LEONARDO PROGRAMME

Competence Development in SMEs: Practices and Methods for Learning and Capacity Building.

Dutch National Report

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EXECUTIVE SUMMARY

This report is part of a European study in the framework of the Leonardo da Vinci programme. The study focusses on the methods to improve the competencies and skills of the enterprises' human capital of enterprises in general and SMEs in particular.
Most of the existing studies focus their attention only on formal training practices that are easily understood in terms of time and financial resources used. However, enterprises in general and SMEs in particular, use many other methods for upgrading the competencies and skills of their human resources, such as 'learning from others' and 'on-the-job' practices like visits to other enterprises, dialogue with customers and suppliers, personal development meetings, work rotation, staff meetings, etc. In order to capture all these non-formal elements, there is an increasing attention in business and management literature on the concept of competence.
Within this project, competence will be understood as the combination of human knowledge, skills and aptitudes serving productive purposes in SMEs. This study addresses the question how SMEs in the manufacturing industries develop their competence base, the instruments they use, the barriers they face and the way policy measures support competence development. We look at how competence is obtained from outside-the-enterprise (new employees, information from clients, suppliers, consultants, etc.) and how competence is developed from the human resources the organisation already possesses within-the-enterprise.

Apart from this Dutch national report, four other national reports (Austria, Finland, France and Spain) and a European report are published.
This national report is based on a literature review of recent Dutch studies on competence development in SMEs, a survey amongst 150 manufacturing SMEs, 3 interviews with experts and policymakers and a case study of a manufacturing SME that is regarded as a 'good practice'.
EIM was, as a subcontractor, responsible for the collection of data in The Netherlands. IKEI in San Sebastian/Donostia (Spain) is the main contractor of the project.

SMEs are more likely to provide formal training to their employees if they are larger, have a business plan, have an HRM department/manager or are associated with business partners. The percentages of employees that participate in training

courses are also slightly higher in larger enterprises, but in the last decade the differences are decreasing. The expenses per employee on firm-provided training are still more than twice as large in large firms (>500 employees) compared to firms with 10-99 employees.

Competence development is regarded as an important issue by all SMEs for sustaining their competitiveness. More than 40% of SMEs agree to the need for upgrading the competence and skills level of their workforce. This need is bigger as the size of the enterprise increases, although only 20 – 30% of the SMEs explicitly experience a shortage of skilled labour.
The main arguments for competence development are keeping up professional knowledge, mastering new machines and equipment and improving personal and social skills.

The larger the SME the more formal methods and training practices relevant for competence development are applied.
So the use of formal practices for upgrading competence increases with the size of the enterprise. SMEs seem to rely more often on informal practices and they prefer informal practices as mechanisms for competence development because they are less costly, can be easily integrated in the firm's everyday activities and can be focussed on the employee's specific individual and work role needs. These practices are in line with the overall preferences of SMEs to operate in an informal and flexible way. The smaller the enterprise the less often formalised management tools and HRM tools are used. Small enterprises prefer informal mechanisms for disseminating information and knowledge.

Most SMEs do not explicitly plan their competence development activities but behave more intuitively on an ad-hoc basis. Although some formal methods for identification of skills gaps have been introduced, especially in the field of HRM-policies, these seem not to have been adopted by SMEs on a large scale. SMEs seem to desire to be very flexible and are afraid to lose flexibility when formalising. Informal practices are widespread among SMEs and SMEs prefer informal training above formal.

Clients and suppliers are by far the most relevant sources of knowledge and competence for manufacturing SMEs. The importance of external sources grows with the size of the enterprise in particular the recruitment of new personnel.

Both internal and external practices are used for increasing the enterprises knowledge, competence and skills. Of the external practices visits to expositions and trade fairs and attendance to external training courses are relatively important as well as collecting written information from magazines and the internet. Internal practices most valued are on the job training and coaching and guidance.
Higher and middle management uses competence development activities from external sources predominantly. Other staffs mostly use internal practices.

The biggest barrier for competence development in SMEs is the workload of employees that allows limited time to spend on formal competence development activities. Costs are also mentioned as an important barrier.

There are some differences between Dutch and European SMEs in general regarding competence development. Characteristic for Dutch SMEs in general seems that they are 'formalised' a bit more than their European counterparts. The use of formalised management and HRM tools, availability and accessibility of databases, preference for informal dissemination methods, is more characteristic for Dutch SMEs.
It seems that the need for competence development and the barriers preventing competence development are somewhat less in The Netherlands compared to the other countries studied. This might be caused by the fact that relatively good infrastructures for competence development is available in The Netherlands and that relatively many SMEs use this infrastructure. It seems that Dutch SMEs place more value on cooperation with other companies (employers associations, colleagues, suppliers and clients). This might be explained by a different structure of cooperation between companies. Many Dutch enterprises are part of larger structures of joint ownership and of structural supplier and customer relationships.

The position of the Dutch government on vocational education and training can be summarized in four main policy responsibilities:

- to provide for initial education
- to provide for basic vocational education to guarantee a starting qualification for everyone
- to care for disadvantaged groups, unemployed and low skilled groups with a large risk to become unemployed
- to create equal opportunities for entering the labour market (women, immigrants, school leavers, age groups, etc)

The role of government in competence development and in keeping knowledge and skills of employees up to date is limited. The main responsibilities in this area have to be carried by employers, employees themselves and their organisations. The role of government in this area is supplementary and limited to stimulating and facilitating investment in 'human capital'. To this end pilot projects and experiments are subsidised (individual learning accounts, investors in people label, training impulse projects, technocentra, etc.).

The Sectoral training funds (O&O funds) form the backbone of the Dutch policies on training of the employed. O&O-funds (development and training funds) are sector initiatives by the social partners in sectors and sub-sectors. They are based upon collective labour agreements. The funds are acquired by payment of a certain percentage of the wages of every enterprise in the sector subject to the collective labour agreement. O&O-funds are preventing 'free rider- behaviour' by enterprises with regard to training employees in the sector. The goals of O&O-funds are generally to promote training of employees in the sector and to stimulate new initiatives in training. In this way they contribute to employability of employees in their sectors. O&O-funds pay the costs of training and, often, for the hours of training within certain limits, depending on the number of employees in the enterprise. O&O-funds are a very powerful instrument for promoting training within companies. They not only pay for training but also help develop new training; they experiment with new forms of training, pay for research in training needs, advice employers to develop training policy, etc.
Competence development will probably be a major subject in negotiations about collective labour agreements in the coming years.

In the future government policies on competence development will probably be integrated into the wider area of regulations concerning peoples course of life (from the cradle to the grave), in which periods of education and training, of working, of care for children or family and of rest will alternate in individual patterns.
Also policies on competence development will be intertwined with regulations concerning distribution and management of knowledge and stimulating innovation (new products, new production techniques and application of scientific research results). A close relationship between needs for competence development and innovation processes within the enterprise can be observed. Therefore coordination

between regulations in those two fields is required because of their mutual dependence.

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1. GENERAL INTRODUCTION

Discussions about 'competences' and 'competence development' in The Netherlands have started during the last decade.

In the first place the idea of 'competence' arose from problems in the labour market. The gap between formal qualifications acquired within the (vocational) education system and the ability of people to perform specific tasks in an organisation seemed to be widening. The formal education system seemed to be unable to respond to those rapid changes. While labour tasks were changing rapidly, formal qualifications acquired in the past became less and less meaningful compared to the competences acquired during a person's career. So there was a need for vocational educational institutions to redefine their programs in terms of competencies to be acquired and their exams to test the competencies accordingly.

The second origin of the discussion about 'competences' is the observation that many people without formal qualifications have learned to perform specific tasks within an organisation but these abilities were not recognised or valuated properly. The recognition of these 'competences' should enable people to find other jobs according to their level of ability and performance and to describe a persons skills or competences in such a way that the description can be used for labour market purposes.

The third origin lies within the enterprise. From an organisational point of view, competence is generally defined as the mix of human knowledge and skills serving the firm's productive purposes and therefore its competitiveness. Competence development within SMEs can therefore be defined as the set of measures taken by any enterprise to develop its human knowledge and skills and subsequently its competitive capacity.

Throughout Europe, governments recognise the importance of competence development, lifelong learning and maintaining ones employability. According to the Dutch government, whether or not employees participate in training activities (in the perspective of lifelong learning) is a shared responsibility of employees and employers and their representatives. Government is only responsible for the employability of specific groups, for instance employees without vocational education and older employees (Ministry of Education, Culture and Science, 1998).

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This country report contains background information on competence development within Dutch SMEs. Competence development in SMEs can be approached from two different angles:

- Focusing on the different individuals that work within SMEs; how and why individuals learn;
- Focusing on the SME as an organisation: which competences are available; how can they be developed, and how do they link to the organisation's strategy, structure or performance.

The next paragraphs provide information on a number of specific topics concerning competence development within SMEs. It is mainly based on recent Dutch studies and surveys.

In addition to the literature review(chapter 2) this report contains the results of a survey of 150 Dutch manufacturing SMEs on an number of subjects related to competence development (chapter 3), including a case study of a Dutch SME that has developed successful strategies in order to develop and upgrade its internal competence base. Finally, the outcomes of working sessions with experts in the field of competence development policy are reported. In the working sessions Dutch public measures and policies of social partners intended to encourage competence development activities within SMEs, are reviewed (chapter 4).

This national report is part of a European study that financed by the Leonardo da Vinci programme. Next to this report national reports of Austria, Finland, France and Spain and a European report are publicized.

2. RESULTS FROM THE NATIONAL LITERATURE REVIEW

In this chapter the following subjects are reviewed:

1. Definitions of Competence Development used in the Dutch literature (2.1)
2. Degree and extent of involvement of SMEs in competence development activities (2.2)

   2a. Identification of main methods used by SMEs for improving competencies (both in-house and external methods) (2.2.1)

   2b. Formal/informal training practices in SMEs (2.2.2)

   2c. SMEs' main sources for obtaining external competence (2.2.3)
3. Identification of competence needs and planning (2.3)

   3a. Methods of identification of current and future skill gaps by the SMEs (2.3.1)

   3b. Who is responsible of this identification? (2.3.2)

   3c. Do SMEs plan their competence development activities or do they respond to a more ad-hoc basis? (2.3.3)
4. Rationale and barriers for SMEs to engage themselves in competence development activities (2.4)

   4a. Rationale/reasons for SMEs to become involved in these activities: What do SMEs expect to obtain from them? (2.4.1)

   4b. What results SMEs obtain form their involvement in these activities? (2.4.2)

   4c. Barriers for SMEs to engage themselves in competence development strategies (2.4.3)
5. Topics and employment categories benefited by the competence development activities (2.5)

   5a. Main topic fields covered by the competence development activities (2.5.1)

   5b. Main employment categories benefited from these competence development activities (2.5.2)

   5c. Differences in the methods used for improving competencies by the different job categories (2.5.2)
6. Knowledge Management/ Learning Organisations in SMEs (2.6)

   6a. Knowledge management in SMEs: practices and barriers (2.6.1)

6b. Storage and dissemination of the existing and new knowledge within the SMEs: practices and barriers (2.6.2)

In the next paragraphs the subsequent subjects are reviewed.

2.1. DEFINITIONS USED IN THE NATIONAL LITERATURE ON COMPETENCE DEVELOPMENT

In the beginning the literature on competence and competence development was of a rather theoretical nature: Clarification of the notion of 'competence', proposals for definition, developing methods to measure competence, relations between competence and other notions to describe people's vocational abilities (qualifications, knowledge, abilities, personal skills, motivation, etc). Of course there is not such thing as a 'specific Dutch' approach. Ideas and definitions of Anglo-Saxon and German origin are widely used in Dutch studies.

In literature there seem to be almost as many definitions of 'competence', 'competencies' and 'competence development' as there are authors addressing these subjects. A part of literature is devoted to making inventories of the definitions in use, trying to make an end to misunderstandings and misconceptions, but sometimes introducing new ones.

The most comprehensive study in Dutch literature in this area is 'Competencies: from Complications to Compromise' published in 2002[1]. It analyses the origins of the notion of competence and the definitions in use. For this study Dutch and international literature was used as well as a consultation of experts.

The development of the concept and the reasons and motives to use this concept, originate from developments in organisational theory, in work and in education and training.

In organisational theory 'competence' refers to the qualities of an organisation, in work and education it refers to the qualities and abilities of a person in relation to work tasks.

Competence of a person refers to a combination of at least three elements: knowledge, skills and attitudes.

[1] Onderwijsraad 'Competencies: from Complications to Compromise' The Hague (2002)

The study concludes that definitions of specific competencies differ in their content as a result of the learning theory used, the cultural context in which they originate and the purpose for which they are developed. However some elements return in almost all definitions. These elements can be considered as core-elements of competency.

These six elements are:

1 competencies are contextual
2 competencies are indivisible
3 competencies are variable over time
4 competencies are linked to (work) tasks and activities
5 learning and development processes are preconditions for acquiring competencies
6 competencies are related to each another in a specific way

The elements can be conceived of as dimensions of competencies.

On the basis of these core elements it is considered appropriate that any definition of a specific competency contains the following three dimensions:

1 *specificity*: competencies have varying degrees of diversity from generic competencies to specific ones
2 *integration*: a competency forms a mixture of knowledge, skills, attitudes and characteristics; the mix and the level of coherence can vary
3 *permanence*: the content of competencies differs to a certain degree; some are relatively stable over time, some competencies have to be redefined frequently according to technological and organisational changes

For training purposes three more dimensions are relevant. They refer to conditions that are important for the development of competencies.

