMPLE PROVIDED BY NTF

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	No

Developer	National Training Fund – National Observatory of Employment and Training
Website	www.dvmonitor.cz (only in Czech)

BACKGROUND OF THE LMI

The web portal DV Monitor (www.dvmonitor.cz) provides an easy and user-friendly access to data, information and news concerning continuing education and training (CET) in the Czech Republic. DV Monitor is an output of the Koncept (Concept of Continuing Education and Training) project lead by the National Institute for Education. Part of the project aimed at Monitoring of CET was implemented by the National Training Fund. Since April 2012 the portal has been administered by the Ministry of Education, Youth and Sports.

NEED OF THIS LMI

There was a lack of comprehensive information about CET. Although there were data they were scattered in many different sources. It was also for the first time that data about supply of CET courses were published in the Czech Republic.

Description of the LMI: The team of authors has collected all available statistical data about CET in order to develop a set of indicators. In the initial phase all interested target groups (decision makers, schools, and private educators/education institutions) were asked about their requirements.

There are, for example, data about CET undertaken by individuals and in enterprises, information about CET funding and barriers to participation in CET – all in the form of clear overviews or detailed tables. Hand in hand with methodology for system of indicators, new tool for collecting data about supply of CET (courses) was developed. The most comprehensive public (state) and private databases of CET courses were utilized for description of CET provision. The courses were divided into several groups by topic of education:

- Language courses,
- General professional courses. Courses leading to obtaining generally demanded skills, with subcategories of: 1. Soft skills courses, 2. General IT courses (e.g. basic MS Office, Internet Explorer or courses leading to ECDL), 3. Others (driver's license, health and safety, etc.),

- Specific professional courses. Courses focused on acquiring or extending skills to perform specific profession (e.g. welding courses, payroll accounting and HR management, configuration data networks on Cisco devices). These courses were matched with professions according to ISCO-08. System of matching CET courses to ISCO code was based on newly designed methodology.
- Leisure time courses.

The final set of indicators includes 72 indicators which were for better clarity divided into groups by:

- 4 “CET life cycle” pillars
- Themes
- Comparison between the CR and EU, comparison among regions of the CR

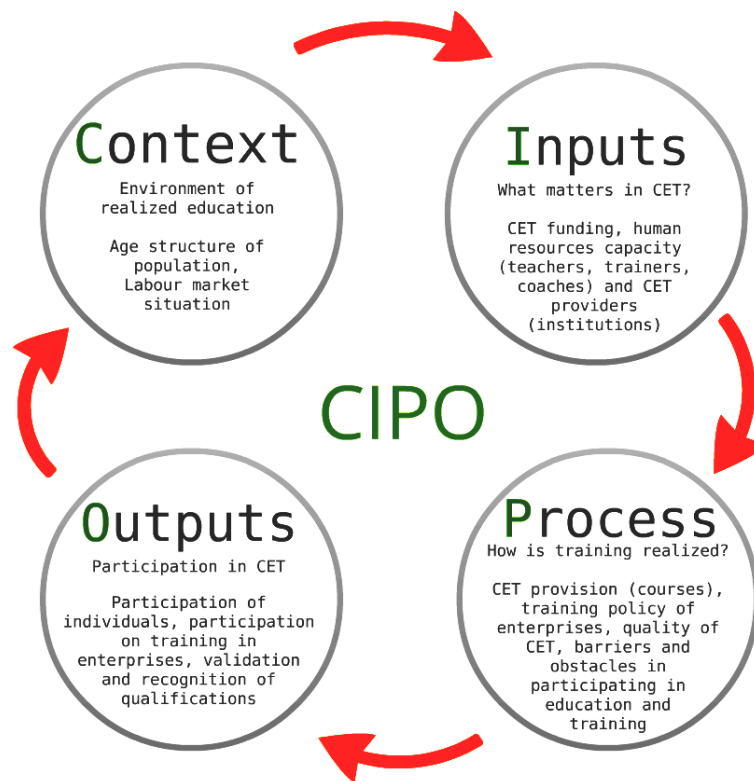
The indicators use the outcomes of international surveys and national research studies and surveys concerned with CET, as well as administrative sources of information and public and private databases covering CET. For each indicator, there are available online tables, csv tables to download, and if possible also results by specific groups of population (elder people, unemployed people, low skilled people).

“CET life cycle” pillars include:

1. **CONTEXT:** This pillar describes environment of realized education, mainly on the base of the LFS, CIS, and ISAE¹². There are indicators such as age structure of population, educational attainment, highest level of education in population, economic activity rate, unemployment rate, innovation capacity etc.
2. **INPUTS:** This pillar is mainly focused on human resources and financial inflows to the CET. Indicators: CET funding (expenditure of individuals on CET, public expenditures, expenditures of employers), human resources capacity (numbers of pedagogical staff), number of CET providers etc.
3. **PROCESS:** The pillar includes especially information about CET provision (both formal and informal education), training policy of enterprises and barriers in education. The authors have put together three largest databases of CET provision (courses) in the Czech Republic and developed a tool for eliminating overlaps and gaining information about the overall number of CET courses. The structure of the courses is compared with the employment and jobs structure so as to ascertain the extent to which the supply of courses meets labour market demand.
4. **OUTPUTS:** The fourth pillar describes results mainly argued by participation in CET (participation of individuals in formal and non-formal education, participation in enterprises, validation and recognition of qualifications, graduates in tertiary education over thirty years of age).

¹² Labour Force Survey, Community Innovation Survey, Information System on Average Earnings (ISPV)

Figure 14: CET life cycle scheme



USE OF LMI

The indicators provide an overview of the situation in continuing education and training at national and regional levels. Moreover, selected indicators facilitate comparison of the Czech Republic and other EU member countries. There are, for example, data about CET undertaken by individuals and in enterprises, information about CET funding and barriers to participation in CET – all in the form of clear overviews or detailed tables.

SUMMARY

The system of CET monitoring offers well-arranged data facilitating international and regional comparisons to be used by policy makers, educational institutions and individuals. The portal constitutes the first regular and comprehensive monitoring of information on CET in the Czech Republic.

Vítejte na webovém portále poskytujícím **INFORMACE A DATA O DALŠÍM VZDĚLÁVÁNÍ**.

ÚVOD INDIKÁTORY O DV MONITOR KONTAKT ODKAZY

Vybrali jsme TOP

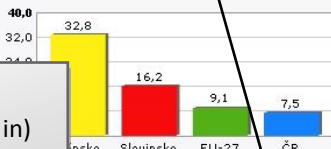
- Podnikové vzdělávání
- Financování dalšího vzdělávání
- Vzdělávání starší populace

Themes
(website users are interested in)

Postavení ČR v Evropě

Podívejte se, jak si Česká republika vede v oblasti dalšího vzdělávání ve srovnání s dalšími zeměmi.

Účast na vzdělávání (2010, pop. 25-64, 4 týdny)



Comparison with EU countries

Kraje ČR



Comparison of regions

Přehled indikátorů vzdělávání v regionech.

Porovnejte

- Postavení ČR v Evropě
- Kraje ČR

Časté otázky

Co je další vzdělávání?

Slovníček dalšího vzdělávání a ostatních důležitých pojmů používaných na DV Monitoru

Analýzy

Czesaná, V.: Nerovnosti v účasti v dalším vzdělávání

Cedefop: Learning while working

Aktuality NEW

- Evropský výzkum kvalifikačních potřeb zaměstnavatelů
- Sdělení MŠMT k vedení

Vybrali jsme TOP

- Podnikové vzdělávání
- Financování dalšího vzdělávání
- Vzdělávání starší populace
- Vzdělávání nezaměstnaných
- Další vzdělávání osob s nižší kvalifikací
- Nabídka dalšího vzdělávání

Link to indicator itself

ÚVOD INDIKÁTORY O DV MONITOR KONTAKT ODKAZY

Kraje ČR

Zajímá vás, jak si stojí jednotlivé kraje České republiky v účasti na vzdělávání, výdajích na rekvalifikace nebo v míře nezaměstnanosti?

Na této stránce naleznete informace o nejrůznějších oblastech dalšího vzdělávání v regionech.

Pro přehled indikátorů pro vámi vybraný kraj klikněte na příslušnou oblast na mapě ČR.



Středočeský kraj

INDIKÁTOR	ROK	HODNOTA INDIKÁTORU					TREND	
		2010	2011	2012	2013	2014	STC	OBDOBÍ
Podíl dospělé populace s terciárním vzděláním (I.1.1) [?]	2010						↑	2000-2010
Podíl dospělé populace se středním nebo vyšším vzděláním (I.1.2) [?]	2010	%	91,9	93,1	4	→	↗	2000-2010
Mzdová diferenciacie podle vzdělání (I.2.1) [?]	:	:	:	:	:	:	:	:
Míra ekonomické aktivity (I.4.1) [?]	2010	%	70	71,1	3	→	→	2000-2010
Míra nezaměstnanosti (I.4.2) [?]	2010	%	7,2	5,1	13	→	↘	2000-2010
Podíl účastníků, kteří si sami hradí náklady na další neformální vzdělávání (II.1.1) [?]	:	:	:	:	:	:	:	:

Link to methodics

Přečtěte si

- Analýzy
- Aktuality



EXAMPLE PROVIDED BY: ARBETSFORMEDLINGEN

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Öresund region
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Region Skåne (lead partner) (Interreg IV project)
Website	www.orestat.se www.orestat.dk

BACKGROUND OF THE LMI

Örestat III is an open database with border-regional statistics for the Öresund region. The database includes comparable statistics over several areas, for instance demography, housing, employment and work". Website, at www.orestat.se and www.orestat.dk , but also publications on hard paper and thematic Workshops. Publications and the database available in Danish, English and Swedish.

