
Pilot employer survey on skill needs in Europe – Pre-test

Measurement concept and questionnaire at a glance

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Agenda

Terminology

Selection of countries

Selection of sectors

Selection of occupations

Generic tasks and skills

Occupation-specific tasks and skills

Background questions

Terminology

- Tasks, skills and occupations are the key terms of the survey with „tasks“ being the central term, the central category.
- 'Generic tasks' capture the usage of generic skills, and are one of the prime concepts of the pilot survey. They comprise the entity, occupation-specific tasks depict parts of an occupation.
- Whereas each generic task equals the generic skill in use, each occupation-specific task requires a different set of occupation-specific skills. Generic and occupation-specific tasks (and skills) refer to and address different levels of detail.

Selection of countries - Criteria

Proposal:

Finland, Germany, Ireland, Poland, Spain

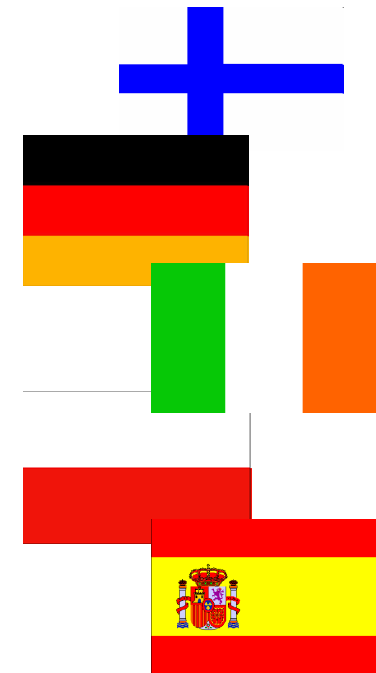
Criteria:

Geographic distribution and time of accession to the EU

Size of labour force

System of vocational education and training (VET system)
and social model

Practical fieldwork aspects,
including establishment population



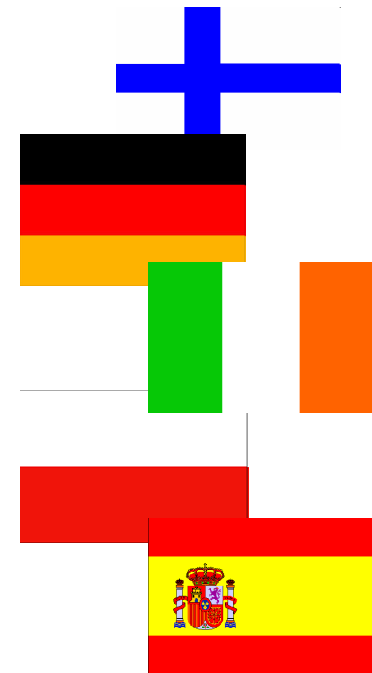
Selection of countries – Specification and Justification

Proposal geographic distribution and time of accession to the EU:
Mix of “old” and “new” countries in the EC and regional variety

Proposal size of labour force:
Mix of different sizes

Proposal VET systems
Coverage of different VET systems

Proposal practical fieldwork aspects:
Availability of certain establishment population



Selection of sectors - Criteria

Proposal:

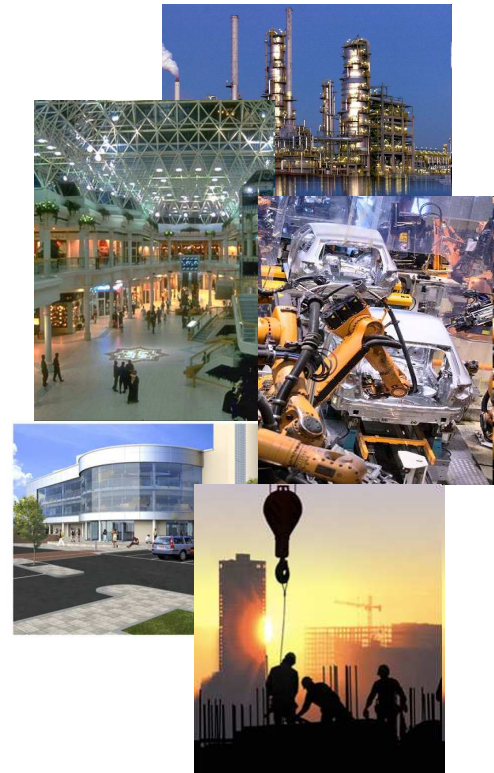
16 sectors

Criteria:

Dynamism and innovation of the sector

Proper enterprise population

Mix of skill levels



Selection of sectors – Specification and Justification

NACE Rev. 2 2-digit code	Innovation ^{*)}	Size/Establishment population	Skill levels ^{*)}
29	above-average in innovation	small	Mainly medium skilled employees
41	below average in innovation, high in some sub-sectors (green technol.)	medium	Mainly medium skilled employees, only few high skilled (engineers, architects)
47	average in innovation	large	Mainly medium skilled employees, only few high skilled, slightly above average low skilled employees
62	Very high above-average in innovation	small	above-average percentage of high skilled employees (computing professionals)
64	slightly above-average in innovation	small	Mainly medium skilled employees, only few low and high skilled
84	below average	medium	Mainly medium skilled employees, above -average percentage of high skilled employees, only few low- skilled employees
86	average in innovation	medium	Mainly medium skilled employees average percentage of low and high skilled employees

**) For the rating of innovation and skill levels we analysed the IAB establishment panel 2009, including 16.000 german establishments. The questionnaire includes 4 questions about development of services and products. We built an index of these 4 questions and compared the sectors with the whole economy. For the rating of the skill levels we compared the percentage of low, medium and high skilled employees in each sector with the whole economy.*

Selection of occupations

EU-27

NACE Rev.2 (rough Rev.1 correspon- dence)	ISCO88 3-Digit	Choice		Employees 2000	Employees 2003	Employees 2006	Develop- ment 2000 to 2006	employees 2009	occupational group/all occupational groups in % (2009)
29	all		all occupational groups					2.909.520	
(34)	828	X	Assemblers	279.917	306.932	278.722	0%	320.899	11%
	723	x	Machinery mechanics and fitters	261.624	272.303	269.526	3%	240.157	8%
	214	x	Architects, engineers and related Professionals	129.472	152.881	195.187	34%	214.296	7%
	311	x	Physical and engineering science technicians	143.847	163.164	210.309	32%	211.366	7%
	721	x	Metal moulders, welders, sheet metal workers, structural metal preparers and related trades workers	180.436	160.512	193.381	7%	188.581	6%
	722	o	Blacksmiths, tool-makers and related trades workers	137.320	125.595	153.234	10%	167.886	6%
	821	o	Metal and mineral products machine operators	104.516	88.112	127.782	18%	112.107	4%
41	all		all occupational groups					4.721.089	
(45)	712	X	Building frame and related trades workers	3.024.909	3.084.591	3.557.716	15%	2.024.313	43%
	931	x	Mining and construction labourers	914.590	1.080.792	1.265.077	28%	601.595	13%
	713	x	Building finishers and related trades workers	2.028.969	2.037.601	2.347.639	14%	308.170	7%
	214	x	Architects, engineers and related Professionals*	357.624	372.502	472.272	24%	234.431	5%
	311	x	Physical and engineering science technicians	391.826	421.433	527.018	26%	192.289	4%
	122	o	Production and operations department managers	206.085	200.119	275.862	25%	155.184	3%
	833	o	Agricultural and other mobile plant operators	424.893	442.737	536.956	21%	120.392	3%
47	all		all occupational groups					15.248.984	
(52)	522	x	Shop salespersons and demonstrators	5.713.555	6.328.768	7.294.090	22%	7.734.232	51%
	341	X	Finance and sales associate professionals	577.003	669.352	889.410	35%	898.321	6%
	421	x	Cashiers, tellers and related clerks	711.824	609.498	786.425	9%	845.498	6%
	419	o	Other office clerks	396.848	408.903	371.153	-7%	385.271	3%
	122	o	Production and operations department managers	284.922	323.253	330.796	14%	369.833	2%
	413	x	Material recording and transport clerks	270.965	274.844	322.583	16%	365.668	2%
	322	x	Modern health associate professionals (except nursing)	207.571	234.840	349.187	41%	365.652	2%
62	all		all occupational groups					2.021.160	
(72)	213	X	Computing professionals	609.423	682.824	861.336	29%	811.515	40%
	312	x	Computer associate professionals	305.194	395.511	437.424	30%	389.721	19%
	123	x	Other department managers	147.183	164.638	214.053	31%	182.311	9%
	214	o	Architects, engineers and related Professionals	46.844	47.641	61.966	24%	67.379	3%
	341	x	Finance and sales associate professionals	43.524	57.273	58.259	25%	64.127	3%
	241	x	Business professionals	37.685	55.591	61.942	39%	62.425	3%
	411	o	Secretaries and keyboard operator clerks	110.976	108.284	69.707	-59%	51.549	3%