4 *degree of action directedness*: problem-solving behaviour is conditional to the development and testing of competencies. So there are differences in the possibilities for measuring and judging competencies
5 *degree of trainability*: trainability varies according to the degree to which relatively stable personal characteristics are involved in acquiring a certain competency

6 *mutual dependence*: competencies are often based on the command of other competencies

So in the end the authors of this study propose to define and use definitions of specific competencies depending on the purpose for which they are to be used keeping in mind these six dimensions. They use the metaphor of the equalizer (in audio amplifiers). Each slide valve can be put in the desired position according to the taste of the listener. The six dimensions can be looked at as elements of a definition of a specific competency. In this definition the position on each of the six dimensions can vary from high to low. This is illustrated by comparing the type of competency typical for different types of education and for organizations / enterprises. (see table 2.1.1)

table 2.1.1: typical scores of competencies acquired in different types of education and in enterprises on six dimensions of competency

type dimensions	secondary education	vocational education (apprentice-ship)	higher vocational education	scientific education	enterprises
specificity	low	high	medium	low	high
integration	low	low	medium	medium	medium
permanence	high	medium	medium	high	low
action directedness	low	high	medium	low	high
trainability	high	high	high	high	medium
mutual dependence	low	low	medium	high	medium

2.2. DEGREE AND EXTENT OF INVOLVEMENT OF SMES IN COMPETENCE DEVELOPMENT ACTIVITIES

Again, quantitative information on the degree of involvement in competence development in general is difficult to come by. This paragraph is limited to quantitative information on the degree of involvement in training practices in Dutch SMEs. First of all, results from an EIM Survey on HRM practices within SMEs shows that the large majority of SMEs provides some training to some or all of its employees (table 2.2.1). This written survey was held in 1999, and resulted in almost 700 completed questionnaires. More information on this survey can be found in De Kok et al. (2002).

table 2.2.1: Share of Dutch SMEs providing training to their employees

		Size class (people employed)	
		1 - 50	51-250
Does business provide any kind of training?	never	10%	8%
	for some jobs	47%	38%
	for all jobs	43%	54%
	Total	100%	100%

Source: HRM Survey, EIM; results are weighed to correct for sector and size class differences.

Based on this questionnaire, De Kok et al. (2002) find that firms are more likely to provide training to their employees if they are larger, have a business plan, have an HRM department/manager or are associated with a franchise partner. Family owned businesses, in contrast, are less likely to do so.

Another indicator of the degree of involvement is the number of employees that participate in training courses. Within firms with 10-99 employees, 40% of male employees and 30% of female employees followed at least one training course during 1999. For larger firms, these percentages are somewhat higher (table 2.2.2).

table 2.2.2 Share of employees following training courses, by firm size and gender (1999)

Size class (people employed)	Employees following courses	
	Male	Female
10 - 99	41%	30%
100 - 499	48%	37%
≥ 500	46%	37%

Source: Statline, the on-site database of CBS Statistics Netherlands

With respect to the number of training courses per employee, table 2.2.3 shows that the difference between small and large firms has substantially decreased during the period 1990-1999. However, the expenses (per employee) on firm-provided training are still more than twice as large in large firms (>500 employees) compared to firms with 10-99 employees[2].

[2] The numbers in tables 2.2.2 and 2.2.3 refer to internal and external courses that are supported by the employer by offering time or money. Not included are training on the job and training of apprentices or trainees. Training activities, like conferences, seminars, quality circles and self-learning, are also excluded. In the expenditures on courses, the labour costs of training hours during working time and the labour costs of training staff are included.

table 2.2.3 Internal and external training courses in the Netherlands, by firm size.

Size class (people employed)	Number of courses per employee			Training costs as % of labour costs*		
	1990	1993	1999	1990	1993	1999
10 – 99	0.14	0.20	0.69	0.5	0.8	1.8
100 – 499	0.33	0.41	0.85	1.1	1.3	2.8
≥ 500	0.54	0.53	0.81	3.2	3.1	3.9
Total	0.33	0.38	0.77	1.7	1.8	2.8

* training costs include out-of-pocket expenses and lost labour costs.

Source: Statline, the on-line database from Statistics Netherlands at www.cbs.nl.

2.2.1. Identification of main methods used by SMEs for improving competencies (both in-house and external methods) and SMEs main sources for obtaining external experience

In the 1999 EIM survey on HRM practices, some questions have been asked regarding the presence of career paths and mentoring, and the answers to these questions are presented in table 2.2.4 below (companies that provide no training activities at all are excluded from this table). Otherwise, quantitative information (or, indeed, any information) on methods used by SMEs for improving competences is hard to come by (with the exception of training activities).

Table 2.2.4 Usage of career paths and mentoring in Dutch SMEs (weighted results for Dutch SMEs providing training to (some or all of) their employees)

		size class (people employed)	
		1 - 50	51-250
Has your business introduced new career paths?	never	82%	64%
	for some jobs	18%	33%
	for all jobs	0%	3%
Does your business provide informal mentoring?	never	39%	30%
	for some jobs	57%	59%
	for all jobs	4%	10%
Does your business provide formal mentoring?[3]	never	68%	58%
	for some jobs	28%	39%
	for all jobs	4%	3%

A study on knowledge management within Dutch SMEs has identified various methods and instruments that were used by the sampled enterprises (Uit Beijerse, 1997). However, since it is based on only a few, non-randomly sampled case

[3] Only enterprises that provided training were asked this question.

studies, it cannot be used to identify the main methods that are used within Dutch SMEs.

2.2.2. Formal/informal training practices in SMEs

Formal and informal training practices come in all shapes and sizes. Table 2.2.5 presents additional information on training practices, for companies that provided training to their employees. The results are based on the 1999 EIM survey on HRM practices.

Table 2.2.5 Characteristics of training provided to employees (weighted results for Dutch SMEs providing training to (some or all of) their employees)

	size class (people employed)	1 - 50	51-250
Does your business have	never	64%	44%
a formal training budget?	for some jobs	13%	17%
	for all jobs	23%	39%
Does your business have	never	21%	11%
informal on-the-job training?	for some jobs	60%	68%
	for all jobs	19%	20%
Does your business have training of	never	36%	28%
a vocational or technical nature	for some jobs	55%	62%
(apprenticeships, training of young employees)	for all jobs	9%	10%
Does your business have	never	39%	16%
management & development training?	for some jobs	58%	74%
	for all jobs	2%	9%
Has your business introduced	never	68%	50%
formal training where none	for some jobs	29%	43%
previously existed?	for all jobs	3%	7%
Has your business increased training	never	60%	45%
where a program previously existed?	for some jobs	37%	46%
	for all jobs	3%	9%
Does your business provide formal	never	76%	51%
in-house training provided by	for some jobs	23%	41%
your own staff?	for all jobs	1%	8%
Does your business provide formal in-	never	47%	23%
house training provided by	for some jobs	49%	70%
an external consultant?	for all jobs	4%	7%
Does your business provide external	never	40%	22%
training (provided by a training body	for some jobs	55%	67%
or institution)?	for all jobs	5%	11%

Source: HRM Survey, EIM
N= 193 (1-50 employees) + 388 (51-250 employees)

According to an econometric study by De Kok (2002), the impact of training courses on production and value added depends upon the time spent on setting up a training program (training support). De Kok uses panel data on 173 Dutch firms with at least 40 employees to determine size differences in training support per employee, and the effect of training support upon the benefits of the actual training courses. His results indicate that the more training support employees receive, the more effective training is. The results even suggest that training has no effect at all, if it is not accompanied by training support: the parameter for training days does not significantly differ from zero.

As table 2.2.6 illustrates, smaller firms provide on average less training support per employee than larger firms. Consequently, smaller firms benefit less from additional training courses than larger firms do.

Table 2.2.6 Training support per full-time equivalent, 1990-1993, by size class.

	1990			1993		
	Number of employees:			Number of employees:		
	40-150	150-500	>500	40-150	150-500	>500
Training support / fte	0.16	0.39	1.02	0.17	0.35	0.76
Number of firms	46	89	38	45	89	38

Source: De Kok (2002).

Various explanations have been offered to explain why small firms spend less on formal training than large firms. First, formal training may be too expensive for small firms (Curran et al., 1997). Not only do small firms have less financial resources (Nooteboom, 1993; Westhead and Storey, 1996), training costs may also be higher for small firms (Westhead and Storey, 1996). Training costs include not only the out-of-pocket expenses of the training course, but also opportunity costs (the costs of lost output). Especially the opportunity costs may be relatively high for small firms: the absence of an individual employee will provide more difficulties, if there are fewer colleagues to fill in.
Secondly, the shorter time horizon of smaller firms (Storey, 1996; Westhead and Storey, 1996) makes it less attractive to invest in training. Thirdly, training may increase the outflow of (trained) employees. Due to the relative lack of internal promotion possibilities, the outflow effect may be stronger for smaller firms than for larger ones. Finally, smaller firms have a more limited capacity for the acquisi-

tion of information (Nooteboom, 1993). Small firms may be less aware of the available training courses and the associated costs and benefits than large firms.
Besides formal training, organizations can also choose to apply informal training practices. For example, many of the entrepreneurs interviewed by Koch and Van Straten (1997) felt that formal training was not necessary for their company. They feel that it is more useful to let an employee work together with older, more experienced colleagues. In this way, the schooling has far more effect, which makes formal training unnecessary. The latter is even more evident the more specialised labour is within a SME. The poor offer of custom-made external courses for specialised jobs and tasks makes non-formal and informal training indispensable.
Generally speaking, small organizations often prefer informal training practices over formal training, because it is less costly (Koch and Van Straten, 1997), because it can be more easily integrated into the firm's everyday activities, or because it can be more easily focused on the worker's specific individual and work role needs (Curran et al., 1997). This preference is in line with the overall preference of SMEs to operate in an informal and flexible manner (De Kok et al, 2002).
So far, we have discussed training activities for employees. However, employers themselves may also take training courses. Koch and Van Straten (1997) found that within small firms, these activities may be substitutes rather than complements: the employer may attend a training course, in order to transfer the newly obtained skill and / or knowledge to his employee's trough an informal training process.

2.3. METHODS OF IDENTIFICATION OF CURRENT AND FUTURE SKILL GAPS BY SMES

Most SMEs do not explicitly plan their competence activities, but behave more intuitively on an ad-hoc basis. This suggests that most SMEs will not engage in any conscious attempts to identify current and future skill gaps. However, no quantitative information could be obtained that could substantiate this suggestion.
According to the Dutch government, the responsibility for lifelong learning and maintaining employability lies mainly with employers and employees (Ministry of Education, Culture and Science, 1998). To stimulate employers to act according to this responsibility, the Dutch government supports initiatives such as Investors in People (IiP) and Recognition of Acquired Competences (RAC)[4].

[4] Recognition of Acquired Competences (RAC) is a translation of Erkenning Verworven Competenties (EVC).

Investors in People originated in England. It concerns certificating companies whose personnel management (including competence development) has achieved certain standards. It became active in the Netherlands during the 1990's, but still only a handful of Dutch enterprises (both SMEs and large firms) have obtained the certificate.

Recognition of Acquired Competences (RAC) is about formally recognising competences that employees have obtained through activities other than schooling or training (resulting in competences that are normally not formally recognised or accounted). RAC may be seen as the Dutch answer to the OECD publication on human capital accounting (OECD, 1996). In this publication, the OECD reacts to the increased knowledge intensity of western economies by stating that more attention should be paid to accurate methods for registering and accounting the actual human capital available to firms.

Among others, RAC is believed to stimulate the employability of employees as well as their motivation to participate in (additional) competence development practices. It also provides insights into the available skills of incumbent employees, which is a necessary prerequisite for determining current and future skill gaps. Again, only a limited number of SMEs makes use of this programme. Chapter four presents additional information on this public policy measure.

Skill gaps measure to which extent the skills and competences of incumbent employees differ from those required by the enterprise. An interesting question in this respect is what determines these requirements. More specifically, to which extent are the requirements related to the available skills and competences? Based on their interviews with small firm owners, Koch and Van Straten (1997) find that within small firms, job content is often adapted to the skills of incumbent employees. Apparently, the requirement of skills strongly depends upon the available skills, which would result in relatively small skill gaps.

2.3.1. Who is responsible of this identification?

No information could be found on this subject.

2.3.2. Do SMEs plan their competence development activities or do they respond to a more ad-hoc basis?

Competence development activities are part of the broader concept of HRM activities. Various publications on HRM assume that HRM policies are formulated in a rational way, as part of an overall business strategy aimed at maximising profits over a certain period of time.

The assumption of rational strategy formulation implies that employers will establish which information they require, obtain this information, correctly interpret it, and use it to arrive at an optimal strategy given the available information. However, strategy formulation may be more of an emergent process than a deliberate one, especially for small enterprises: "… Knowledge of alternatives and consequences is prey to an individual's cognitive limitations [and] lack of motivation to conduct comprehensive information searches. … [the reality of strategy-making is] a 'bounded rationality' resulting in satisfying behaviours, acceptable to the 'dominant coalitions'." (Legge, 1995, p. 100).