NEEDS FOR THIS LMI

Örestat III was built with the support of the Interreg projects *Örestat I* and *II* with the purpose of providing border-regional and comparable statistics for the Öresund region and the integration process, following the building of the Öresund bridge (*Öresundsbron*) in 2000.

"Örestat III is a continuation of the earlier projects with the purpose of strengthening and developing the border-regional networks and anchoring and promoting the use of Öresund statistics in more regional and border-regional activities. The project started in 1 September 2011 and ends at 31 August of 2014." Örestat III also aims at gaining more "knowledge on the competitiveness [of the Öresund region] in relation to other regions... and improving the usability of the content". "Örestat III is a cooperation between Region Skåne (Leadpartner) [regional Government, SE], Region Hovedstaden [regional Government, DK], Region Sjælland [regional Government, DK], Helsingborg stad [local Government, SE], Malmö stad [local Government, SE], AF [SE], Landskrona stad [local Government, SE], *Öresundskomiteen* (political committee formalizing the cooperation between Skåne [SE] and Sjælland [DK]) och Beskæftigelsesregion Hovedstaden & Sjælland [one of four regional employment authorities within the Danish National Labour Market Authority, under the Ministry of Employment]". No explicit target group is stated, but the main users are most likely analysts, planners and policy makers.

DESCRIPTION OF THE LMI

Örestat III publishes two LMI:s on the website, namely “Key figures” (*Nøgletal*) and the Öresund “Database” (*Öresundsdatabasen*). *Nøgletal* includes brief fact sheets on prioritized areas of development, e.g. “Population” and “Labor market and commutation”. The main LMI is *Öresundsdatabasen*, which offers harmonized statistics on 13 thematic areas, including “Labor Market”, “Regional Accounts” and “Transports and Travelling”. The input comes mainly from Danish and Swedish PES:s. Örestat III has also generated a number of hard paper publications (available on the website under *Publikationer*):

- a set of fact sheets (*Öresundsanalyser*, in Swedish and Danish) covering thematic areas like “The Öresund regions competitiveness in Europe” and “The Öresund region as a metropol”;
- the report “Öresund-regional labor market” (*Öresundsregional arbetsmarknad*);
- a brochure addressing methodological pitfalls encountered through Örestat III (in Swedish and Danish); and, in particular,
- *TendensÖresund2012* (in Swedish, Danish and English, full report as well as flyer), a descriptive and analytical study on the Öresund region.

In addition, Örestat III has organized six Workshops in Malmoe and Sweden, on themes like “Accessibility and Mobility”, “Climate and Sustainable Development”, and “Health and life style”; and the website publishes “diagrams”, “news”, and “short facts” related to the work of the project.

The project engages one full time resource but employs resources from a number of other actors on both sides of Öresund, in particular the project partners.

USE OF LMI

No evaluation of the impact of the project, yet it seems that knowledge about Örestat III is not very widespread beyond a smaller group of stakeholders and analysts. No systematic “control” and “evaluation” seems to be employed but from the overall approach follows an important focus on the pitfalls with the data addressed. Broad stakeholder involvement at the border-regional level. *Job og Competencer* is a related project in the sense that it deals with cross-border issues regarding the Öresund region. May be a rather exclusive yet not unique project in Europe (take note of the presentation in Bilbao of the cooperation between German and Polish analysts and correspondingly in relation to commutation to and from Luxemburg, which probably dealt with very similar issues (harmonization of statistics).

SUMMARY

GP as cross-border (i) statistical harmonization, and (ii) cooperation (at regional level). In a recent case study, the Oresund region is identified as “the most widely publicized flagship model of cross-border European integration”, a “success story” (p. 12) where for instance the “availability of cross-border statistics and research... is the envy of many other cross-border areas” (p. 52).¹³

¹³ Nauwelaers, C., K. Maguire and G. Ajmone Marsan (2013), “The case of Oresund (Denmark-Sweden) – Regions and Innovation: Collaborating Across Borders, OECD Regional Development Working Papers, 2013/21, OECD Publishing (<http://dx.doi.org/10.1787/5k3xv0lk8knn-en>).

ADDITIONAL INDICATORS

- Methodology: no further info .
- EUSP: Not identified. Potential link is that the project probably has identified pitfalls and accumulated knowledge that may be valuable to exploit and apply in many similar regions across Europe. An issue addressed by the project is that national statistical bureaus do generally not have the required knowledge and competence to deal with these pitfalls and methodological problems.

Information system for employment and training



EXAMPLE PROVIDED BY CRISP

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	Yes (medium term)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Excelsior
Website	http://excelsior.unioncamere.net/

BACKGROUND OF THE LMI

Excelsior is an information system that provides data and analysis on employment demand and required training (including professional and academic qualification).

NEED OF THIS LMI

The project was born thanks to the Italian Union of Chambers of Commerce, Industry, Handicraft and Agriculture, in collaboration with the Ministry of Labour in 1997 to reconstruct the framework annually and quarterly forecast of the demand for labor and professional and training needs expressed by businesses, providing guidance extremely useful especially to support the programming choices of training, guidance and employment policies.

DESCRIPTION OF THE LMI

To provide data about the hiring analytical information were collected on the characteristics of the staff that each company intends to acquire.

The information collected with Excelsior concern, at a glance:

- the characteristics of hiring companies;
- reasons for not hiring for companies who do not take;

- movements openings for classification level;
- the hirings provided by the companies by type of contract (employment indefinitely, employment term, project-based, seasonal employment, apprenticeship contracts, insertion etc.).
- the professional, educational qualifications, education levels and their addresses required;
- the main features of the planned recruitment (recruitment difficulties, need for further training, prior experience, knowledge and language skills);
- the planned recruitment of immigrant workers and related professionals;
- the size and characteristics of the annual investments of Italian companies in continuing education and the types of human resources involved;
- Companies that host trainees and the number of internships each year in total activated.

The data presented comes from surveys. The survey was conducted in each province by the network of Italian Chambers of Commerce with nearly 300,000 direct interviews or telephone surveys per year (about 100,000 and 180,000 for the annual survey for the 4 quarterly surveys), involving companies from all sectors of the economy and of all sizes. The high number of interviews and the overall methodology adopted in the construction of the sample allow to obtain statistically significant data for all 105 Italian provinces (including the new province of Monza and Brianza and Fermo and excluding the new provinces of Sardinia and Puglia). For this reason, Excelsior is considered one of the most extensive surveys required by National Statistical Programme and represents the most comprehensive source of information available in Italy for the knowledge of professional and training needs of companies. For each company are recognized programs of recruitment of staff for the next twelve months and the corresponding outputs on the occasion of the annual survey and for the following quarter on the occasion of the quarterly surveys.

USE OF LMI

Information available is a fundamental cognitive support for:

- the measurement of the actual demand professions in the different basins of local labour, in order to provide information support to all those - public or private - are engaged in guiding the supply of labor to the needs expressed by the demands or promote direct meetings and punctual between demand and supply of labour;
- the address of the choices of decision-makers on policies and programming of educational and vocational training, as well as training professionals at all levels, offering detailed information on the needs of professionalism expressed by industry for the short and medium term;
- the orientation of young people who, at the conclusion of their own learning, require immediate usability of information on trends in the labour market in general and the most popular professions in particular.

The target is quite broad because it includes policy makers that works on Labour market and a lot of others Labour market stakeholders: Excelsior will appeal to anyone is looking for information on recruitments foreseen by companies from various sectors up to the provincial level and supplied with details about required school addresses and professionals.

The outputs are many: online it is possible to find an accessible database where the user can select data through filters; there are also statistic tables, bulletins and publications. These last ones comprehend both general publications on employment trends and publications focused on specific topics (Craft Industry, youth employment sector, etc.).

The investigation is ongoing since the start of the project (1997) provided data on an annual basis. Users can access data via the online platform that allows them to filter the variables of interest (such as the territorial dimension), and download it in excel format.

SUMMARY

The level of innovation that characterizes the experience of excelsior as good practice is manifold:

- The methodology of data collection and analysis is certainly established, having been developed and perfected over 15 years;
- It is the only Italian experience made with continuity that can offer an analysis of forecast in the medium term (2017);
- The use is easy and intuitive, and are available both data and reports, along with comments;
- The geographic detail from the national to provincial to get up while the temporal detail that divides both years quarters.
-

Piedmont Region: Statistical Information System on Labour Market



EXAMPLE PROVIDED BY CRISP

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Piedmont region
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Regional Labour Market Observatory of Piemonte
Website	http://piemonte.crisp.unimib.it/

BACKGROUND OF THE LMI

Statistical Information System on Labour Market is a project realized by CRISP – Interuniversity Research Centre on Public Services and founded by the Piedmont Region in Italy. It was developed to allow the enhancement of administrative data for statistical purposes collected by the public employment services.