Selection of occupations

64 (65)	all		all occupational groups					3.962.786	
	412	x	Numerical clerks	915.588	899.532	783.342	-17%	828.639	21%
	421	x	Cashiers, tellers and related clerks	704.658	643.673	666.548	-6%	626.351	16%
	341	x	Finance and sales associate professionals	321.972	391.137	474.836	32%	528.427	13%
	122	x	Production and operations department managers	262.349	295.331	335.244	22%	343.468	9%
	241	X	Business professionals	103.420	109.313	216.629	52%	265.356	7%
	343	o	Administrative associate professionals	220.445	220.157	262.807	16%	236.862	6%
	123	o	Other department managers	160.952	185.378	198.917	19%	206.436	5%
84 (75)	all		all occupational groups					15.514.941	
	516	x	Protective services workers	1.532.921	1.522.468	1.717.119	11%	1.703.209	11%
	419	X	Other office clerks	919.352	1.059.499	1.295.856	29%	1.324.514	9%
	344	x	Customs, tax and related government associate	1.030.378	1.099.409	1.265.393	19%	1.247.957	8%
	247	x	Scientific administrative professionals of public sector	737.075	776.857	925.285	20%	1.035.420	7%
	343	o	Administrative associate professionals	837.131	872.596	945.809	11%	940.162	6%
	913	x	Domestic and related helpers, cleaners and launderers	463.763	591.897	568.852	18%	649.314	4%
	411	o	Secretaries and keyboard operating clerks	723.493	671.930	428.740	-69%	432.445	3%
86 (85)	all		all occupational groups					11.399.046	
	513	x	Personal care and related workers	3.703.901	4.386.119	4.958.790	25%	2.204.853	19%
	323	X	Nursing and midwifery associate professionals	2.309.196	2.763.667	2.472.446	7%	2.102.791	18%
	322	x	Modern health associate professionals (except nursing)	715.827	826.761	1.413.950	49%	1.335.473	12%
	222	x	Health professionals (except nursing)	967.925	972.137	1.222.074	21%	1.276.972	11%
	223	x	Nursing and midwifery professionals	955.372	501.321	775.324	-23%	738.048	6%
	913	o	Domestic and related helpers, cleaners and launderers	722.619	930.653	1.013.020	29%	450.447	4%
	411	o	Secretaries and keyboard operating clerks	391.060	415.134	427.384	8%	341.266	3%

Source: Calculations of TNS Infratest Sozialforschung on base of data from Eurostat Labour Force Survey of the years 2000, 2003, 2006, 2009

X = Group with occupation specific task list;

x = inclusion among occupational groups to be selected, with generic task list asked only;

o = not included in questionnaire

Selection of occupations – Specification and justification

Employment in the sector (quantity, largest occupations)
Extrapolate the largest occupations in the sector

Distribution of skill levels
Mix of skill levels (if possible)