Small firms have less experience and a more limited capacity for the acquisition of knowledge, which leads Nooteboom (1993) to conclude that small firms are more bounded in their rationality than large firms. An important source for this lack of experience and limited capacity is a lack in manpower and management time. Most employers are taken up by day-to-day worries, which follow from their participation in the production process (Van den Tillaart and Warmerdam, 1997). Also, small firm employers often do not have a formal management education, and the possibilities to gain management skills by co-operating with other managing employees are limited. As a result, employers are often not able to use classical management tools properly (Lee, 1995). Finally, as a consequence of having relatively few employees, decisions regarding personnel management have to be made less often, causing small firms to have less experience and routine in HRM activities (Nooteboom, 1993; WRR, 1987b).

The same results were found by Koch & Van Straten (1997) in interviews with SME entrepreneurs. Even within their sample of micro and small companies, they find that smaller companies apply less and less formal HRM practices than larger companies. Procedures are generally not recorded unless they are deemed necessary. This is caused by the desire of SMEs to be very flexible. SMEs are afraid to lose their flexibility when formalising. SMEs also choose to be informal, because they fear that formalising diminishes the 'team spirit'. This informality has direct consequences for the extent of formalisation of their competence development activities.

Comparable results are found by De Kok et al. (2002), who examine the relationship between firm size and formality of HRM practices using a written survey of 600 Dutch SMEs (0-500 empl). They find that smaller firms make less use of formal HRM practices in general, and formal training and development methods in particular.

All in all, these findings suggest that the majority of SMEs does not explicitly formulate a competence development plan, where various competence development activities are indicated that should be applied to reduce current and future skill gaps.

2.4. RATIONALE AND BARRIERS FOR SMES TO ENGAGE THEMSELVES IN COMPETENCE DEVELOPMENT ACTIVITIES

2.4.1. Rationale/reasons for SMEs to become involved in these activities: What do SMEs expect to obtain from them?

What do SMEs expect to obtain from competence development activities? Again, quantitative information could only be provided for training activities.
EIM's Dutch SME Policy Panel has been used to ask almost 1500 Dutch independent enterprises (with 1-100 employees) about their main arguments to provide training to their employees. The answers to this question are presented in table 2.4.1. The results clearly suggest that improving technical skills (including professional knowledge and mastering new machines, apparatus and software) are more important arguments to provide training courses than improving personal, social or managerial skills.

table 2.4.1 Reasons for training employees.

Firm provided training can be provided for various reasons. How often are the following arguments relevant within your company?	very often	often	somet imes	never	don't know /no answer
Keep up with professional knowledge	36%	28%	21%	14%	0%
Mastering new machines, apparatus and/or software	20%	21%	31%	27%	1%
Improving management skills	6%	11%	44%	38%	1%
Improving personal and social skills	11%	15%	41%	31%	1%
Reinforcing team commitment	11%	18%	32%	37%	1%

Source: EIM, Dutch SME Policy Panel, first wave in 2000; N=1491; results are weighted.

2.4.2. What results SMEs obtain form their involvement in these activities?

2.4.3. Barriers for SMEs to engage themselves in competence development strategies

Limited time and knowledge on (the relevance of) human resource management in general pose serious barriers for SMEs to engage themselves in HRM activities.

Information on specific barriers to engage in competence development could not be identified for Dutch SMEs.

2.5. MAIN TOPIC FIELDS COVERED BY THE COMPETENCE DEVELOPMENT ACTIVITIES

Training courses are provided on many different topic fields. Table 2.5.1 presents an overview of the relative importance of various topic fields for three different size classes. The majority of training courses in Dutch SMEs deal with technical and ICT training and environmental and working conditions. Training courses on management and personal skills only account for 17% of all training courses for firms with 10-99 employees. The most notable differences between small and large firms are the provision of technical training and of training on finance and accounting.

According to Den Boer and Hövels (2000), the relative importance of various topic fields shows substantial sectoral differences. Quantitative information on these sectoral effects have, however, not been obtained.

table 2.5.1 Training course by topic field (1999)and by firm size

Training course topic field	Size class (number of employees)		
	10-99	100-499	≥ 500
Management	5	5	8
Personal skills	12	16	17
Sales and marketing	9	9	9
Finance and accounting	5	3	14
ICT	19	24	18
Technical training	20	15	9
Environmental and working conditions	20	17	11
Other	10	11	14
Total	100	100	100

Note: both internal and external firm-provided training included.

Source: Statline, the on-line database from Statistics Netherlands at www.cbs.nl.

2.5.1. Differences in the methods used for improving competencies by the different job categories

2.5.2. Main employment categories benefited from these competence development activities

No information on these topics has been obtained.

2.6. KNOWLEDGE MANAGEMENT / LEARNING ORGANISATIONS IN SMES

The final two topics are about knowledge management rather than competence development. Since competences are defined as the mix of relevant human knowledge and skills, competence development is closely related to knowledge management. In fact, the similarities and dissimilarities between knowledge, skills, competences and human capital are generally difficult to delineate, and often these concepts are used as synonyms. It is therefore difficult to tell the difference between competence development and knowledge management. Here, we have decided to classify all information as information on competence development, unless the information source explicitly states that the topic is knowledge management (Uit Beijerse, 1997).

Knowledge management can play a significant role in SMEs, but SMEs are faced with specific barriers when trying to implement knowledge management. These problems occur because of lack of time, lack of money, a pragmatic attitude of SME-managers and lack of strategy (Uit Beijerse, 1997). Although these problems may cause SMEs to lack a specific knowledge management strategy, that does not stop them from applying knowledge management on an instrumental level. This holds at least for the companies interviewed by Uit Beijerse (1997), where many different knowledge management instruments were applied (including the instruments on knowledge dissemination). Time and money also do not seem to be impeding factors. Both medium-sized and small companies alike implement both instruments that are relatively cheap (e.g. training-on-the-job) as instruments that are relatively costly (e.g. central databanks and intranet).

2.6.1. Knowledge management in SMEs: practices and barriers

2.6.2. Storage and dissemination of existing and new knowledge within SMEs: practices and barriers

Uit Beijerse (1997) has studied knowledge management within Dutch SMEs, and combined an extensive literature review with case studies on 12 SMEs (with up to 100 employees). Each of these companies was selected on their explicit attention for knowledge management and/or its instruments. The results of this study can therefore not be generalised to the total population of Dutch SMEs. It is nevertheless interesting to discuss some of the results of this study.

According to Uit Beijerse (1997), the difference between tacit and explicit knowledge plays a pivotal role in knowledge management. Explicit knowledge is knowledge in an explicit form, relatively easy accessible and transportable. Implicit knowledge, in contrast, refers to intuition, rules of thumb, conventions, habits,

routines, contacts etc: knowledge that is present, but not written down or otherwise made explicit. Especially implicit knowledge can be an important source of sustained competitive advantages for firms, since it is difficult for competitors to imitate (Lado and Wilson, 1994).

Dissemination of knowledge (both implicit and explicit) is an important part of knowledge management. Uit Beijerse (1997) identified 29 different instruments on knowledge dissemination from existing literature, and examined which of these instruments were applied by at least one of the SMEs in his sample. Almost 2/3 of these instruments (18) turned out to be applied by at least one of the enterprises. An overview of these instruments is provided in table 2.6.1.

table 2.6.1 Dissemination of knowledge in theory and practice

Instruments found in literature	Instruments in practice
Mentorship	☑
In-house trainers available	☑
Training on the job	☑
Breaking in new employees	☑
Informal training of elder employees by teaming them up with younger employees.	☑
Central archiving of projects to ensure that the results are easily accessed by colleagues	☑
Institution of information-brokers	☐
Databases	☑
Intranet and other forms of information technology	☑
Electronic networks	☑
Formalising communication	☑
Knowledge management system	☐
Fill in project- or fact sheets	☐
Multi-employee task groups	☐
Teambuilding	☑
Work meetings	☑
Organising product- and sales meetings	☑
Internal (information and/ or knowledge) audits	☐
Exit interviews with former employees	☑
Task rotations	☐
Formation of working groups	☑
Autonomous working groups	☐
Internal postings	☐
Facilitating a consultative culture	☐
Communication between employees on professional matters, for instance through seminars or lunch meetings	☑
Intervision (structural and systematic employee meetings with the	☐

specific aim of knowledge dissemination)	
Facilitating informal meetings and gatherings	☐
Organising drinks and social events	☑
Newspaper clippings and staff magazine	☑

Source: Uit Beijerse (1997).

Leonardo Programme

3. COMPETENCE DEVELOPMENT ACTIVITIES IN NATIONAL SMES: RESULTS FROM THE SURVEY

3.1. DESCRIPTION OF THE SAMPLE

In order to get information on activities of SMEs to foster and strengthen employability of their workforce and to get a view on barriers and problems SMEs face, a survey among 150 SMEs was conducted.

The survey was directed to a sample of manufacturing enterprises (NACE Section D) in The Netherlands. The sample was drawn from manufacturing SMEs in The Netherlands (see table 3.1.1). The very small enterprises (less than 10 employees) are excluded from this sample.

table 3.1.1 Number of manufacturing enterprises in The Netherlands, 2004

sector of main activity	NACE	enterprise size	
		10 - 49	*50 - 249*
1.Food & Beverage	DA	1.364	296
2.Textile, Clothing, Shoes	DB,DC	371	86
3.Wood & Furniture	DD,DN	1.003	179
4.Paper & Print	DE	1.246	274
5.Fuel, Chemical & Plastics	DF,DG,DH,DI	1.018	397
6.Metal Products, Machinery & Equipment	DJ,DK,DM	3.457	792
7.Electric & Electronics	DL	687	175

Source: EIM/BLISS based on CBS.

The composition of the actual sample is presented in table 3.1.2. The survey has been executed by telephonic interviewing in the first two weeks of May 2004.

table 3.1.2 Sample according to sector and size distribution

sector	**10-49**	**50-249**	**TOTAL**
1. Food & Beverage (DA)	9	13	22
2. Textile, Clothing, Leather & Shoes (DB, DC)	12	9	21
3. Wood & Furniture (DD, DN)	6	15	21
4. Paper & Print (DE)	12	9	21
5. Fuel, Chemical & Plastic (DF, DG, DH, DI)	10	11	21
6. Metal Products, Machinery & Equipment (DJ, DK, DM)	12	12	24
7. Electric & Electronics (DL)	8	13	21
TOTAL	**69 (46%)**	**82 (54%)**	**151 (100%)**

Source: Ikei and ENSR partners, CODE Leonardo project

Manufacturing is an important part of economic activity in the Netherlands. In table 3.1.3 the share of manufacturing in the Dutch economy is presented in some indicators.

table 3.1.3 Share of manufacturing in Dutch economy (public services excluded) in 2002

characteristic	share of manufacturing
number of enterprises	8%
employment (fte)	19%
turnover	27%
export turnover	50%
added value	24%

The relative importance of manufacturing is slowly declining. Other sectors are developing faster than manufacturing, especially the services sector.
This is also visible in the development of the number of manufacturing enterprises since 1998 (table 3.1.4). The relative share of SMEs (10-249) in manufacturing is growing.

table 3.1.4 development in number of manufacturing enterprises

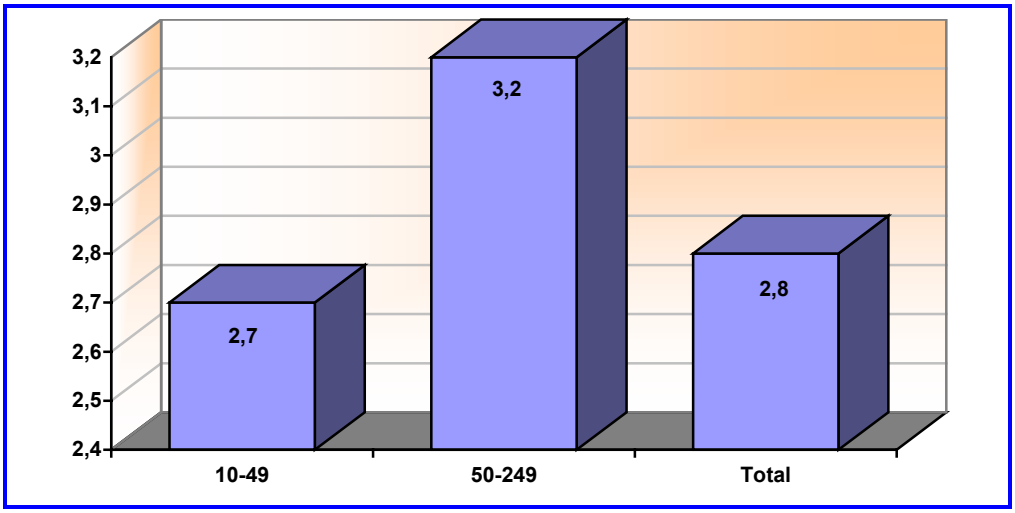
size of enterprise	1998	2003	1998 - 2003
0	16350	17257	+ 5,5%
1-9	20628	17673	- 14,3%
10-49	7264	8008	+ 10,2%
50-249	2170	2408	+ 11,0%
250 +	561	548	- 2,3%
total	46973	45894	- 2,3%

Total employment in manufacturing has decreased from 850.000 fte in 1998 to 814.000 fte in 2002 (- 4,2%). Despite the sinking employment labour market shortages are characteristic for recent years in The Netherlands. This is caused by a sharp decline in attendance of technical vocational education
Labour productivity has risen with 18% from € 63.200 (1998) to € 74.740 (2002).
An important development is the increase of outsourcing and direct foreign investment in manufacturing. Outsourcing and direct investment by Dutch manufacturing firms are developing rapidly, particularly in Eastern European countries (Poland, Czech Republic).