NEED OF THIS LMI

This LMI was born to answer the basic problem of putting in quality the administrative data available and therefore being able to use them properly. This need was expressed by regional and local policy makers. The aim of the system is to get information on the Labour Market to take decision about the policies and to evaluate the actions (e.g. through the analysis of the professions). The actors involved are basically policy makers of local, provincial and the regional level in Piedmont.

DESCRIPTION OF THE LMI

In this context, it becomes important to the creation of a Statistical Information System to collect all this information, loading them into a database, commissioning, quality of data, their integration, construction and supply of a data warehouse that contains the facts that intend to investigate, the preparation of tools for analysis and presentation, the provision of statistical information service to various recipients in different ways to fruition.

- Multidimensional analysis (OLAP): the dimension of presented events are: gender of the subjects, the age group, nationality, sector of activity, the province of the operational headquarters, the type of contract, skills and date of the event. It is offered to the users the possibility to apply filters and create *ad hoc* analysis.
- Territorial Analysis: Data are presented in maps, aiding the visualization and the understanding of the phenomenon at the local level.
- Dashboards: the tool offer also structured analysis and synthesis representation about trend of professions, survival analysis about average duration of contracts and forecast at short term.
- Reporting: the report are released every month, quarter, semester and year and they are defined on the basis of expressed needs, and there are two kinds of report, both analytical both synthetic.

About the Data source it is interesting to note that the used administrative data are the mandatory communications (primary data). These are mandatory by 1st March 2008, and are sent electronically to a collection center, who then dispatches basing on competencies. The public sector is included in these data. The data record all the goodwill, terminations, extensions and transformations implemented by employers in every enterprise. The flow of data is monthly updated.

USE OF LMI

The user is Information available is a fundamental cognitive support for:

- the measurement of the actual demand professions in the different territorial level of Labour Market, in order to provide information support the ones engaged in guiding the supply of labor to the needs expressed by the demands or promote direct meetings and punctual between demand and supply of labor;
- the address and the programming of the choices of decision-makers on policies;

The target is quite limited because it includes only policy makers that works on Labour market in Piedmont.

The outputs of the LMI are those already described, i.e. the analyzes presented or created ad hoc downloadable in excel format and the reports periodically written. The project has been started in 2011 by CRISP - Interuniversity Research Centre on Public Services on Piedmont Region demand and is still updated and available as service. About the fruition modality to access the Statistical Information System it is necessary to have the address at which the system is released and a personal account (username and password) to access. In this sense, the tool is not free access and has a limited target.

SUMMARY

The level of innovation that characterizes the experience of SIS Piedmont as good practice is manifold:

- The tool allows the use of administrative data (suitably cleaned: inaccurate or out of date information are corrected);
- It is offered a model of short-term forecast about the professions;
- There is the possibility to customize the analyzes and to create "ad hoc" reports;
- The geographic detail from the regional to local goes along with the temporal detail and this allows an horizontal integration;
- The data are monthly updated.

Basisset regionale arbeidsmarktinformatie



EXAMPLE PROVIDED BY KWIZ

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	National and regional (all regions)
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	UWV
Website	https://www.werk.nl/werk_nl/arbeidsmarktinformatie/publicaties/publicaties-over-regios/basisset-regionale-arbeidsmarktinformatie

BACKGROUND OF THE LMI

The practice is a monthly report with information about developments per region in the supply-side and demand-side of the labour market over time (comparisons per month and per year). The report is in Dutch and covers whole of the Netherlands, divided in 35 regions.

NEEDS FOR THIS LMI

The objective is to provide up-to-date detailed and reliable information about the state of affairs of demand and supply in the regional labour market. Also the development in the last 12 months and the development of the labour market at a national level is reported. There is need for transparency of the labour market and up-to-date information on regional level for jobseekers and employers. The UWV provides this information in order of the Ministry of Social Affairs and Employment to match as much jobseekers with a job.

DESCRIPTION OF THE LMI

This monthly report per region describes trends and developments in the supply-side of the labourmarket and sorts it out to (education)level of the occupation, age, and occupation group (32 different occupational groups are distinguished, grouped in 4 educational levels of the occupations). The actual numbers of the people looking for work are compared over time (comparisons per month and per year). Also the number of people joining and leaving this group of jobseekers is reported. The number of vacancies is reported in comparison to the past twelve months and is reported per occupational group. A comparison between supply and demand per occupation is reported. At last the developments of the labourmarket at the national level are reported to give the opportunity to compare the numbers. Also some information about trends in the Netherlands are given in each report. The practice addresses current needs.

UWV has its own data about jobseekers, but uses external data about vacancies from the company TextKernel (this dataset is called Jobfeed). UWV links these data in order to get an overview of the labourmarket. UWV is still developing the Basisset Regionale Arbeidsinformatie. They want to add educational information. Also UWV is planning to rebuild the Basissets to some sort of portal with access to the datawarehouse with the ability for users to generate information sorted out by own selected criteria (something like the 'Spanningsindicator', see other practice).

USE OF THE LMI

The practice is referred to by many other websites and the practice is well-known. The impact is therefore pretty big. Some municipalities use this practice for making policy.

UWV tries to monitor the quality of the data they use themselves. Since they are very transparent in providing their methodology, the numbers seem very reliable. An investigation tells us that the quality of the data is variable. The cooperation of the data-providers isn't always going smooth. Overall, this practice is one of the best reports and suppliers of labourmarket-information there is in the Netherlands.

SUMMARY

This is a good practice because the report gives a really clear view on the current state of affairs. What's also good about the practice is the provision of data over time and at national level. Also the fact that UWV publishes their report for 35 regions every month is very good.

The practice could also be used in other regions; the data it provides would be compatible with LMI from other European regions, since it has a broad coverage of groups of professions.

EQUIB – Regional Monitoring of Qualification Development (RMQD)



EXAMPLE PROVIDED BY IWAK

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Region of Bremen
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	IAW - Institut Arbeit und Wirtschaft
Website	www.equib.de (both until 2008 and the developments from 2009 onwards; in German)

BACKGROUND OF THE LMI

Between 1990 and 2008, EQUIB (*Ermittlung des Qualifikationsbedarfes der Region Bremen*) was supported through the ESF. Since 2008, the project has been carried out by the University of Bremen and the Chamber of Employees of the City of Bremen. However, the surveys and analyses do not take place as regularly any more (rather, selective surveys for single sectors). Therefore, the best practice study relies on the description of the situation before 2008 – the concept and set-up are still interesting, since EQUIB and the associated RMQD methodology constitute an unusual approach in the world of labour market monitoring.

EQUIB is an analysis of regional qualification needs in the City of Bremen (the smallest federal state in Germany with about 550,000 inhabitants). Until 1999, extensive sectoral surveys were carried out (quantitative data), supplemented by expert interviews (qualitative data). However, the in-depth approach meant that it was possible to concentrate only on one sector (at the beginning the focus was on the metal industry and metal crafts/trades). The challenge was to extend the monitoring to other sectors by increasing the efficiency of the monitoring process without losing the in-depth information level. Furthermore, the local actors stated that they needed qualitative LMI rather than the highly abstract and aggregated quantitative data. This led to developing a qualitative instrument for monitoring qualification needs.

NEEDS FOR THIS LMI

At the beginning of the 1990s, Bremen decided to respond to the far-reaching changes in its economic structure with active labour market policies. It recognised already at an early stage that the economic re-structuring needed to be accompanied by corresponding changes in the qualification structure. To that end, the economic policy had to be integrated with the labour market and education policy. In this framework, EQUIB was supposed to deliver the necessary LMI for better alignment of the policy efforts in the field of qualification to the structural changes of the economy.

However, since Bremen is a city-federal state, its financial resources have always been limited and the LMI provided by EQUIB had to ensure the efficient use of resources.

DESCRIPTION OF THE LMI

The RMQD stands on three pillars:

Figure 15: Pillars of the system



The expert pool in the **first pillar** consist of experts external to the businesses (161 persons in 2004), who are selected according to information need. They consult the RMQD as to the sectors in to be focused upon and the business to be contacted and are. In its function as a consultative body, the expert pool also represents the user interests.

For the **business survey** in the second pillar, expert interviews with the heads of the general management or the HR departments are conducted. For the survey to be representative, the interview partners are selected on the basis of previous experience of the person conducting the survey, background checks of the business/experts and recommendations by other experts. The business survey is conducted at least once a year and involved in 2008 200 businesses. The interviews with the experts are a combination of open questionnaires and mind-maps – this structure ensures the comparability of the interviews.

The **cooperation with the research** entails workshops and discussions for validating the results.

USE OF THE LMI

The information needs of the different users were of key importance when developing the RMQD. The information is mainly used by the political decision-makers as well as the different providers of (continuous) education and training in Bremen in their activities concerned with the planning, structuring and optimising the qualification strategies which are seen to be crucial for re-positioning Bremen economically. The results form the basis for the discussions about the distribution of financial support.

SUMMARY

This instrument can primarily be used in small territorial units, since it is very time-consuming. However, due to the direct contacts with the businesses, a network of relevant business actors can be built up. This can be used for targeted dissemination of survey results and inclusion of the industry stakeholders in the policy deliberation processes. A side-effect of the in-depth expert

interviews were the impulses that the experts in the business survey received through the reflection of the qualification needs of their businesses.