Increasing/decreasing

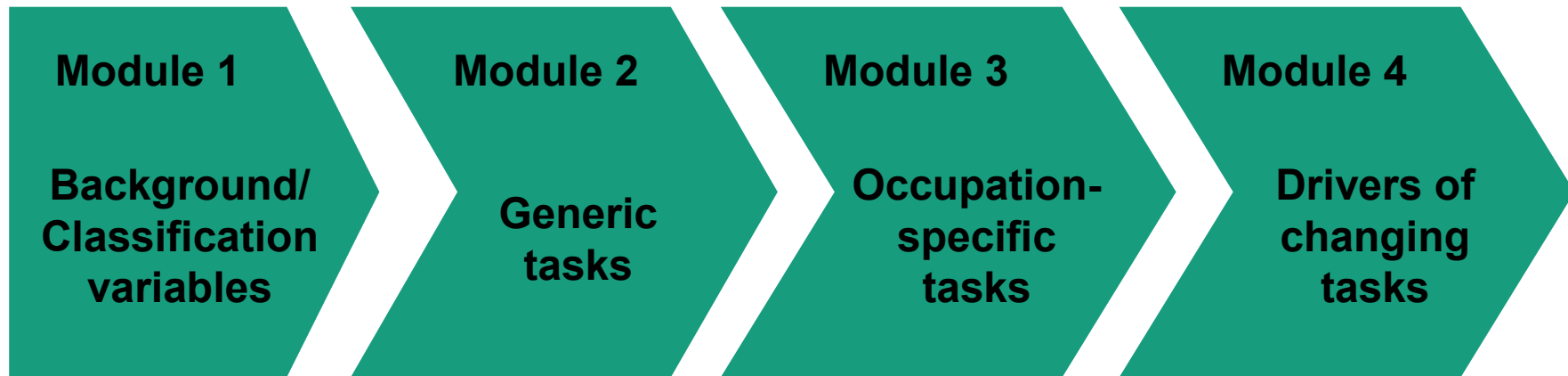


Selection of occupations - ISCO-08

- 821 Assemblers
- 711 Building frame and related trades workers
- 243 Sales, marketing and public relations professionals
- 251 Software applications developers and analysts
- 241 Finance professionals
- 411 General office clerks
- 322 Nursing and midwifery associate professionals



The proposed concept in the pilot



Module 1 – Background/Classification variables

- Number of employees
- Public vs. private sector
- Type of enterprise
- Headquarter or subsidiary
- Skills needs identification processes and training
- Selection of occupational group
- Number of employees in selected occupational group
- Age structure of the workforce
- Hard-to-fill vacancies and skill level

Module 2 - Generic tasks: domains to be covered

- A reading
- B writing
- C mathematics
- D problem-solving
- E foreign language
- F manual dexterity
- G making speeches or presentations
- H working with a group or team
- I persuading or influencing others
- J providing emotional support or physical care
- K learning new things
- L adapting to new equipment or materials
- M instructing or teaching
- N reduce the use of raw materials, energy or water
- O limit pollution waste, environmental degradation or biodiversity loss
- P observing and applying rules and standards on environmental protection
- Q determining their own tasks, working methods and speed of work
- R setting objectives and planning resources
- S co-ordinating co-workers and their tasks
- T performing physically demanding tasks
- U level of computer use

Module 2 - Generic tasks: features to be measured

Two dimensions for each generic task:

- Importance
- Current development of importance

If importance is increasing:

- Preparedness of workforce

Module 3 - Occupation-specific tasks

Q300	<i>If specific task list exist:</i> current development of importance for each occupation-specific task:
Q301	<i>If importance of task is increasing:</i> Preparedness of workforce
Q302	<i>If at least for one task occupational group not well prepared:</i> Strategy for addressing this problem
Q303	<i>If specific task list exist:</i> Newly emerging occupation-specific tasks
Q304	<i>If newly emerging task exists:</i> Which new task
Q305	<i>If newly emerging task exists:</i> Preparedness of workforce
Q306	<i>If occupational group not well prepared for new task:</i> Strategy for addressing this problem

Module 4 – Drivers of changing tasks

- Innovation activities and their impact on tasks
- Environmental changes and awareness and their impact on the tasks
- Occupational group most affected by changes