3.2. ATTITUDES OF THE ENTERPRISES TOWARDS COMPETENCE DEVELOPMENT ACTIVITIES

Competence development is regarded as a rather important issue by SMEs for sustaining their competitiveness. On average medium sized enterprises place more value on competence development for sustaining their competitiveness than smaller enterprises (see graph 3.2.1).

Graph 3.2.1 Importance attributed by enterprises to the competence development activities for sustaining their competitiveness, by enterprise size



Results from '1'= Not important to '4'=very important
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

3.3. EXTERNAL-TO-THE-ENTERPRISES SOURCES OF KNOWLEDGE AND COMPETENCE

Table 3.3.1. Relevance for the enterprises of different actors as sources of knowledge and competencies, by enterprise size

	Enterprise size		
	10-49	50-249	Total
Recruitment of new external personnel with required new competencies	2.0	2.7	2.1
Suppliers	3.1	3.2	3.1
Clients	3.3	3.5	3.4
Competitors and business colleagues	2.4	2.6	2.5
Consultants and accountants/auditors	2.6	2.5	2.6
Universities and training centres	1.8	2.3	1.9
R&D centres and technical experts	1.6	2.2	1.7
Business and Trade Associations	2.5	2.6	2.5
Government & public agencies	1.8	2.1	1.9

Results from '1'=not relevant for my enterprise to '4'=very relevant for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Clients and suppliers are by far the most relevant sources of knowledge and competencies for SMEs (see table 3.3.1).

Medium sized enterprises do regard external actors more often as important sources of knowledge and competencies than small enterprises do.

In particular the relevance of 'recruitment of personnel' and contact with 'universities' and 'R&D centres' is much bigger for medium sized enterprises, probably because of the fact that medium sized enterprises use these instruments and contacts for competence development more frequently.

3.4. PRACTICES FOR INCREASING ENTERPRISES' COMPETENCE LEVELS

Table 3.4.1. Relevance of different practices for increasing the enterprises' knowledge, competence and skill base, by enterprise size

	Enterprise size		
	10-49	50-249	Total
External-to-the-enterprise practices			
Visits to expositions/trade fairs	2.6	2.7	2.6
Attendance to conferences/seminars provided by external personnel	1.7	2.1	1.8
Attendance to training courses provided by external-to-the enterprise personnel	2.4	3.1	2.5
Co-operation with other enterprises	2.3	2.6	2.3
Study visits to other enterprises/institutions	2.0	2.4	2.1
Job rotation and exchanges with other enterprises	1.4	1.4	1.4
Reading of information available in trade and sector magazines, publications	2.4	2.9	2.5
Reading of information available in Internet (websites, databases, etc)	2.3	2.9	2.4
Analysis of patents and licenses	1.6	2.3	1.7
Internal-to-the-enterprise practices			
Internal training courses/seminars provided by own personnel	1.9	2.5	2.0
Self-study activities during working time	1.8	2.1	1.8
On the job learning/learning in the daily work (for current personnel)	2.8	3.2	2.8
Job /task rotation (in-house)	2.2	2.9	2.4
Coaching/guidance activities for staff by other people in the enterprise	2.8	2.9	2.8
Tutor/mentoring systems for new employees	2.2	2.5	2.3
Apprenticeship schemes	2.0	2.1	2.1
Meetings amongst personnel for knowledge exchange/quality circles	1.8	2.3	1.9
Innovation and R+D activities	2.0	2.6	2.1

Results from '1'=not relevant for my enterprise to '4'=very relevant for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project.

The average scores on both groups of items, internal and external practices, are about 0.4 higher for medium sized enterprises than for small enterprises. This suggests that the bigger the enterprise the more important practices for increasing the enterprises' knowledge, competencies and skills are.

The average scores for internal and external practices are only slightly (0.1) in favour of internal practices.

External practices that are most valued are 'visits to expositions/trade fairs', 'attendance to training courses' and, for medium sized companies, 'consulting information in publications and on the internet'.

Internal practices that are most valued are 'on the job training', 'coaching and guidance activities' and for medium sized companies, 'job or task rotation'.

Table 2.4.1. Percentage of enterprises, according to their preference of formal/informal training practices, by enterprise size

	Enterprise size		
	10-49	**50-249**	**Total**
The formal training acquired in a course (external or internal)	11.6	14.4	12.1
The informal training and knowledge acquired on the job	63.9	36.6	58.7
Both equal	22.9	49.0	27.9
Don't Know/ No answer	1.7	0.0	1.3
TOTAL	**100.0**	**100.0**	**100.0**

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Informal training practices are preferred, especially in small companies. About half of the medium sized enterprises value both formal and informal practices as equal.

3.5. OCCUPATIONAL GROUPS BENEFITING FROM COMPETENCE DEVELOPMENT ACTIVITIES

Table 3.5.1. Percentage of enterprises, according to the occupational groups mainly benefited from enterprises' external and internal competence development activities, by enterprise size

Group categories	External activities			Internal activities		
	10-49	50-249	Total	10-49	50-249	Total
Directors and managers	59.9	50.8	58.1	22.9	17.3	21.8
Middle management, technicians	62.9	81.1	66.5	61.1	79.6	64.7
Manual workers, operators	26.6	24.2	26.1	59.3	66.4	60.6
Clerks, administrative personnel	27.5	34.8	28.9	16.8	21.0	17.6

Vertical totals may sum more than 100% as enterprises were requested to identify the two groups mostly benefited.
All enterprises.
Source: Ikei and ENSR partners, CODE Leonardo project.

The groups benefiting most from external activities are 'managers' and 'middle management and technicians'. 'Middle management and technicians' and 'manual workers and operators' benefit most from internal activities. This pattern applies to small as well as medium sized enterprises. The position, size and type of competences of the different occupational groups probably determine this pattern.

3.6. FORMALISATION AND DIFFUSION OF THE IN-HOUSE KNOWLEDGE

3.6.1. Formalisation of in-house knowledge

Table 3.6.1 Percentage of enterprises with formalised management tools, by enterprise size

Variables	Enterprise size		
	10-49	50-249	Total
A formal organisation chart	51.5	88.7	58.7
A formal strategic plan	54.0	79.5	58.9
Written manual(s) describing the main tasks and activities of each working post	86.1	93.0	87.5
Written manual(s) describing the productive standards and routines	71.8	90.8	75.5
Quality management systems	65.2	86.9	69.4
ISO certifications (9000, 14000, others)	28.6	74.9	37.6

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

As could be expected formalised management tools are more common in medium sized enterprises. The tools mentioned are in use in the majority of the medium sized enterprises. Small enterprises use formalised tools less often; in particular ISO-certification is far less common than in medium sized enterprises.

Table 3.3.2 Percentage of enterprises with formalised human resources management tools, by enterprise size

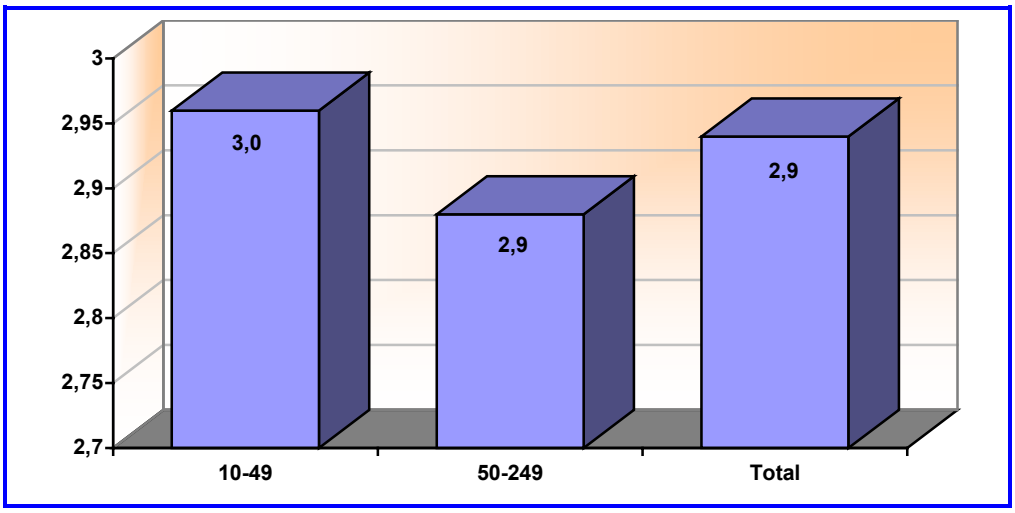
Variables	Enterprise size		
	10-49	50-249	Total
Defined process(es) for the recruitment and selection of personnel	34.3	71.8	41.6
Formal system(s) for evaluating the personnel performance	47.4	82.7	54.2
Formal system(s) for evaluating the personnel training needs	28.9	74.9	37.9
A written training plan	28.6	76.8	38.0
System(s) for collecting employees' suggestions related to work issues	49.0	67.6	52.6
Meetings to inform employees on changes/developments about job/enterprise	82.9	88.8	84.0

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

The same is true for the use of human resources management tools, with the exception of 'meetings to inform employees on developments in the enterprise' that are common for all SMEs.

3.6.2. Diffusion of the in-house knowledge

Graph 3.6.1. Assessment of the degree of dissemination of relevant knowledge and information through the organisation, by enterprise size



Results from '1'= Very badly disseminated to '4'=Very well disseminated
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

The majority of SMEs (85%) think that relevant knowledge is disseminated well within the enterprise.

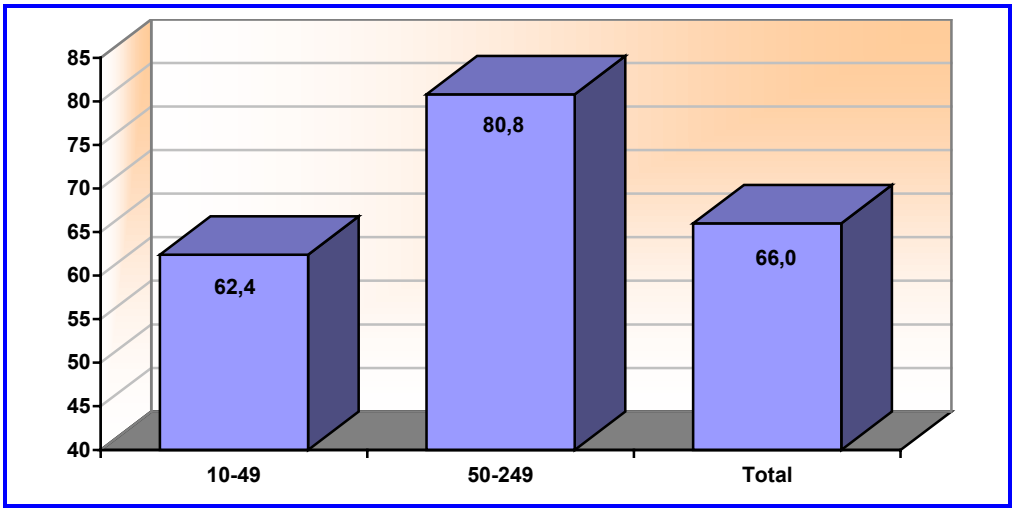
Table 3.6.3. Preference of enterprises of formal versus informal tools for disseminating relevant knowledge and information within the organisation, by enterprise size

Variables	Enterprise size		
	10-49	50-249	Total
Formal mechanisms	3.7	3.0	3.6
Informal mechanisms	75.5	50.0	70.5
Both equal	20.8	47.0	25.9
Don't Know/ No answer	0.0	0.0	0.0
Total	**100**	**100**	**100**

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

The preference for informal tools for dissemination of relevant knowledge and information within the organisation is clear. About half of the medium sized enterprises prefer a combination of formal and informal tools.

Graph 2.6.2 Percentage of enterprise who suggest to have databases where relevant-to-the-enterprise knowledge, experiences and documents are stored for subsequent use, by enterprise size



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

The use of databases where relevant knowledge and documents have been stored is widespread. About two thirds of the small enterprises and 80% of the medium sized use these databases.