Lanbide Labour Market Observatory



EXAMPLE PROVIDED BY IWAK

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
------------------------	--------------------	-------------------------	----------------------------------	----------------------

Territorial dimension	Region of Basque
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	
Website	www.lanbide.net

BACKGROUND OF THE LMI

The Lanbide Labour Market Observatory (LLMO) was established in 1994/1995 and delivers LMI for both the supply and demand side of the labour market. The LLMO can be accessed at: www.lanbide.net (in Basque and Spanish), the website of the Basque Employment Services. The provided information has a regional focus.

NEEDS FOR THIS LMI

Prior to developing and launching of the LLMO, the specific LMI needs of the regional stakeholders were explored. It was established that the LMI's main relevance should be for the labour market and training policies as well as for the entrepreneurship policies concerned with industrial and economic development.

The objectives for setting up the LLMO were:

- Creation of a system providing LMI
- Assessment of labour market policies and programmes
- Support in regard to management control and continuous improvement within the organisation
- Assistance and advice to service managers particularly in the field of strategic planning

DESCRIPTION OF THE LMI

The LLMO includes both quantitative and qualitative data depending on the type of information. However, quantitative data is used more frequently. The data comes from the following sources: EUSTAT (Basque Statistics Institute), INE (National Statistics Institute), Eurostat, data from the

education and training system and administrative data (social security, unemployment, contracts, commercial data). The taxonomy includes: CNAE (National Classification of Economic Activities), CNO (National Classification of Occupations), SISPE (Public Employment Services Information), Classification of the Educational System. The data is collected at local level but always complemented with transregional and transnational data. The costs for providing this LMI are covered by Lanbide (public financing). The quality control takes place through policy evaluation and assessment.

Following stakeholders are involved in the of labour market monitoring and validation: Social companies and NGOs, other departments of the Basque Government (Industry, Education), business and sectoral associations, trade unions, etc.

The set-up of the LLMO had the following impact: Improved quality of the LMI, improved intermediation/ brokerage system, targeted planning activities for developing the Employment Strategy of the Basque Employment Service. Activities of the practice: statistical analysis, design of indicators, labour market and training policies management support.

- Observatory – Prospection: the labour market analysis from the social, economic and employment perspective as well as foresight studies.
- Evaluation – Quality: a systematic evaluation of practice on employment policies, that allows us to gather information, evaluate it and return it, trying to improve these interventions.
- Strategic planning – Assistance to the management: identifying planning strategies in the short and long term in order to reach the determined goals and specific objectives.
- Management monitoring: to improve management efficiency it is necessary to check different activities by monitoring the ratios, the development and the outputs.
- Products of the practice: Statistical plans related to unemployment rate and social benefits. In addition, surveys of the access to initial employment of people who have received vocational training and recently graduated university students.
- General and specific information about the labour market.
- Statistical plans related to the employment policy.

USE OF LMI

- Education system and employment
- Training needs in productive sectors
- Quality and continuous improvement in Lanbide
- Evaluation of employment policies
- Contribution to the web content
- Consultancy and advice to the Department of Employment and Social Policies
- Performing R&D
- Specific requests and information dissemination

The different utilisation paths can also be grouped along the activity clusters:

- Strategic planning: long-term vision, integrated view, prioritisation of action lines
- Information: synergies, shared knowledge, customer orientation
- Evaluation and monitoring: efficient management, monitoring the quality of services, decision model

SUMMARY

The LLMO has an advanced coordination system and collaborates with the third sector, business associations, providers of VET and continuous education and training. It provides information needed for developing employment policies and strategy programmes.

However, the LLMO has still room for improvement:

- Broader scope of data (including more information on skills) and better access to data
- Improved access to administrative sources
- Increased short-term policy relevance
- Generation of specific scenarios
- Improved communication between different stakeholders; improved user-orientation
- Stronger involvement of stakeholders from the industry
- More information on the future developments regarding employment opportunities and the ageing work force

THEME 5: SKILLS PROFILES & MATCHING

Introduction

This group contains six LMIs, two coming from Italy, three from Netherlands and one from United Kingdom. These examples focus especially on matching labour supply and demand though the first example goes beyond this frame and besides on-line recruiting services provides also information on university graduates' employment conditions and graduates' profile that can be sorted by several search criteria. Second Italian LMI is an example of extensive employer survey. Three LMIs describe good practices of collaboration among different institutions aimed at active work with unemployed people or job seekers and potential employers and at providing relevant information. The sixth LMI is a very comprehensive web tool that brings together a range of complex information in one place in a format of use to the end user, i.e. especially young people and advisors. The main goal is to help young people to make informed decisions about their future.

Graduate Employment Conditions and Profiles



EXAMPLE PROVIDED BY CRISP

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	National
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Consortium of Italian universities
Website	http://www.almalaurea.it

BACKGROUND OF THE LMI

AlmaLaurea was set up in 1994 following an initiative of the Statistical Observatory of the University of Bologna and is run by a consortium of Italian universities with the support of the Ministry of Education, University and Research. Since then it has experienced an exponential growth; now it involves 80% of Italian graduates and on 12/11/2012 the total number of curricula coming from 64 Italian universities amounted to more than 1.820.000 units. AlmaLaurea is aimed at being a reference point for everyone who deals at different levels with issues like academic studies, employment and youth conditions and to be a meeting point for graduates, universities and the business world.

NEEDS FOR THIS LMI

AlmaLaurea was initiated to create a bridge between Universities, labour market and professions. Accordingly, AlmaLaurea is aimed at:

- Facilitating and improving the access of young people to the labour market and their placing. By doing this AlmaLaurea simplifies companies' research of personnel, reducing the time gap between qualified work demand and offer.
- Guaranteeing the optimization of human resources through a steady update of data regarding the career of students holding a diploma or a degree.
- Looking after all monitoring processes concerning the academic programs chosen by students and analyzing graduates' characteristics and performances, so that a direct comparison between different courses, faculties and universities is made possible.
- Analyzing the effectiveness of the study opportunities offered by each university.
- Taking into account the professional profile that is required by Italian and foreign companies.
- Analyzing the effectiveness that the study opportunities offered by each university have in the labour market by monitoring the different occupational openings.
- Developing a synergic relationship with high schools which is aimed at guiding students towards university and the labour market.
- Promoting any activity aimed at the achievement of the above mentioned goals, both at a national and at a European level.

DESCRIPTION OF THE LMI

AlmaLaurea collect primary data in order to realize two relevant surveys on (1) Graduates' employment condition, and (2) Graduates' profile.

The survey - Graduates' employment condition - involves more than 400,000 graduates from all the 64 Universities that are members of AlmaLaurea. The Survey refers to 215,000 post reform first and second level graduates interviewed at one year from graduation; all the 2009 second level graduates (about 65,000) interviewed at 3 years from the achievement of the degree. Starting from this year the second-level graduates (over 40,000) have been investigated at five years from the completion of their studies. The profile on graduates' employment condition is divided into 10 sections: surveyed group, postgraduate training, employment condition, access to the labour market, characteristics of the current work, characteristics of the company, earnings, use and need for a degree within the current job, degree effectiveness, and search of a job.

The Survey - Graduates' Profile gives the picture of the human capital coming from universities. It can be considered a reference point for all the people interested in every single aspect of the Italian university system. Data comes from an integration of the administrative archives of the Universities belonging to AlmaLaurea and the information collected by the questionnaires. The study concerns almost 227.000 graduates who concluded their studies in 2012 in one of the 63 universities that have been taking part in AlmaLaurea since at least one year. More than 129,000 graduates have obtained a 1st level degree (kind of degree deriving from the University reform), whereas over 65,000 of them have obtained a 2nd level degree. The profile of graduates is divided in 13 sections: characteristics of the graduates as they enter the university, work during their studies and class attendance, traineeships, experiences of studying abroad, regularity in studies, votes, experience as guest,

services received, living condition in university towns, study prospects, job prospects, adults at university.

In addition to the information provided on graduates employment conditions and profiles, AlmaLaurea also provides an on-line recruiting service. Graduates coming from universities taking part in AlmaLaurea can constantly update their CVs both in Italian and in English. Then companies can search candidates, save research and student's curricula, evaluate candidates having access to a database that today counts more than 1.820.000 curricula updated by students and certified by universities. AlmaLaura also contacts the graduates complying with the companies' requirements.

USE OF THE LMI

AlmaLaurea was born to serve graduates of the University, enterprises, government agencies and trade associations. Accordingly, the inter-university consortium supplies reliable data in a short time to the Governing Bodies of the universities that are part of the consortium, to the Assessment Units and to the Committees dealing with Teaching Activities and Career Guidance. These data serve as a basis for fostering all decisional processes and activity planning, with a particular attention for all training activities and services targeted at students. Moreover, AlmaLaurea operates for facilitating and creating more equal conditions for young people to access both the Italian and the international labour market.

The surveys on graduates' employment conditions and graduates' profiles are published every year from 1998, and the final results are presented at many regional, national and international conference and seminars.

Each report is available as pdf document, including tables, graphs and comments to the data analysis. All the data can also be consulted through an on-line platform which allow the user to select from many search criteria: each university, faculty, degree course and class of degree, graduation mark, marks obtained in single exams, regular attendance, social class, work experiences made during studies, and much more. Interested persons have also the opportunity to watch and listen the presentations at the annual meetings of AlmaLaurea and see everything relating to them.