Table 3.6.4 Characterisation (updating and accessibility) of databases available within enterprises, by enterprise size (% of enterprises)

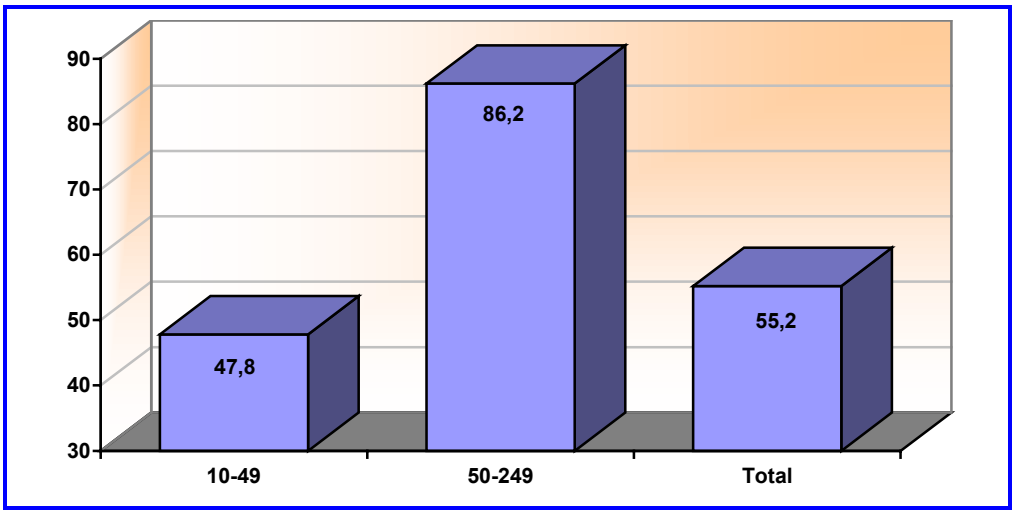
Variables	Enterprise size		
	10-49	50-249	Total
Databases are periodically updated	100.0	100.0	100.0
Databases are accessible through ICT-based systems (i.e. Intranet)	61.8	84.3	67.1
These databases are accessible to			
All the enterprise's workforce	25.2	37.3	28.1
Only allowed personnel (including management board)	59.7	57.1	59.1
Only the management board	13.3	5.6	11.4
Don't know/no answer	1.8	0.0	1.4

Data referred only to enterprises with databases
Source: Ikei and ENSR partners, CODE Leonardo project

All databases are periodically updated and two thirds are accessible through ICT-based systems. Nearly 30% are accessible by the whole workforce and nearly 60% are accessible by allowed personnel. Only 10% of the enterprises use their databases exclusively for management.

3.7. SCANNING COMPETENCE DEVELOPMENT NEEDS

Graph 3.7.1 Percentage of enterprises who suggest to have a special person or group responsible within the enterprise for identifying current or future skill needs, by enterprise size



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

About 50% of the small enterprises have a specific person or group of persons who are responsible for identifying skills needs. This applies to about 85% of the medium sized enterprises.

Table 3.7.1 Percentage of enterprises according to the person/group(s) responsible of identifying current or future skill needs, by enterprise size

Variables	Enterprise size		
	10-49	50-249	Total
The owner/ the general manager	37.9	0.0	26.4
The human resources manager/training director (if different from above)	16.7	51.8	27.3
The management team	28.4	19.9	25.8
A group formed by representatives of the management team and employees	0.7	5.4	2.1
Other	16.3	22.9	18.3
Total	**100.0**	**100.0**	**100.0**

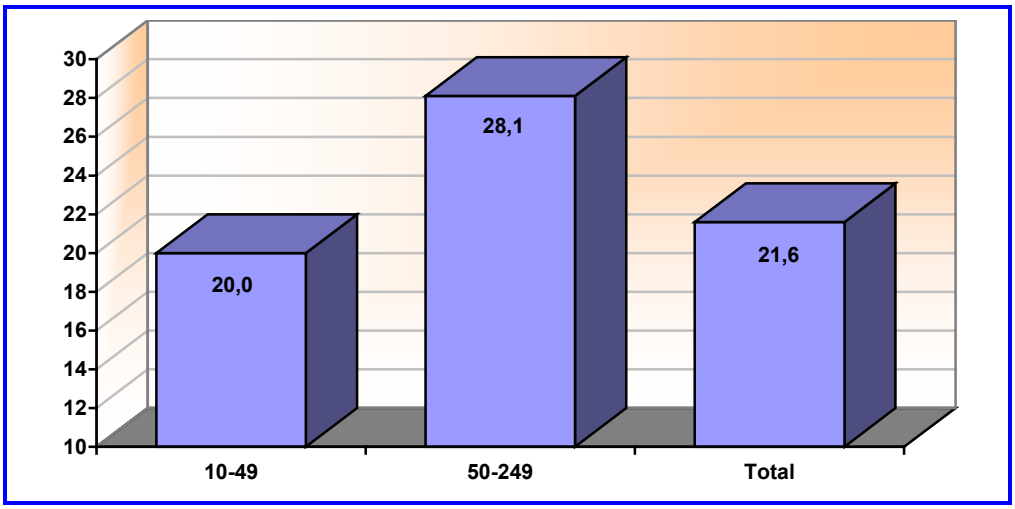
Only enterprises who have a special person or group for this task
Source: Ikei and ENSR partners, CODE Leonardo project

In two thirds of the small enterprises identifying skill needs is a task of the general manager or management team. Only 1 of 6 small enterprises there is a specific human resources manager with this responsibility.

In 50% of the medium sized enterprises a HR manager or training director is responsible for identifying skills needs.

3.8. SKILL SHORTAGES/GAPS IDENTIFIED BY ENTERPRISES

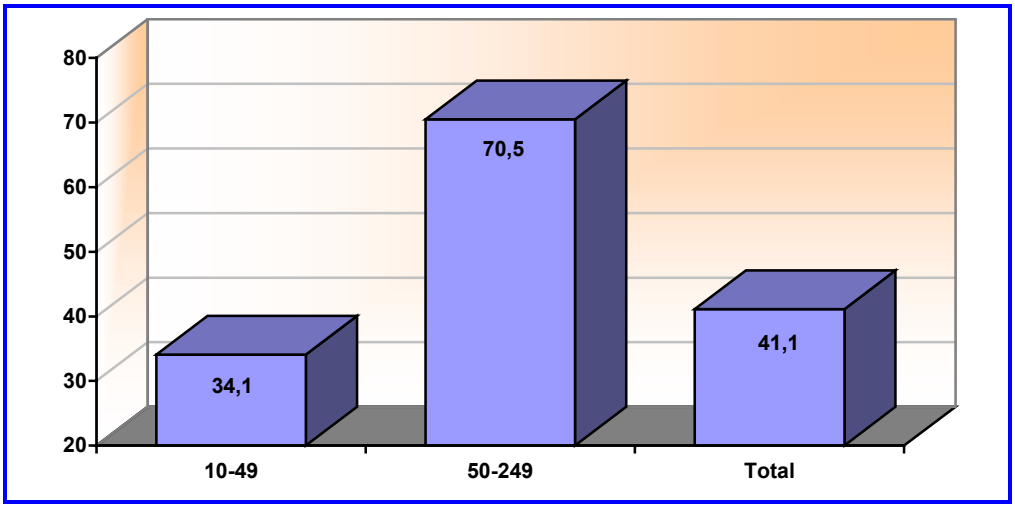
Graph 3.8.1 Percentage of enterprises agreeing or totally agreeing with the statement 'My enterprise is currently experiencing a lack (shortage) of skilled labour', by enterprise size



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Shortage of skilled labour seems to be the case for 20% of the small and nearly 30% of the medium sized enterprises in manufacturing in The Netherlands.

Graph 3.8.2 Percentage of enterprises agreeing or totally agreeing with the statement 'My enterprise currently needs to upgrade the competencies and skills base of its workforce', by enterprise size



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

The need to upgrade the competencies and skills of the workforce in general is felt by over 70% of the medium sized and 34% of the small manufacturing enterprises.

Table 3.8.1 Relevance of different competence areas according to the enterprises' identified needs, by enterprise size

Variables	Enterprise size		
	10-49	50-249	Total
Engineering and manufacturing	2.1	2.7	2.2
Sales and Marketing	2.1	2.5	2.2
Management, finance	1.6	2.2	1.8
ICTs, computers	1.8	2.3	1.9
Office work	1.5	1.8	1.6
Personal skills	2.1	2.7	2.2
Language abilities	1.5	2.1	1.6
Environment protection	1.6	2.0	1.7
Health and safety issues	1.9	2.4	2.0

Results from '1'= no need for my enterprise to '4'= very urgent need for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

The need to upgrade skills in manufacturing SMEs is felt mostly in the areas of 'engineering and manufacturing', 'personal skills' and 'sales and marketing'. Of the medium sized enterprises 60 – 75% indicates a need (or urgent need) for the de-

velopment of skills and competencies in these areas for their workforce. This applies also for about 40% of the small companies. This is reflected in the average scores in table 3.8.1.

3.9. BARRIERS FOR ENTERPRISES TO ENGAGE IN COMPETENCE DEVELOPMENT ACTIVITIES

Table 3.9.1. Relevance of different barriers for enterprises to engage themselves in competence development activities, by enterprise size

Variables	Enterprise size		
	10-49	50-249	Total
Insufficient budget/costs are too high	0.9	1.1	0.9
Employees' workload makes these activities difficult to organise	1.1	1.1	1.1
Too difficult for the enterprise to assess its own knowledge/skill needs	0.5	0.4	0.5
Lack of information on the possible sources of knowledge/skills	0.2	0.3	0.3
The available sources of skills and knowledge are unsatisfactory	0.3	0.3	0.3
Lack of motivation from the employees	0.4	0.6	0.5
Risk of trained employees being 'poached away' by competitors	0.5	0.6	0.5
Lack of support by the government (guidance, subsidies,...)	0.6	0.6	0.6

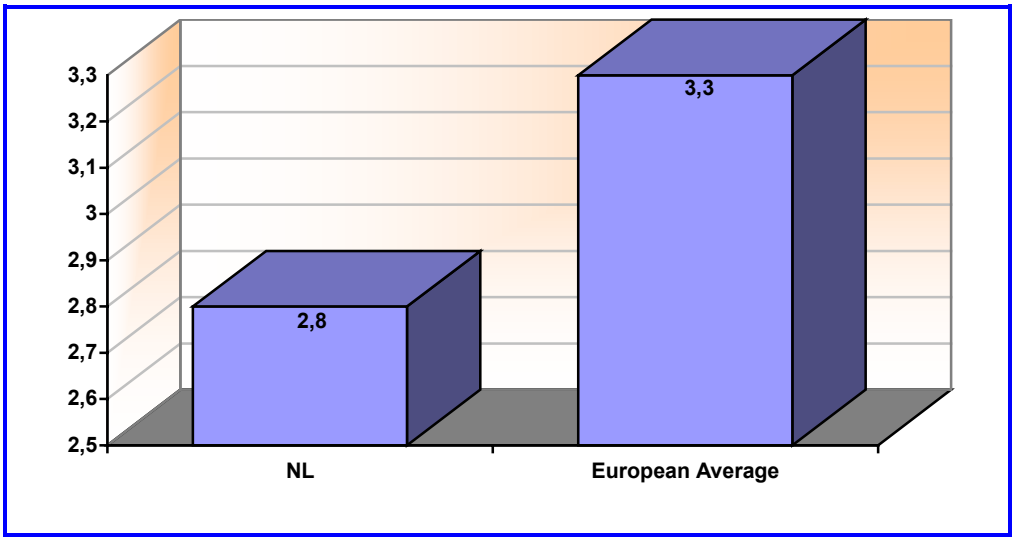
Average scores computed from '0'= not a barrier; '1'= a moderate barrier and '2'= a big barrier for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Barriers in SMEs for engaging in competence development can be of different nature. The barriers 'employees workload' and 'costs/budget' are rated highest.

3.10. COMPARISON WITH EUROPEAN AVERAGE RESULTS

3.10.1. Attitudes of the enterprises towards competence development needs

Graph 3.10.1 Importance attributed by enterprises to the competence development activities for sustaining their competitiveness, comparison between the national and the European average



Results from '1'= Not important to '4'=very important
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Dutch manufacturing SMEs score significantly lower on the importance of competence development for maintaining competitiveness. On the other hand the scores of medium sized enterprises in the Netherlands are equal to the European average.

3.10.2. External-to-the-enterprises sources of knowledge and competence

Table 3.10.1 Relevance for the enterprises of different actors as sources of knowledge and competencies, comparison between the national and the European average

Variables	NL	European Average
Recruitment of new external personnel with required new competencies	2.1	2.5
Suppliers	3.1	2.9
Clients	3.4	3.2
Competitors and business colleagues	2.5	2.6
Consultants and accountants/auditors	2.6	2.6
Universities and training centres	1.9	2.2
R&D centres and technical experts	1.7	2.1
Business and Trade Associations	2.5	2.4
Government & public agencies	1.9	2.0

Results from '1'=not relevant for my enterprise to '4'=very relevant for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

'Clients' and 'suppliers' are rated relatively high as sources of knowledge and competence by Dutch manufacturing SMEs. They rate 'recruitment of new personnel', 'universities/ training centres' and 'R&D centres / experts' relatively low. Dutch medium sized enterprises are more equal to European averages.