SUMMARY

The level of innovation that characterizes the experience of AlmaLaurea as good practice is manifold:

- It provides useful and detailed information on graduate employment conditions in the short and medium term, and a complete description of graduates' profiles;
- The methodology for data collection and analysis is certainly established, having been developed and perfected over 30 years;
- the initiative is institutionalized and its outputs are largely used by the relevant stakeholders;
- beyond the access to data and information about graduates' employment, it provides a database of graduates' curriculum which is accessible by the companies looking for skilled workers.

Assolombarda: Report on the Companies Demand for Competences



EXAMPLE PROVIDED BY CRISP

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	Regional
Forecasting	No
Demand / Supply side focus	Demand side
Career guidance suitability	Yes

Developer	Assolombarda- part of Confindustria (Italian Entrepreneurial Association)
Website	http://www.assolombarda.it

BACKGROUND OF THE LMI

The project was created by Assolombarda- part of Confindustria (Italian Entrepreneurial Association) for the Province of Milan - and it is a recognition on most required skills after the high-school degree in mechanical, electronic, computer and administrative studies.

NEEDS FOR THIS LMI

- Basic problem: it is difficult to identify the real needs of companies in the demand for labor.
- The aim is to orient the training according to the real needs of the companies. Another goal is the encouraging of collaboration between businesses and schools to enrich the educational offer and the development of learning skills
- The actors: many technical institutes and many companies in 10 different provinces
- Involvement of potential stakeholders: The survey was initiated by Assolombarda in 2011, as last step of a trial carried out in few years. In 2012, Confindustria Lombardia has promoted the survey also at all other local associations in the region, in order to increase the response rate of enterprises and enhance the relevance of the information gathered. Spread by Federmeccanica for member companies throughout the country, it has been the starting point of a research and experimentation conducted by companies and schools in 10 provinces Italian (Lombardy, Brescia, Milan and Varese), who used the 2011 Report to proceed with the implementation of training programs in school-work for the development of skills.

DESCRIPTION OF THE LMI

The questionnaire provides for each professional profile a list of competencies that describe in detail the content of the work of the major professional positions (mechanical, electronic, computer, chemical and administrative addresses). Different skills have been linked to various elements of the work process. The study conducted had also the merit to clarify the description of the skills and to arrive at a unique definition of "transversal" skills (communication, interpersonal, organizational) for all the addresses.

The listed competencies are 30-35, with 40 skills distributed in the following "classes": managing information, managing resources, managing relationships and behaviors, managing problems. This rationalization of the common skills allows a meaningful comparison even between different profiles.

Although there was limited to 5 addresses mentioned above, the 94 participating companies are representative of almost all productive sectors.

The data presented comes from the surveys: 321 companies responded to the survey in 2012 (to September 30), and 477 questionnaires were completed (in 2011, 283 companies had participated, with 545 questionnaires, most of which did not include in the new edition profiles considering his application already well represented by previous year). Companies are therefore increased by 13.4%. The answers are distributed mostly in the North-West, with a clear preponderance of Lombardy and in it of Brescia and Milan. The other areas are unfortunately still poorly represented. The Center-South, out of a total of 35 companies saw a particularly significant presence in only two areas of the Centre: Ancona (12) and Rome (with Frosinone, Rieti and Viterbo) (14).

USE OF LMI

We can diversify the use of this LMI depending on the different actors that use it:

Enterprises:

- the comparison between the importance that some skills have and the importance attached to them by the media businesses can highlight the distinctive features of "working with us": this is useful for recruitment and selection, but also to better explain, inside and outside, the professional values that the company pursues;
- the availability of a repertoire of skills recognized and shared by the other firms in the industry is a good starting point to achieve (for companies that do not have them already, and in particular for SMEs) a corporate system of staff evaluation, avoiding costs and inefficiencies of evaluation systems too much personalized;
- the evidence of most relevant skills for different company' profiles can support the planning of corporate training and development of staff.

Schools:

- The connection between competencies and skills required by businesses formed by the education system allows the reading of data highlighting the constants (i.e. avoiding excessive contextualization of competence on a single company or single company profile) and therefore offering a good starting point for review or enrichment of the curriculum;
- The results are also a starting point for planning teaching skills, for the enhancement of the experiences of combined school and the organization of the curriculum to address. It is

possible to derive useful indications for the common area (especially considering the common skills);

- Highlighting the skills required for different business profiles allows a practice of vocational guidance for students based on optimization, as well as the personal proclivities, skills actually developed in the course of the academic experience and personal;
- The linkage of the educational offer to the possible use of the skills in the subsequent job allows a more targeted promotion of the school on the land and in the families, improving the ability of recruiting new students.

Policy makers:

The availability of this survey of the application of skills enables enterprises to promote better coherence between the education system and labor market policies, in particular:

- By describing the planning of the educational, both for the system and for the system leFP and for continuing education;
- Defining priorities for the so-called area of flexibility for schools in relation to the real needs of the productive system , reducing the risk of joining the alleged vocations local content;
- Promoting the adoption of training methodologies centered on skills training;
- By defining more precisely the evaluation criteria for the funding of training activities, especially with regard to the requirements analysis, the definition of objectives (to be expressed in terms of skills - lens), the training methods, evaluation of results;
- When attaching the enhancement of key skills, which are essential factors for the development of the economy, the political incentives for enterprises and SME support;
- Basing on the development of key skills policies to support youth employment.

The main output is the report, distributed to schools and institutions. The same are therefore invited to moments of dissemination and discussion, open to all. The project has been started in 2011, and the periodicity is annual. About the fruition modality, the report is distributed to schools and institutions. The same are therefore invited to moments of dissemination and discussion, open to all.

SUMMARY

The advantages that the research may lead to the activity of companies and schools in the area can be summarized as follows:

1. adherence to the language with which companies identify professional needs;
2. reading summary for address which facilitates the connection with education;
3. the ability to highlight the skills of a specific professional profile with advantage for career guidance and recruitment;
4. being a good starting point for teaching programming, starting with the school-work and organization of the curriculum to address;
5. the offer of a knowledge base of training needs of businesses, all levels of intervention.

Baanbrekend Randstad

EXAMPLE PROVIDED BY: KWIZ



Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	National and regional (all regions)
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Baanbrekend
Website	http://www.randstad.nl/werkgevers/onze-hr-diensten/hr-oplossingen/publieke-private-samenwerking.xml

BACKGROUND OF THE LMI

Baanbrekend is an institution, a co-creation between departments 'Social Services' of municipalities and Randstad (a temporary employment agency) and is therefore a public-private combination. Baanbrekend is regional but exists through-out the whole country.

NEEDS FOR THIS LMI

Baanbrekend addresses current needs. The objective is to bring demand and supply (people with a social welfare payment) in the labourmarket together through matching and coaching people to new jobs. The target is to lead people within 3 till 6 months to a new job (fulltime, parttime or temporary). There is need to help people with a social welfare payment to get a job and to meet with employers to inform about the possibility to hire people who cannot work with 100% productivity and get funding in return. Baanbrekend acts in line with the national policy to reduce people with a social welfare and diminish the unemployment in the region.

DESCRIPTION OF THE LMI

Baanbrekend is a co-creation between departments 'Social Services' of municipalities and Randstad (a temporary employment agency) and is therefore a public-private combination (50/50 division of people working for the municipality and for Randstad). The Social Services have knowledge about social legislation and Randstad about jobs and guiding people into new jobs. The target group is people receiving a social welfare payment with a short relation to the labourmarket (people must be mediated to a job within 3-6 months of receiving the social welfare payment). Baanbrekend is not only using the Randstad-database for vacancies, but also vacancies of other temporary employment agencies and big companies in the region. Therefore, Baanbrekend covers almost the whole labourmarket.

For employers there is the opportunity to cooperate with Baanbrekend to help with the employment of people that are not 100% productive as some sort of investment. For the period the employee is not 100% productive the employer receives a payment to compensate for loss in productivity.

USE OF LMI

This practice helps many jobseekers to get a job. As soon as people request for a social welfare payment, Baanbrekend will contact those people. Baanbrekend will screen all the participants, give them a workshop and appoint them to a contact person. Then a match with a job is the goal. Employees of Baanbrekend have knowledge about social legislation, the labourmarket, jobseekers and jobs. In one year Baanbrekend guided 1500 people to a job. In the Drechtsteden-region the government saved 9,5 million euros on social welfare payments because of this practice.

Municipalities and Randstad are mostly involved in the practice, but by providing vacancies also other temporary employment agencies are involved. Randstad has their own record of vacancies, but also records from other temporary employment agencies will be used. Also, Randstad keeps own records about the occupational background of the jobseekers.

More and more municipalities cooperate with Randstad to start departments of Baanbrekend and now more than 13 municipalities are cooperating with Randstad and have new departments of Baanbrekend.

People from the European Commission visited Baanbrekend and they are thinking about implementing this concept in other countries.

SUMMARY

This is a good practice because of the knowledge and expertise of vacancies, jobseekers and coaching. The practice has access to local legislation, temporary employment agencies and potential employees.

This practice can easily be implemented in other regions in Europe, because there are municipalities and temporary employment agencies everywhere. The basics of this practice are easily transferrable to other regions.

Pastiel Partnership

EXAMPLE PROVIDED BY: KWIZ



Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	Regional
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Pastiel
Website	http://www.pastiel.nl

BACKGROUND OF THE LMI

Pastiel has coaches to get jobseekers ready for a job through screening and training. For employers Pastiel offers intensive and personal service to map the demand for new employees. Pastiel was established in 2013 and addresses both the supply and demand-side of the labourmarket. The practice covers almost half of the province of Friesland.

NEEDS FOR THIS LMI

The objective is to bring demand and supply (people with a social welfare payment) in the labourmarket together. Pastiel wants to help people with a social welfare payment to get a job and to meet with employers to inform them about the possibility to hire people who cannot work with 100% productivity on account of a funding from the government ('socially responsible entrepreneurship'). The practice is related to policy in the way that they reduce the amount people with a social welfare payment (government savings) and diminish the unemployment in the region.

DESCRIPTION OF THE LMI

When people want to get social welfare payment (when they lose their job), the municipality redirects those people to Pastiel. So every person who just lost their job, requesting for social welfare payment, is redirected to Pastiel. Pastiel makes those people do production work (in return for the social welfare payment they receive) for a few weeks and meanwhile they get help to find another job or stage (this policy is called 'Work first'). This will keep those people in a workrhythm and it increases the strength of their social network, until they find a new job. These aspects of the practice increases the chances of success in the labourmarket. For employers there are also benefits. Because of the policy 'Maatschappelijk Verantwoord Ondernemen' (which means socially responsible entrepreneurship) the employers hiring handicapped people or other people who cannot work with 100% productivity only have to pay per performance, municipalities will add salary to the level of minimumwage.

Pastiel will help a jobseeker through a coach to map people's skills and talents. Pastiel has coaches to get jobseekers ready for a job through screening and training. The practice has a test- and training centre to get the jobseekers ready for a job. Via local temporary employment agencies Pastiel tries to find good jobs for the jobseekers. For employers Pastiel offers intensive and personal service to map the demand for new employees.

Pastiel works together with 13 neighbouring municipalities. They also work with the local temporary employment agencies to get access to most of the vacancies available. They cooperate with the social workplace Empatec for people asking for social welfare payment to do production work. Pastiel uses own data, data from municipalities and from temporary employment agencies. The data exists of vacancy data and data about people getting social welfare payment.

Pastiel addresses current and future needs by letting the people who are looking for work do production work and screen and train to get them a durable future job.

USE OF LMI

In 10 months Pastiel helped over 350 people to get a job. Most people are positive that Pastiel keeps people who are requesting for social welfare payment in a normal rhythm of work. Besides positive reactions some there are some negative about the practice. People don't think it's fair people have to do production work 32 hours a week and receive no more than the social welfare payment. Another point of attention: shouldn't those people do work that benefits the society instead of doing production work?

SUMMARY

We consider it a good practice because Pastiel tries to help jobseekers to have better opportunities in the labourmarket. They don't just match information of the demand-side and the supply-side, but they actively try to improve the supply-side of the labourmarket by keeping the jobseekers in a work rhythm, connect them to new people and train them.

It is relatively easy to introduce the practice in other regions in Europe, since the basics of this practice aren't necessarily focused on one specific region.



EXAMPLE PROVIDED BY: KWIZ

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	Regional
Forecasting	Demand side only
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	UWV WERKbedrijf, SW-bedrijven Pantar Amsterdam, AM-Groep and several municipalities
Website	http://www.wspgrootamsterdam.nl

BACKGROUND OF THE LMI

Werkgeversservicepunt Groot-Amsterdam (from now on: WSP) provides up-to-date information about the Dutch legal and regulatory system and the labourmarket to find durable matches between employers and jobseekers. The practice covers the region of Amsterdam and surrounding municipalities. The website is in Dutch, but the promotion is partly in English.

NEEDS FOR THIS LMI

The objective is to improve good and durable matches between jobseekers and vacancies by providing up-to-date detailed and reliable information of the jobseekers and the labourmarket. Also, WSP will train people before entering their new job if necessary.

Employers can now go to one univocal servicepoint for their questions related to the regional labourmarket. For jobseekers there is need for jobs they fit in. For employees there is need for employers who fit in their organization without spending much time and energy in looking for this person.

The practice is indirectly related to a policy, WSP tries to re-integrate jobseekers into a new job and this way minimize unemployment. WSP does promote 'Maatschappelijk Verantwoord Ondernemen', which can be translated to 'socially responsible entrepreneurship'. This means that employees can get funding for hiring people who cannot work with 100% productivity.

DESCRIPTION OF THE LMI

WSP is a cooperation between UWV WERKbedrijf, SW-bedrijven Pantar Amsterdam, AM-Groep and several municipalities. WSP is therefore a univocal servicepoint possessing a lot of knowledge and skills. WSP has a dataset of the jobseekers and has employees who intermediate between employers and jobseekers. Through personal contact and screening they bring together the demand-side and

supply-side of the labour market. The people working for WSP attend several business meetings to get information from within the different branches.

WSP provides free advice, free services of a jobcoach, up-to-date information about trends, numbers of the regional labour market per occupational sector and training for jobseekers before entering their new jobs. WSP has data of jobseekers in the region they work in. The practice also provides up-to-date information about the Dutch legal and regulatory system and the labour market to find durable matches between employers and jobseekers.

When you assign at WSP as employee you will be assigned to an accountmanager who maps the demand of this employee through a personal meeting. WSP will then make a selection of the jobseekers and matches one jobseeker to the employer. If necessary, a jobcoach trains the jobseeker before entering the new job to contribute to a durable work relationship.

The practice analyses current skill needs and gaps in the region. Also future predictions about the demand-side of the labour market are addressed and WSP gives advice about how to prepare for changes in the future labour market.

USE OF LMI

The mismatching on the labour market in the region Groot-Amsterdam (the initial problem) is diminished. Employer and jobseeker can find each other better through this practice.

Clients are very happy about the good personal service of WSP. The results will show how good the practice is.

SUMMARY

This practice is good because it can provide an overview of the complex regional labour market. The practice invests in obtaining up-to-date knowledge about the labour market. Also this practice provided free counselling and services of an accountmanager to improve durable matches between employees and jobseekers.

The practice can easily be implemented in other regions in Europe. A service point like this is useful for any European region. Because WSP doesn't use a lot of quantitative data, comparison with other European regions is hard. The practice is really region-focused and people working for WSP gather mostly qualitative knowledge.

Careers Logistics' by Careers South West (CSW) Limited

EXAMPLE PROVIDED BY MARCHMONT OBSERVATORY



Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	Regional
Forecasting	No
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Careers South West Limited
Website	

BACKGROUND OF THE LMI

CSW are making high quality labour market intelligence available to young people to support their informed careers guidance and to help ensure that young people are directed to the right opportunities. The tool is also being used by the large network of careers advisors.

NEED FOR THIS LMI

The UK Federation of Small Businesses report (2012) Back to Work identifies that 'each year SMEs take on 1.3 million unemployed and disadvantaged people, large businesses hire less than 130,000 and 16-24 year olds are more likely to move into work in an SME.

The Nothing in Common report (Education and Employers Taskforce/UKCES 2013) demonstrates the gap between jobs projected to be available in 2020 and those chosen by young people. Careers Logistics shows how their choices compare to projected vacancies in 2020 and supports the removal of barriers to access. Ofsted review on Careers Guidance in Schools (2013) identifies a the lack of provision of careers guidance and a lack of labour market awareness and the need for this to be addressed to meet future skill demands.

The National Careers Council's report An Aspirational Nation identified that: "A culture change is needed in careers provision for young people and adults in order to address the mismatch of skills shortages and high unemployment." And that: "Studies have repeatedly shown that young people's aspirations are often misaligned with the opportunities presented by local labour markets." The report proposes that what is needed is: "Accessible relevant and high quality labour market intelligence/information." In order to: "Give young people and adults the opportunity to make their skills available to the labour market; and ensure that those skills are used effectively at work."

DESCRIPTION OF THE LMI

Careers Logistics is CSW's response to this challenge. By making high quality labour market intelligence available to young people they will have accurate and informed careers guidance and this will benefit employers and the economy by ensuring that the right young people are directed to the right opportunities. The outcomes that will be improved are:

- Sustainable choices
- More young people in Employment Education and Training
- An understanding of the potential return on the young person's investment in education and training
- Avoidance of sunk costs to education and training providers
- Better alignment of skill demands and communication of these direct to the labour supply

Annually CSW supports over 140,000 young people to make informed decisions about their future. In a fast changing economy new jobs appear and others become obsolete. It is essential to provide effective careers guidance, sustainable choices and career planning based on accurate, up-to-date LMI that is accessible, including what opportunities may, or may not, be available in the future and the availability of the appropriate training route. This will ensure that the gap between the skills needs of employers and the high level of youth unemployment is closed.

Adviser interventions are funded by Local Authorities, individual schools and colleges and the Skills Funding Agency for Adult interventions. CSW Investment in Careers Logistics amounts to £200,000.

The 2 main parts of the site are 'Plan My Career' and 'Find A Job'. As a result of user feedback they have started the development of additional sections including one for graduates one for employers and one for professional Advisers.