3.10.3. Practices for increasing enterprises' competence levels

Table 3.10.2 Relevance of different practices for increasing the enterprises' knowledge, competence and skill base, comparison between the national and the European average

Variables	NL	European Average
External-to-the-enterprise practices		
Visits to expositions/trade fairs	2.6	2.7
Attendance to conferences/seminars provided by external personnel	1.8	2.1
Attendance to training courses provided by external-to-the enterprise personnel	2.5	2.5
Co-operation with other enterprises	2.3	2.2
Study visits to other enterprises/institutions	2.1	2.0
Job rotation and exchanges with other enterprises	1.4	1.5
Reading of information available in trade and sector magazines, publications	2.5	2.6
Reading of information available in Internet (websites, databases, etc)	2.4	2.5
Analysis of patents and licenses	1.7	1.9
Internal-to-the-enterprise practices		
Internal training courses/seminars provided by own personnel	2.0	2.3
Self-study activities during working time	1.8	2.3
On the job learning/learning in the daily work (for current personnel)	2.8	3.0
Job /task rotation (in-house)	2.4	2.7
Coaching/guidance activities for staff by other people in the enterprise	2.8	2.5
Tutor/mentoring systems for new employees	2.3	2.5
Apprenticeship schemes	2.1	2.2
Meetings amongst personnel for knowledge exchange/quality circles	1.9	2.5
Innovation and R+D activities	2.1	2.4

Results from '1'=not relevant for my enterprise to '4'=very relevant for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

There seems to be little difference in the relevance of different practices for increasing knowledge, competence and skills between manufacturing SMEs in Europe and in The Netherlands. Score-patterns appear to be the same. Dutch SMEs score relatively lower on a whole range of practices with the exception of 'cooperation with other companies', 'and visits to other companies/institutions' and 'coaching activities within the enterprise', where the scores are slightly above average. The ratio between the average importance of internal and external activities is about the same. Internal activities are estimated somewhat more relevant by SMEs in The Netherlands as well as in Europe.

Table 3.10.3 Percentage of enterprises, according to their preference of formal/informal training practices, comparison between the national and the European average

Variables	NL	European Average
The formal training acquired in a course (external or internal)	12.1	5.5
The informal training and knowledge acquired on the job	58.7	38.9
Both equal	27.9	54.4
Don't Know/ No answer	1.3	1.1
TOTAL	**100**	**100**

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Preferences for formal versus informal training practices seem to be somewhat more outspoken in The Netherlands than in Europe as a whole. Both show however a marked preference for informal practices.

3.10.4. Occupational groups benefiting from competence development activities

Table 3.10.4 Percentage of enterprises, according to the occupational groups mainly benefited from enterprises' external and internal competence development activities, comparison between the national and the European average

Variables	NL	European Average
External-to-the-enterprise practices		
Directors and managers	58.1	67.0
Middle management, technicians	66.5	67.6
Manual workers, operators	26.1	19.3
Clerks, administrative personnel	28.9	14.1
Internal-to-the-enterprise practices		
Directors and managers	21.8	31.0
Middle management, technicians	64.7	74.4
Manual workers, operators	60.6	54.7
Clerks, administrative personnel	17.6	18.4

Vertical totals may sum more than 100% as enterprises were requested to identify the two groups mostly benefited
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

The occupational groups benefiting most from competence development activities of SMEs are about the same in The Netherlands as in Europe.

3.10.5. Formalisation and diffusion of the in-house knowledge

Table 3.10.5 Percentage of enterprises with formalised management tools, comparison between the national and the European average

Variables	NL	European Average
A formal organisation chart	58.7	62.4
A formal strategic plan	58.9	48.2
Written manual(s) describing the main tasks and activities of each working post	87.5	66.0
Written manual(s) describing the productive standards and routines	75.5	56.8
Quality management systems	69.4	66.6
ISO certifications (9000, 14000, others)	37.6	40.5

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Formalised management tools seem to be used in The Netherlands to a somewhat greater extend than in Europe, in particular written manuals.

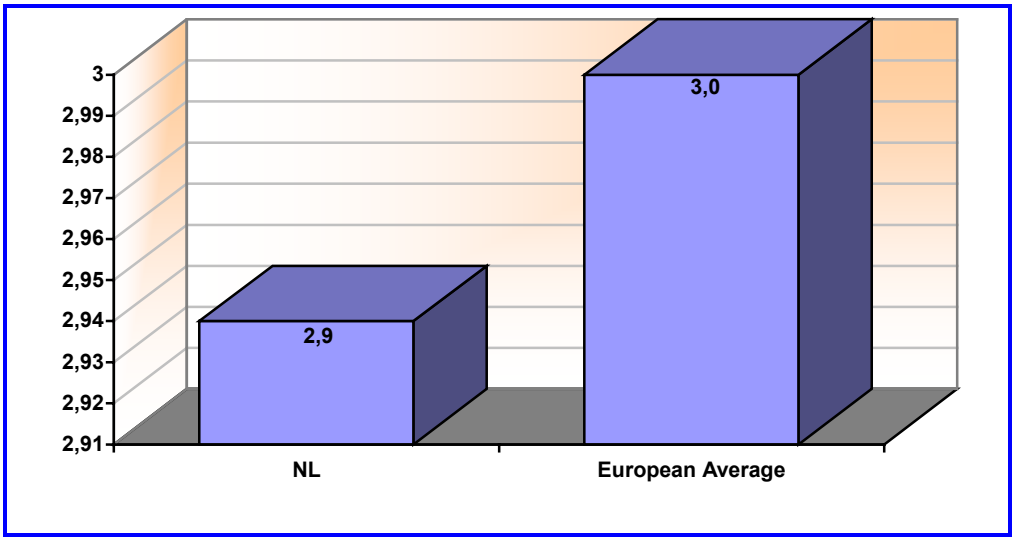
Table 3.10.6 Percentage of enterprises with formalised human resources management tools, comparison between the national and the European average

Variables	NL	European Average
Defined process(es) for the recruitment and selection of personnel	41.6	34.1
Formal system(s) for evaluating the personnel performance	54.2	34.4
Formal system(s) for evaluating the personnel training needs	37.9	32.7
A written training plan	38.0	36.9
System(s) for collecting employees' suggestions related to work issues	52.6	50.7
Meetings to inform employees on changes/developments about job/enterprise	84.0	80.0

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project.

Dutch manufacturing SMEs seem to use formalised HRM tools more often than European SMEs on average. With regard to 'evaluating personnel performance' Dutch SMEs seem to attach more importance to formalised systems.

Graph 3.10.2 Assessment of the degree of dissemination of relevant knowledge and information through the organisation, comparison between the national and the European average



Results from '1'= Very badly disseminated to '4'=Very well disseminated
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

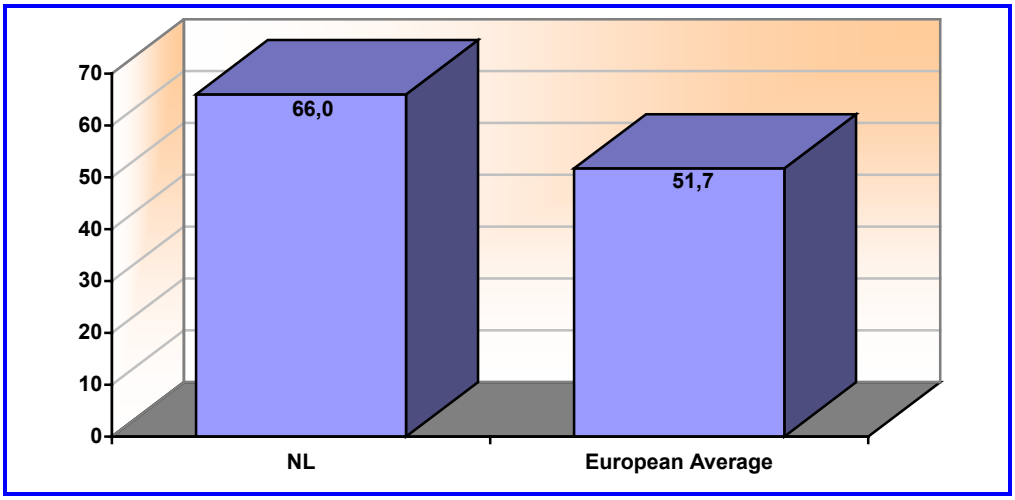
Table 3.10.7 Preference of enterprises of formal versus informal tools for disseminating relevant knowledge and information within the organisation, comparison between the national and the European average

Variables	NL	European Average
Formal mechanisms	3.6	9.7
Informal mechanisms	70.5	48.3
Both equal	25.9	41.8
Don't Know/ No answer	0.0	0.2
Total	**100**	**100**

All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Dutch SMEs seem to favour informal tools for disseminating relevant knowledge compared with the 'average' European SME.

Graph 3.10.3 Percentage of enterprises that suggest to have databases where relevant-to-the-enterprise knowledge, experiences and documents are stored for subsequent use, comparison between the national and the European average



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

In manufacturing SMEs in The Netherlands the use of databases for disseminating information seems to be more widespread than in Europe on average.

Table 3.10.8 Characterisation (updating and accessibility) of databases available within enterprises, comparison between the national and the European average (% of enterprises)

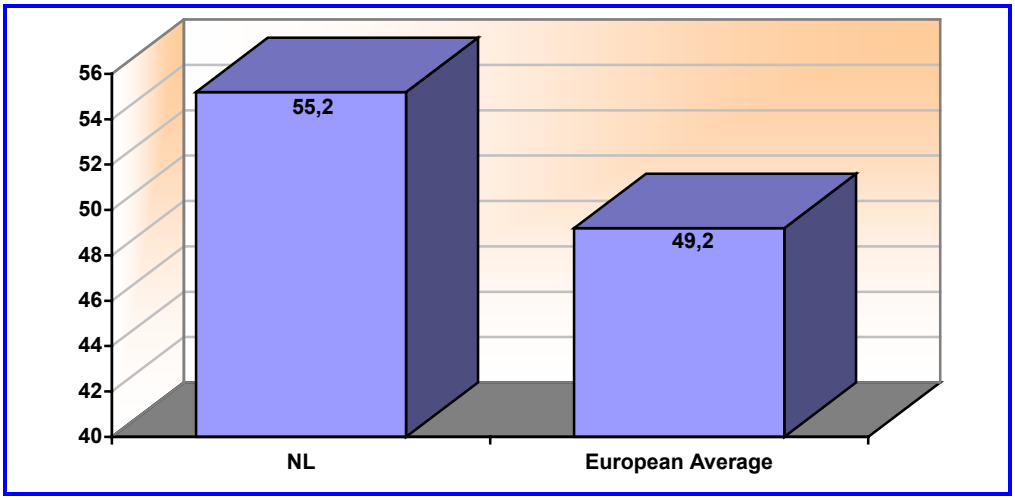
Variables	NL	European Average
Databases are periodically updated	100.0	94.2
Databases are accessible through ICT-based systems (i.e. Intranet)	67.1	68.7
These databases are accessible to		
All the enterprise's workforce	28.1	23.4
Only allowed personnel (including management board)	59.1	64.1
Only the management board	11.4	11.7
Don't know/no answer	1.4	0.8

Data referred only to enterprises with databases
Source: Ikei and ENSR partners, CODE Leonardo project

The way databases are used, updated and accessed in Dutch SMEs show only minor differences with the European average.

3.10.6. Scanning competence development needs

Graph 3.10.4 Percentage of enterprises who suggest to have a special person or group responsible within the enterprise for identifying current or future skill needs, comparison between the national and the European average



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Table 3.10.9 Percentage of enterprises according to the person/group(s) responsible of identifying current or future skill needs, comparison between the national and the European average

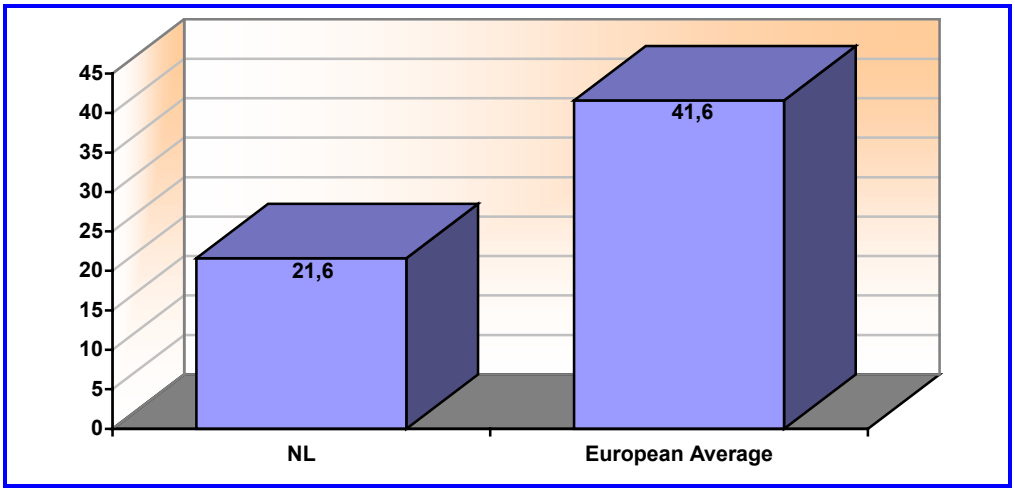
Variables	NL	European Average
The owner/ the general manager	26.4	30.0
The human resources manager/training director (if different from above)	27.3	16.2
The management team	25.8	38.7
A group formed by representatives of the management team and employees	2.1	7.1
Other	18.3	8.1
Total	**100**	**100**

Only enterprises who have a special person or group for this task
Source: Ikei and ENSR partners, CODE Leonardo project.