USE OF LMI

CSW is working in partnership with Cognisoft to develop Careers Logistics, a tool that brings together a wide range of sources of labour market information (automated feeds from reliable sources) and they have integrated with the National Apprenticeship Service and Universal Job match (Universal Job Match is the vacancy system for Job Centre Plus (PES). The decision engine translates information into intelligence that advisers can use directly with individuals. Longer term it is CSW's intention that intelligence generated could be available to individuals without the mediation of an adviser

This is a web based guidance tool which shows at a glance the chances of securing a chosen occupation in a selected geographical area. Employers can directly input their vacancies and after quality assuring them they are uploaded onto the site. The intelligence the tool generates enables them through their close links to learning providers to inform the planning and design of training and education provision e.g. identify gaps in the system.

Their contact with young people enables them to challenge the perception of the opportunities available and raise their aspiration and awareness of what will be available at their point of entry to the labour market. Information is presented in a narrative and illustrative way so it is understandable and can be applied to the individual's circumstances. It also presents to them alternative careers and their chances of securing jobs in these careers, anticipated trend data for the

future prospects in those careers, likely salary and the cost of training. This is based on live information which is regularly updated.

A team of staff will, in addition to the bulk information uploads, canvass employers on an on-going basis to ensure that local labour market information is accurate and up-to-date. This reduces the likelihood of sunk costs where young people could be trained for jobs that either won't be available or may not exist at all.

Internal beta pilots of the system have been undertaken and action taken as a result of the findings.

All CSW Advisers have now been trained in the tool and are undertaking an accredited module on LMI which requires in depth study of a particular sector or local economy which they will utilise to further inform the system. A Reference Group has also been established with representatives across the Company to continue to inform future developments. They are about to commence pilots with external partners including Job Centre Plus (the UK PES) and school groupings.

The Government withdrew funding for careers guidance for young people a few years ago and also for work experience activities. In response, CSW devised a costed service to be delivered to schools and colleges and has developed a range of products to reduce the costs of provision and make it more efficient. Careers Logistics is one of these products.

Challenges have included the assessment of the accuracy and validity of data and the interpretation of the results. This has been overcome by using trusted data sources, mainly government sources. Some information became so complex it would have been misleading e.g. costs of pathways into careers. Some careers have multiple pathways all with different associated costs and criteria which could become demotivating to individuals or possibly deny them access. This was overcome by calculating an average cost for each qualification level and permitting individual access through mediation only.

Sustainability of the system was a key element for CSW with reductions and restraints on budgets becoming more severe. This has been alleviated by using automated feeds and integration of other systems, and linkage with other government initiatives such as the *LMI For All* project funded by UKCES (the UK Commission for Employment and Skills). This project aims to bring together the work of all Sector Skills Councils who are working on projections in terms of work and skills that will be needed/available in the future.

Monitoring information is currently being collected with a full evaluation due in the Summer. Each expected outcome will be measured (see above) and CSW will utilise the activity survey to assess the impact of the use of Careers Logistics on the change in customer choices, the level of sustainability of the choice based on projection information, and the impact of the information gathered on the provision of education and training opportunities.

Evaluation methodology will include:

- Focus Groups
- Benchmarking
- Observation of the use of the tool
- And the exploration of assessing the social return on the Company investment

As part of the Careers Logistics development, CSW is participating in the UKCES (United Kingdom Commission for Employment and Skills) *LMI for All* Project. LMI for All is a data tool that the UK Commission for Employment and Skills is developing to bring together existing sources of labour market information (LMI) that can inform people's decisions about their careers. This 'big data' project involves the development of freely available tool / data repository and to encourage open use of this by application developers and websites which can bring the data to life for varying audiences.

The data tool will give access to some of the most robust LMI from national surveys/sources therefore providing a common and consistent baseline for people to use alongside wider intelligence. The data tool has an access layer which will include guidance for developers about what the different data sources mean and how they can be used without compromising quality or confidentiality.

SUMMARY

The new LMI tools developed by CSW will both:

- Support Careers Adviser's to support individuals into learning (education and training) and work through the exploration of labour market information and its application to their individual circumstance.
- Support young people to address the mismatch between what careers individuals are choosing and the actual skills and careers that will be available. To bring together all the relevant labour market information in one place. To support individuals to make sustainable career choices, making best use of existing information.

They have discovered that any tool cannot be 100% accurate in relation to predictions nor have 100% of the information and therefore access to the information needs to be mediated by a professional vocational guidance adviser. The main purpose of the tool is to guide an individual, stimulate discussion, support the removal of barriers to access, raise aspiration and bring together a range of complex information in one place in a format of use to the end user.

Feedback from Partners (employers, schools, representatives from Local Enterprise Partnerships) found:

- 80% Careers Logistics is a new concept.
- 90% said it would be useful for their work.
- Respondents said to ensure to link to Local Enterprise Partnerships to influence training supply
- 15% said enable employers to directly upload vacancies, something they have built into the system.

The pilot phase user's feedback is:

- 70% say the tool has influenced decision-making
- 50% had been shown something they had not seen before
- 75% had raised awareness of options to young people

THEME 6: COOPERATION & LABOUR MARKET ACTIONS

Introduction

This group contains three LMI examples, one from Sweden, one from Netherland and one from United Kingdom. All examples focus on the collaboration of all important actors in the labour market but in a different way and in a different level of complexity. One LMI represents very unique approach enhancing collaboration between schools and business by mediating the contacts between schools and different professionals willing to share their experience with the pupils/students on the voluntary base. Second LMI is the comprehensive multiannual programme aiming at increasing the competitiveness of the region by strengthening the knowledge based economy. Human capital agenda represents the important part of this programme and one of it's goals is improving the cooperation between schools and the business community. Third example focuses on skills and provides information about the underpinning LMI needed for working out a high-quality Skills Plan that sets out the labour market opportunities and challenges of the Solent area and highlights the strategic priorities and actions.

Marchmont Observatory's approach to developing a LEP level "Skills Plan"



EXAMPLE PROVIDED BY MARCHMONT OBSERVATORY

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	Regional
Forecasting	Yes
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	Marchmont Observatory
Website	http://solentlep.org.uk/

BACKGROUND OF THE LMI

The current UK Government strategy stresses the importance of localism: the idea that local people and businesses know best what is needed in their area. This move to localism has resulted in Local Enterprise Partnerships – locally-owed partnerships between businesses and local authorities - being set up to play a central role in determining local economic priorities and undertaking activities to drive economic growth and the creation of local jobs. One new responsibility for LEPs is the requirement on LEPs to consult with partners to agree a Strategic Economic Plan which will be used to bid for a share of a new Local Growth Fund, providing LEPs with at least £2billion funding each year between 2015 and 2020.

In 2013, the Solent LEP commissioned Marchmont Observatory to produce a standalone Skills Plan setting out the overall strategic priorities for skills and providing an investment framework that could be used to influence concurrent negotiations for the City Deal, the European Union Strategic Investment Fund (SIF)¹⁴ and the Local Growth Deal. The Skills Plan process included the assembly and interrogation of the skills evidence base drawing on local and national statistics and research as well as informed opinion gathered at consultation events and conferences. The research and planning process was overseen by the Employment and Skills Board for Solent and a special Steering Group convened for the process.

NEED FOR THIS LMI

LMI was needed in order to

- sets out the labour market opportunities and challenges of the Solent area;
- highlight the strategic priorities and actions;
- allows national and European funding to be effectively targeted on local priorities; and
- can be used as a basis for ensuring that publicly funded provision and private investment in skills, reflects local labour market requirements.

DESCRIPTION OF THE LMI

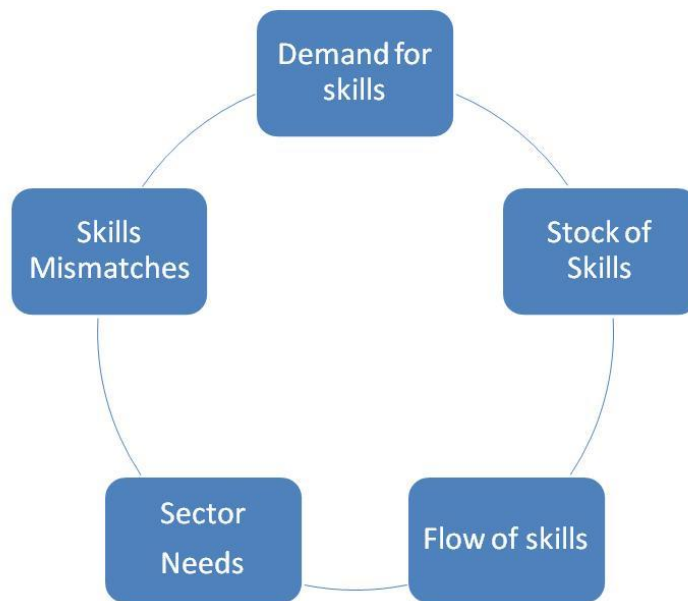
The Evidence Base Report providing the underpinning LMI for the Skills Strategy drew together:

- A review of latest policy developments;
- Analysis from a wide range of data sources, including forecasts from Working Futures and Oxford Economics, separately commissioned by Solent LEP, and data on learning provision made available by the Skills Funding Agency (SFA).
- A range of reports on key sectors which draws on evidence from Sector Skills Councils (SSCs) and UKCES.
- An online survey which secured responses from thirty four stakeholders, including businesses, learning providers, business support agencies and Local Authorities and interviews with eight key partners.
- A series of consultation events, working groups, and meetings with Solent Further Education (FE) colleges, representatives of PUSH local authorities with responsibility for skills and employment, meetings of the Solent Employment and Skills Board (ESB) and a meeting with Association of Learning Providers for Hampshire and the Isle of Wight (ALPHI).
- This evidence report also draws on the extensive consultation that underpinned the development of the *European Union Structural and Investment Funds 2014 - 2020 Draft Strategy*.

The evidence base looked at:

¹⁴ £43 million over a 6 year period.

Figure 15: Evidence based approach



Skills and employment forecasting formed an important component of the work since determining future jobs and skills priorities requires an examination of predicted changes across different occupations and sectors. The Solent Skills Plan evidence base drew upon the latest Working Futures forecasts, covering the period from 2010-2020. As with all projections and forecasts, the results are regarded as **indicative of likely trends** and orders of magnitude given a continuation of past patterns of behaviour and performance, rather than precise forecasts of the future.

The Solent LEP Skills Plan used forecasting information in presenting a picture of:

- Projected changes in the industrial structure – exploring projected changes in total employment for the area overall and by sector including prospects for 'priority sectors' (identified by the LEP).
- Projected change in employment by qualification level – exploring to what extent the general movement towards higher-level occupations will generate rising demand for higher levels of skills and qualifications.
- Exploration of future demand for skills differentiating between expansion and replacement demand across occupations. Expansion demand reveals where new jobs are anticipated and replacement demand is the demand for labour which arises due to retirement and thus which requires jobs and skills to be replaced (because of retirement), even where the sector is not in expansion mode. Expansion and replacement demand interact to generate a 'net requirement' for each occupation.

Forecasting models of labour demand were complemented by official population projections – predicting the size of the working age population - and an analysis of residents' qualification attainment at various stages or route-ways through the education system (i.e. from primary to

Higher Education). This exploration of the labour supply 'pipeline' suggested that the local area may struggle to meet the demand for highly-skilled workers solely from resident workers.

USE OF LMI

While the utilisation of the LMI provided by the Skills Strategy process has not been formally evaluated, feedback from LEP personnel and observations by the research team suggest that the process has raised awareness of the strategic implications of known local phenomena. For example, while local stakeholders were aware of that there were pockets of under-performance at primary and secondary school level (particularly in urban levels) the broader implications of this in meeting future labour demand (for higher skills) had not fully been explored, in particular for housing and transport.

The evidence base and emerging strategic priorities were validated through fairly extensive consultation with local partners. This validation by partners was crucial in 'getting everyone on the same page' and achieving a shared understanding of the issues. This shared understanding is crucial in securing a collective response (i.e. priorities for investment).

The need to agree investment priorities for an identified budget provided momentum and focus to the work.

SUMMARY

The (NEW) SOLENT sub-region has a degree of responsibility for the provision of adult skills provision and the matching of the demand and supply of skilled workers. To support this the new Local Enterprise Partnership needed a standalone Skills Plan setting out the overall strategic priorities for skills and providing an investment framework that could be used to influence concurrent negotiations for a number of new developments including the allocation of European Union funding (ESF and ERDF) and also to help build the case for bidding for UK government funding to promote growth and social inclusion.

The Skills Plan process included the assembly and interrogation of the skills evidence base drawing on local and national statistics and research as well as informed opinion gathered at consultation events and conferences. The research and planning process was overseen by the Employment and Skills Board for Solent and a special Steering Group convened for the process.

This is a good example of a sub-regional strategic approach to tackling the need for accurate skills intelligence to enable forecasting and strategic planning.

Transfer

EXAMPLE PROVIDED BY: ARBETSFÖRMEDLINGEN



Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	National
Forecasting	No
Demand / Supply side focus	Supply
Career guidance suitability	Yes

Developer	Transfer (non-profit organisation)
Website	www.transfer.nu

BACKGROUND OF THE LMI

Transfer is a network that provides lecturers from different businesses and occupations, providing inspiration and insights, and offers them to schools free of charge.

NEEDS FOR THIS LMI

The educational system, that in many cases lacks a platform for collaboration between schools and businesses, is via Transfer provided with direct and customized (i.e. the teacher or careers consultant chose which profession their pupils should encounter) LMI.

DESCRIPTION OF THE LMI

Professionals from business, industry and enterprises sign up at the Transfer web site to become lecturers. Transfer contacts its network of schools to organize for the speakers to teach in classes about subjects such as "How to start a company", "What is marketing about?" or "This is how the Internet works". Transfers lecturers come from different industries and represents many professions; business leaders, economists, engineers, marketers, entrepreneurs, human resource managers, etc. All speakers do this voluntarily and alongside their regular jobs. Transfer provides the platform (a web-site) for organizing the knowledge transfers and connecting the members with schools.

Transfer has more than 3000 lecturing members in currently four regions; Stockholm-Uppsala, Gothenburg/Western Sweden, The South/Oresund and Mälardalen/Central Sweden. Over 400 cooperating schools have joined the network and since the start, schools have ordered more than 18,000 lectures from Transfer

Transfer is a non-profit organization.

USE OF LMI

For schools and career counsellors this project is very welcome, as it is not only complementary to but also adjusted the ordinary schooling and as the resources is free.

SUMMARY

Transfer delivers LMI in a very direct and simple fashion and is frequently used . The model is very simple and hands-on, and could probably be used in many countries without too much modification. Hence, Transfer should be considered as a best practice.

Brainport Human Capital Agenda / Brainport 2020



EXAMPLE PROVIDED BY: KWIZ

Occupation based tools	Sector based tools	Data & monitoring tools	Skills profiles & matching tools	Cooperation/ Actions
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Territorial dimension	Regional
Forecasting	Yes (medium to long term)
Demand / Supply side focus	Demand and supply
Career guidance suitability	Yes

Developer	
Website	http://www.brainport2020.nl

BACKGROUND OF THE LMI

This practice is a multi-annual program with the main objective to make the south-eastern part of the Netherlands frontrunner of the international knowledge-based economy. The practice covers the region south-east Netherlands. The Human Capital Agenda and website are in written in Dutch. The practice addresses the supply-side as well as the demand-side of LMI.

NEEDS FOR THIS LMI

This practice is actually a multi-annual program with the main objective to make the south-eastern part of the Netherlands frontrunner of the international knowledge-based economy (in the divisions People, Technology, Business and Basics). Lots and lots of companies, schools and municipalities are involved. One of the objectives is to match the supply-side with the demand-side of the labour market. There is more and more need for beta-schooled people in this area to become frontrunner of the international knowledge-based economy, so the Brainport Human Capital Agenda tries to improve the cooperation between schools and the business community and is stimulating schools to promote beta-studies. The practice is also trying to get a flexible working labour market with a durable employability of the working population (lifelong learning to achieve better matches in the

labour market). The main goal is to gather reputation and knowledge and make the south-eastern part of the Netherlands economically wealthy. The practice is indirectly related policy to avoid shortcomings in the labour market. Also, this practice will stimulate the Dutch economy.

DESCRIPTION OF THE LMI

The practice is a multi-annual program to improve network relationships between the 6 regions and between the industry, schools, knowledge institutions. The Brainport 2020-commission coordinates, performs and monitors the Human Capital Agenda. There is also regularly a meeting with the directors of the 6 regions to prepare policy related to the Brainport topics. There is also a Taskforce EU Brainport 2020 to link Brainport to European networks. At last there is a commission called 'Labourmarketapproach South-East Netherlands'. This commission is responsible for the objectives related to the labourmarket.

The practice sets targets and goals, creates vision and plans how to achieve those goals. The Brainport 2020 commission supervises through the 'labourmarketapproach South-East Netherlands' commission the local institutions that are responsible for achieving the goals. This practice investigates the opportunities for receiving fundings from the EU. The government has appointed 9 sectors that have economic importance. The industry, knowledge institutions and the government have signed innovationcontracts to try to get 40% beta-educated people (out of all graduated people) in 2020, so much effort is put in getting high-schooled employers to the area and stimulate beta-studies among scholars.

The practice addresses future needs, because this practice is a multi-annual program. There is a future need for more technical educated people, better contacts and links with the EU and other European economy-regions. Therefore, the practice is transregional within the 6 regions and transnational by involving in EU-projects.

The practice has the following datasources: ROA (2011), Bureau Louter (2010), topsectoren.nl: rapport 'Naar 4 op de 10'.

USE OF LMI

The Brainport 2020 commission is responsible for quality control and evaluation. In a report describing progression so far is told that the region is climbing the list of top economical regions of the world due to excellent knowledge infrastructures. The economic growth in the area was last year twice as big as in the rest of the Netherlands.

Many stakeholders are involved in achieving the goals. The most important stakeholders involved: Brainport International Community, Brainport 2020 commission, Ministry of Economic Affairs, labourmarketapproach SE Netherlands, EU, education sector, Platform Beta Techniek, Brainport International Community. Concerning the focus on promoting beta-studies, so far it looks like more students than before choose a beta-study.

SUMMARY

The practice is good because of the focus on progression, cooperation, growth, improving the labour market and knowledge.

The practice can't be implemented elsewhere easily, because the practice is specifically focused on the south-eastern part of the Netherlands. In this region many stakeholders, schools and companies have specified technological knowledge in which the regions distinguishes oneself of other European regions.