In Dutch manufacturing SMEs the task of identifying current and future skills needs is somewhat more frequently appointed to a special person, especially to a HR manager. Elsewhere it is more often a collective responsibility for a team or group of persons. (Or responsibility is more diffuse or less formalised)

3.10.7. Skill shortages/gaps identified by enterprises

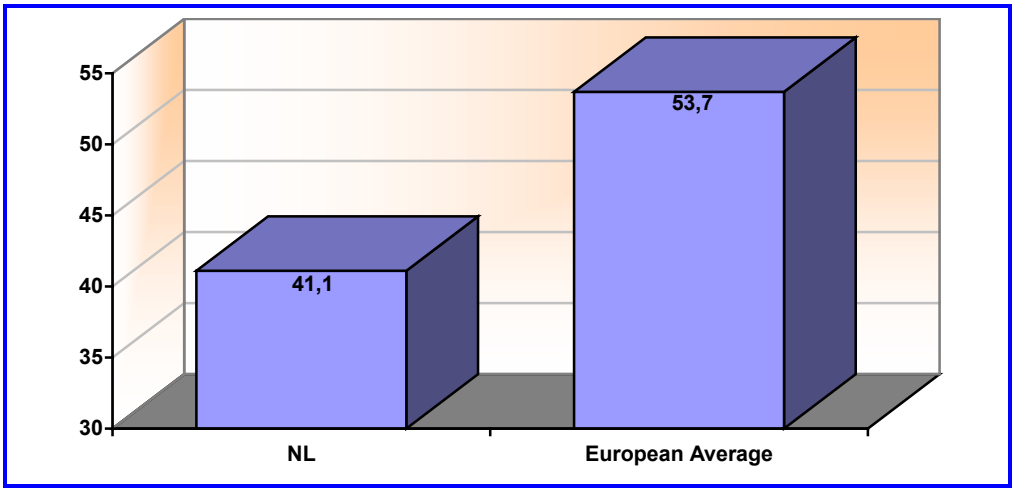
Graph 3.10.5 Percentage of enterprises agreeing or totally agreeing with the statement 'My enterprise is currently experiencing a lack (shortage) of skilled labour', comparison between the national and the European average



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

A shortage of skilled labour seems to be a European problem in manufacturing SMEs. In The Netherlands this problem seems relatively small compared to other European countries.

Graph 3.10.6 Percentage of enterprises agreeing or totally agreeing with the statement 'My enterprise currently needs to upgrade the competencies and skills base of its workforce', comparison between the national and the European average



All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

This seems also the case for the need of upgrading skills, although the differences between Dutch SMEs and the European average are less pronounced.

Table 3.10.10 Relevance of different competence areas according to the enterprises' identified needs, comparison between the national and the European average

Variables	NL	European Average
Engineering and manufacturing	2.2	2.2
Sales and Marketing	2.2	2.4
Management, finance	1.8	1.9
ICTs, computers	1.9	1.9
Office work	1.6	1.8
Personal skills	2.2	2.1
Language abilities	1.6	2.0
Environment protection	1.7	1.9
Health and safety issues	2.0	2.0

Results from '1'= no need for my enterprise to '4'= very urgent need for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

Only in the case of 'language abilities' there seems to be more than a minor difference between Dutch and European manufacturing SMEs with regard to the relevance of the different competence areas.

3.10.8. Barriers for enterprises to engage in competence development activities

Table 3.10.11 Relevance of different barriers for enterprises to engage themselves in competence development activities, comparison between the national and the European average

Variables	NL	European Average
Insufficient budget/costs are too high	0.9	1.1
Employees' workload makes these activities difficult to organise	1.1	1.1
Too difficult for the enterprise to assess its own knowledge/skill needs	0.5	0.5
Lack of information on the possible sources of knowledge/skills	0.3	0.5
The available sources of skills and knowledge are unsatisfactory	0.3	0.5
Lack of motivation from the employees	0.5	0.8
Risk of trained employees being 'poached away' by competitors	0.5	0.6
Lack of support by the government (guidance, subsidies,...)	0.6	0.8

Average scores computed from '0'= not a barrier; '1'= a moderate barrier and '2'= a big barrier for my enterprise
All enterprises
Source: Ikei and ENSR partners, CODE Leonardo project

It seems that the relative height of barriers is the same for Dutch and European SMEs, although the barriers in the rest of Europe seem to be a little more pronounced, in particular 'lack of motivation of the employees'.

3.10.9. General remarks about differences between Dutch manufacturing SMEs and European averages

It seems that there are some differences between Dutch and European SMEs in general regarding competence development. Three patterns can be observed.

1. Characteristic for Dutch SMEs in general seems that they are 'formalised' a bit more than their average European counterparts. Tasks in determining needs appointed to specific functionaries, the use of formalised management and HRM tools, availability and accessibility of databases, preference for informal dissemination methods are more characteristic for Dutch SMEs.

2. It seems that the need for competence development and the barriers preventing competence development are somewhat less in The Netherlands compared to Europe on average. This might be caused by the fact that

relatively good infrastructures for competence development is available in The Netherlands and that relatively many SMEs use it.

3. It seems that Dutch SMEs place more value on cooperation with other companies (employers associations, colleagues, suppliers and clients) than the European average. This might be explained by a different structure of cooperation between companies. Many Dutch enterprises are part of larger structures of joint ownership and of structural supplier and customer relationships.

3.11. THE CASE STUDY: NORMA BV

For the case study we selected an SME that is a relevant example for its involvement in competence development activities for its workforce. We carried out an in-depth interview with the general manager of NORMA.

NORMA is a machine shop that produces high-precision machine parts in metal and synthetic materials. NORMA is a supplier of high-precision parts and modules to industrial companies in the Netherlands and Germany. It works in close co-operation and in long-lasting relationships with customers. NORMA delivers series of products with a high degree of difficulty, complete modules and different services, such as engineering. NORMA follows the latest technological developments and pursues an innovative policy. The company exists for over 50 years. The present manager recently succeeded his father as general manager.

The staffs of NORMA consist of 85 workers. About 10 of them are trained on a higher technical level and 75 on secondary level of vocational training. The positions of the producing workers are specialised according to the type of tooling (milling, grinding, turning, etc.) and the type of machine they are working with. Gradually production planning is becoming more important and a growing number of workers have a position in planning the process, programming and developing tooling strategies.

The company has no difficulties in filling vacancies: it has a good reputation and the type of positions it offers is unique in the region.

The company has on average 3 apprentices in the dual training system and also offers opportunities for a number of trainees and graduating students of secondary and higher vocational education.
It takes about 3 years for school-leavers to develop into skilled workers. A necessary precondition is to have feeling for the job and especially feeling for working very precisely.

3.11.1. The management philosophy of NORMA

In order to stay competitive with low-cost countries, innovation power is becoming increasingly important. Manufacturing has to be less expensive, faster, and more flexible. To make innovations possible close relations with customers and suppliers are essential. This network structure also influences the organization: it has to be open, informal and flexible. The company also innovates as an individual company, with flexible production automation as well as with marketing and sales.

3.11.2. Competence development policies of NORMA

Competence development is closely linked to the development of the company as such. The development of the company starts from its mission and management philosophy. Continuous development is, in the vision of management, a precondition for the company to maintain its position in the markets in which it operates. Quality is largely determined by the knowledge, craftsmanship, and the motivation of the employees. The company can only be successful in the high-tech market with employees who master the latest technologies. Therefore, with regard to education and training, the company maintains a very active and non-bureaucratic strategy. It capitalizes on continuing education and training in the latest machining technologies, which bears fruit in the long run.

Two elements are considered important: quality and precision standards and price. Quality and precision standards are, in the short run, given by customer-specifications. To secure quality standards procedures according to ISO 9001 and 14001 have been implemented. So the main struggle for the company is to keep prices at a competitive level. It can do so by constantly focussing on the possibilities of a more efficient production to keep costs low. One of the main areas which are decisive for low costs is the degree of capacity utilization. It needs constant reflection on all levels in the organization, in production planning as well as execu-

tion, to raise the degree of capacity utilization. One of the important areas is the development of efficient tooling strategies. The effect on staffing is that in production planning more highly skilled labour is required and cooperation between planning and execution has to be promoted. Workers have to develop a broader look at their own tasks and their own role in the company. Their understanding of the significance of their jobs within the framework of the strategy and the functioning of the company is important.

3.11.3. Competence development and the strategy of NORMA

Competence development is interwoven with the strategy of the company.
To promote the strategy and development of the company there is a big emphasis on competence development and HRM-policy is geared to this strategy. Workers are encouraged to participate in training activities.
NORMA also uses a system for measurement and evaluation of employees' performance. Assessment and job evaluation talks are held regularly to monitor competence development needs. This method contributed to a nomination for the P&O Award in the Metal Union in 2000, and in 2002 to the certification according to the Investors in People standard.
NORMA is an accredited training site. That means that it employs instructors who have completed Internship Instructor in Metalworking training.
There are two categories of trainees:

- Employees who attend training sessions once a week and work four days a week. They have an apprenticeship contract.
- Students who complete their internship.

In 2003 NORMA has participated in an exchange project for interns from abroad. For a period of six weeks, German secondary-school students came to the Netherlands to complete their internship, and interns from the Netherlands visited German businesses.
In the company workers are trained on the job as well as through external courses. Training on the job is mainly done by experienced craftsmen. NORMA is one of the few smaller companies that publicises company news on a regular basis for all employees.

3.11.4. Conclusion

NORMA is regarded as a 'good-practice case' because it successfully combines the elements necessary for success in the long run: economic strategy, human resources policy and competence development. Not only to the benefit of the company but also in the interest of its employees.

4. RESULTS FROM THE WORKING SESSIONS

In the working sessions we consulted experts from the world of policy, social partners and experts in the field. The results of the sessions are in this chapter. For a better understanding of the results we start this chapter by short descriptions of the national policy context (4.1), the instruments and incentives used (4.2) and the effects of the policies in The Netherlands (4.3).

4.1. NATIONAL POLICY CONTEXT

Since the mid-1990s, policy has been focused on turning the Dutch economy into a knowledge-based economy. This involves not only stimulating innovation, entrepreneurship and economic development but also improving the competences and employability of the workforce. Lifelong learning is an important policy objective in this transformation. Policy instruments introduced during the 1990s are directed mainly towards reinforcing the economic structure by stimulating innovation and development of new economic activity. Improving labour participation and the employability of the population are part of this approach.
An emphasis on economic motives is also manifested in the parties involved in policy development. At government level this not only involves the Ministry of Education, Culture and Science and the Ministry of Social Affairs and Employment, but also the Ministries of Economic Affairs and the Ministry of Finance. Further, the social partners and the European Union play an important role (CEDEFOP, 2002).

The roles of the ministries with respect to vocational training and competence development of the working population are the following:

- The Ministry of Education, Science and Culture is responsible for initial vocational education and directly funds the Regional training centres (ROC's) and Colleges for higher vocational education. ROC's are vocational education institutes, which provide initial secondary vocational education, general adult education, citizenship courses for immigrants and initial and post-initial training for both the employed and job seekers.
- The Ministry of Economic Affairs supports entrepreneurial training for employees and job seekers. Most of the policy measures of the Ministry of Economic Affairs are related to promoting innovation and investment in new economic activity. Regulations that stimulate competence development are directed toward employers and business start-ups.

- The Ministry of Social Affairs and Employment focuses on promoting labour market participation, equal opportunities and reintegration in the labour market and is offering training opportunities for disadvantaged groups.
- The Ministry of Finance contributes to individual spending on education and training in an indirect way through tax reductions.

With reference to the educational system, it is clear that involvement of the government is still primarily concerned with the initial phase of education and training where the focus is upon equipping young people for a lifetime of learning. Up to now, policy has largely focused on enabling everyone to acquire a starting-qualification whereby the assumption is that this creates a basis for further learning.
Learning and working are increasingly seen as essential aspects of the life cycle. In this regard, the division of responsibility involves that government is mainly concerned with risk categories, for example those not in possession of a start qualification, while the other actors are more concerned with further education and training (CEDEFOP, 2002).

Job-related training of employees, for example, mostly takes place through employer sponsored internal and external courses and informal training in the work situation. Although a large part of this field is left over to market forces, collective agreements between the social partners also play an important role. As a consequence of collective bargaining agreements at industry level, levy systems have been set up in a lot of sectors. These levies are allocated to sectoral training funds, known as *O&O fondsen* (Baaijens et al., 1998). Since this system is one of the main programmes in the Netherlands for promoting training of the employed, it is included as a specific instrument.

The government has an increasing commitment to a greater degree of intensity in the interaction between publicly financed providers of vocational education and training with a variety of stakeholders in their direct environments to create learning regions in the form of regional knowledge networks. To this end, the government is of the opinion that ROCs need to become 'open learning centres'. With a view to facilitating the articulation between ROCs and regional labour markets, a number of 'Techno-centres' were established since 2000. They are intended to promote the active exploration of bottlenecks in regional and local labour markets (exclusively in technical professions), the exchange of knowledge between voca-

tional education institutions and regional businesses, and encourage closer cooperation between ROCs and employers (CEDEFOP, 2002).

The position of the Dutch government on vocational education and training can be summarized in four main policy responsibilities:

- to provide for initial education
- to provide for basic vocational education to guarantee a starting qualification for everyone
- to care for disadvantaged groups, unemployed and low skilled groups with a large risk to become unemployed
- to create equal opportunities for entering the labour market (women, immigrants, school leavers, age groups, etc)

The role of government in competence development and in keeping knowledge and skills of employees up to date is limited.
The main responsibilities in this area have to be carried by employers, employees themselves and their organisations. The role of government in this area is supplementary and limited to stimulating and facilitating investment in 'human capital'.
In the last decade the main instruments are fiscal incentives for all fee-earners, support for new initiatives in the supply of training, financing campaigns for raising the awareness of the importance of lifelong learning and competence development and measures to stimulate the supply side of the training market.
The principle underlying the policies of Dutch government is that government intervention is limited to facilitating initiatives by the social partners, individual employers and employees and to intervene if market imperfections prevent or hamper investment.

Recent developments regarding specific stimulating regulations and policy measures are the following.
Firstly, the announced introduction of a financial support system of individual learning accounts (ILA) in 2003 has been delayed.
Secondly, in January 2003 the cabinet reacted to an advice by the Social and Economic Council (SER) that it would reconsider its policies taking a "complementary responsibility of government, social partners and educational institutions" as the starting-point. The cabinet announced to start an interdepartmental platform to coordinate policies on lifelong learning.
This platform should also consider:

- the effectiveness of the present instruments to promote lifelong learning and competence development activities
- the present policy model and reviewing its alternatives
- to develop a working plan for the implementation of APL (Accreditation of Prior Learning)
- to develop a plan for new dual training routes
- to study the possibilities to create a greater transparency of training supply
- to suggest ways to diminish the proportion of working people without a starting qualification.

A third recent development is that fiscal incentives for employers regarding costs of training have been abolished in January 2004. The obvious reason for this was an evaluation study that concluded to a lack of effectiveness of fiscal incentives.

Costs do not seem to have a predominant influence on decisions about training within companies. Perceived need for training and quality of training are more likely to influence decisions. If perceived need is low, costs may be more influential. In these cases spending on training is regarded as cost rather than as an investment. If perceived need (of the decision maker) is high then a reduction of costs will have little influence on decisions.
The evaluation study seems to have supplied the argument to end tax reduction measures as part of reducing government expenditure in 2004.

In the future policies on competence development will probably be integrated into the wider area of regulations concerning peoples course of life (from the cradle to the grave), in which periods of education and training, of working, of care for children or family and of rest will alternate in individual patterns.
Also policies on competence development will be intertwined with regulations concerning distribution and management of knowledge and stimulating innovation (new products, new production techniques and application of scientific research results). A close relationship between needs for competence development and innovation processes within the enterprise can be observed. Therefore coordination between regulations in those two fields is required because of their mutual dependence.

4.2. INSTRUMENTS AND INCENTIVES

Overview of instruments and incentives in The Netherlands

1 *Deduction of tax on wages of formerly unemployed employees participating in training.* This is a fiscal incentive for employers to obtain a basic vocational qualification.

2 *Experiments Individual learning accounts (ILA).* This is an experiment to increase the level of education of the population, improving employees' employability, increasing citizens' participation in programmes for competence development, specifically those aimed at older employees, less educated employees and ethnic minorities, widening the interest in continuing education, increasing individuals' motivation to continue learning on a regular basis, increasing freedom to set one's own learning aims, and think about one's own future, improving demand and control of the educational market.

3 *Investors in people label.* This certification is developed to award companies that invest in the employability of their employees and use career advisers; government subsidizes this private initiative.

4 *Employability-adviser*. Pilot project that provides HRM consultancy for SMEs.

5 *Framework regulation Education* (KRS); This subsidy for employers offers to those at risk of unemployment a tailor-made training programme to improve their chances in the labour market.

6 *Regulation training impulse*. This regulation is set up to establish innovative projects for training employees to a higher level of vocational qualification; it provides a subsidy for employers whose employees participate.

7 *Sectoral training funds*. (O&O-fondsen) Set up by social partners to promote training of the employed; Levy

4.3. IMPACT OF INSTRUMENTS AND INCENTIVES

On some of the above mentioned instruments and incentives studies have been done to evaluate the impact.

4.3.1. Sectoral training funds

O&O-funds (development and training funds) are sector initiatives by the social partners in sectors and sub-sectors. They are based upon collective labour agreements. The funds are acquired by payment of a certain percentage of the wages of every enterprise in the sector subject to the collective labour agreement. O&O-funds are preventing 'free rider- behaviour' by enterprises with regard to training employees in the sector.
The goals of O&O-funds are generally to promote training of employees in the sector and to stimulate new initiatives in training. In this way they contribute to employability of employees in their sectors. O&O-funds pay the costs of training and, often, for the hours of training within certain limits, depending on the number of employees in the enterprise. O&O-funds are a very powerful instrument for promoting training within companies. They not only pay for training but also help develop new training; they experiment with new forms of training, pay for research in training needs, advice employers to develop training policy, etc.

The Sectoral training funds (O&O funds) form the backbone of the Dutch policies on training of the employed. They can be divided into training funds (known as *Scholingsfondsen*) and educational funds (*Opleidingsfondsen*). Training funds are sectoral funds, which focus on training and education of the employed. They obtain their resources from levies on the gross wage bill. Education funds are sector-exceeding funds and government funds which focus on indirect promotion of training. They obtain their resources mostly from national and European subsidies. The number of training funds has increased from 72 to 99, whereby almost 40 % of people in employment are working in sectors with a sectoral training fund. The sectors industry and trade have the most training funds. Also the yearly turnover has increased, to approximately 600 million euro. Two-third is destined for additional training, apprenticeship and employment projects. Extra training for the employed is the most important expenditures category. In 1999 on average 44% of the expenditures were on extra training for the employed. The contribution of the funds to apprenticeship and training of the unemployed has decreased, probably due to the fiscal facility apprenticeship respectively lower rate of unemployment. The distribution of the resources can take place in many different ways, for exam-

ple through a fixed subsidy per training day or vouchers for training (Waterreus, 2002).

4.3.2. Tax incentives

Tax incentives based upon costs of training were available in recent years for both individuals (via income tax) and for employers (via corporation or wage tax).

In 1998, a general tax allowance for training costs was introduced for employers. Extra allowances, over and above this incentive, have been created in recent years for older employees (over the age of 40 years), for small and medium-sized enterprises and for employed people without starting qualification.

In 2001 tax incentives for employers have been evaluated for the first time. The conclusion was that many employers know how to use the fiscal instrument, but feel no motivation to raise their investment in training. Subsidies are 'a welcome extra', because they help to reduce the employers' costs, but do not act as a motivator, partly because those who decide whether an employee can follow a training course are not the accountants who send information to the tax authorities each year.
The effect of the extra incentive for employees over 40 seems to be limited. The main reason is that the design of this fiscal instrument focuses on the employer and does not address the intrinsic motivation of the employee (Oomens, 2002).

4.4. THE RESULTS OF THE WORKING SESSIONS: COMMENTS ON COMPETENCE DEVELOPMENT POLICIES

These comments are based upon interviews with Metaalunie, the umbrella-organisation of SME's in the metal working industry and FNV, the Federation of Labour Unions in The Netherlands.

According to Metaalunie, central government in general is doing to little. Fiscal incentives for training were abolished in 2004 without sufficient argument. The outcomes of a rather superficial research project provided the argument for a decision that fitted in well with the general policy of cutting back government spending. Metaalunie is convinced of the valuable contribution of fiscal incentives for promoting competence development activities, especially in SMEs.

FNV, the Dutch federation of labour unions, sees rapid changes in the Dutch economy in the direction of a 'knowledge based economy'. Competence will be a production factor of growing importance and investment in human capital will be a more central issue. The workforce will have to be prepared for these new challenges and the effects on employment will have to be taken care off. So policy measures have to strengthen resilience of the workforce and to raise productivity, under the slogan 'Work smarter, not longer'. These measures will be a subject for negotiations on collective labour agreements in the coming years.
The 'work smarter'-part of the slogan is also adopted by AWVN, the umbrella organisation of employers organisations.
Policy goals as adopted by labour unions as well as employers organisations for coming years do not differ a great deal. So the agenda for collective labour agreement negotiations looks very much the same for the social partners. Of course there are differences in accent. The perspective of labour unions is focussing more on the workforce as whole, employers unions place more emphasis on the functioning of individual enterprises.
FNV stresses the need for investment in the workforce, in particular in the low skilled part of it. To promote investment in competence development FNV argues in favour of individual training rights for workers and a new role for training funds. In their view training funds should also be supporting types of training that stretch outside the borders of the individual company and branch of industry. To this end systems of settlement between funds should be set up. Both, employer's organisations and labour unions, seem to accept competence development activities within companies as a main responsibility of the social partners, individual employers and employees. The role of government and public services is to provide for an infrastructure of initial and continuous vocational training and education that facilitates competence development and meets the demands of enterprises and employees.

Concerning the development of competence, metal working industry relies mainly on regular vocational education. Adaptations in educational programmes have to be tuned to developments in work. The industry has a profound preference for dual routes of education. Dual routes of vocational education and training stimulate investing in education and training. Metaalunie is an advocate of educational programmes in which competences are the starting-point. Education should be seen as supportive to acquiring competences.

Metaalunie, as a nationwide organization, is sceptical about the effectiveness of regional 'Technocentra'. Metaalunie is opting for a sectoral approach that fits better to the needs of SMEs for development and transfer of knowledge. There are however some initiatives by technocentra that fit in with this approach, for instance a laser-applications centre and a centre for integrated production technology.

Metaalunie postulates that assessment of competences is the basis for competence development. From the assessment a clear picture should emerge of the competences a person possesses and in which directions these competences can be developed. Competence development can be translated into formal recognition and certificates that help labour market transitions. So, not the content of the education programme, but the acquired competences form the basis of certification. The working situation and labour tasks determine the required competences. Education is only a tool for obtaining them. This vision on competence development requires good HRM-practices within companies and the possibility of training that can be tailored to individual needs.
Not all enterprises, in particular the smaller ones, can handle this situation. Lack of expertise in the field of education and training has to be overcome by hiring external expertise. This expertise can be found in educational institutions or specialised HRM-managers and training advisers.

Another idea to stimulate competence development is the instrument of training vouchers, developed by O&O-funds. Vouchers are particularly meant for employees over 45 years of age. Employees have to ask themselves how to use them. They have to ask themselves questions about their current position, their remaining career opportunities and in which areas their competences lag behind. A resulting personal development plan can help determine how to use training vouchers. Training advisers can help to develop a personal development plan. In companies taking part in experiments where training vouchers have been used, 25% of the workforce participated. In the follow up of these experiments each year 10.000 to 15.000 employees in the metal working industry are expected to take part.

Metaalunie is supporting many more initiatives in modernization of education and training. One of these initiatives is the founding of training companies. These 'companies' are places where employees working in the sector can participate in practical training to develop their competences. These institutions will act as full-service training institutions where training programmes will be developed based on

specific needs in the region for specific competences, based on assessment of the needs within enterprises and assessment of employees existing competences.
The biggest problem for many small enterprises is the lack of know-how in finding concrete solutions for competence needs. Especially small enterprise is strongly oriented towards finding solutions for concrete problems in production processes. These changes in production, the possibilities to apply new techniques and to develop competences accordingly, determine their need for support and in the end their competence development policy.

To organize sufficient support METAALUNIE is a strong advocate for so called 'knowledge position research' projects. This type of research looks for trends in sectors, for new combinations of economic activity that are developing and new markets. This leads for instance to new types of enterprises or sub-sectors where new types of (combinations of) competences are needed. On the basis of this kind of study new forms of cooperation and training are being developed, possibly with the help of financial support of O&O-funds or ESF.

Another recent initiative is the development of so-called "Development vouchers" supported by social partners in the metal industry. These vouchers are connected to HRM-policies in enterprises and collective labour agreements. In 2005 a report about an experiment with these vouchers in 30 companies with 850 employees will be published. The idea of 'development vouchers' sprang from:

- deficits in competences of employees following process innovation within enterprises
- the need to enlarge resources for training purposes
- expected changes within enterprises
- the need to promote training advice and training culture

4.5. CONCLUSION

In The Netherlands the role of government regarding competence development activities is limited compared to the role of social partners and enterprise organisations. So the impact of government policies cannot be judged in an isolated way. Because of the complementary roles of government, social partners, individual employers and employees, results in terms of participation in competence development activities cannot be contributed to the activities of only one of the parties

involved. The results have to be judged in terms of creating or influencing necessary and sufficient conditions for participation in competence development.
The information available cannot justify naming specific government measures as 'good practice'.

5. CONCLUSIONS AND RECOMMENDATIONS

1. Competence development is regarded by the vast majority of Dutch manufacturing SMEs as an important issue for sustaining their competitiveness. More than 34% of small manufacturing SMEs and more than 70% of medium-sized SMEs agree to the need for upgrading the competence and skills level of their workforce. This need is bigger as the size of the enterprise increases, although only 20 – 30% of the SMEs explicitly experience a shortage of skilled labour.

2. The main arguments for competence development are keeping up professional knowledge, mastering new machines and equipment and improving personal and social skills. The need to upgrade skills in manufacturing SMEs is felt mostly in the areas of 'engineering and manufacturing', 'personal skills' and 'sales and marketing'. Of the medium sized enterprises 60 – 75% indicates a need (or urgent need) for the development of skills and competencies in these areas for their workforce. This applies also for about 40% of the small companies.

3. The larger the SME the more formal methods and training practices relevant for competence development are applied. The use of formal practices for upgrading competence increases with the size of the enterprise. SMEs are more likely to provide formal training to their employees if they are larger, have a business plan, have an HRM department/manager or are associated with business partners. The percentages of employees that participate in training courses are also slightly higher in larger enterprises, but in the last decade the differences are decreasing. The expenses per employee on firm-provided training are still more than twice as large in large firms (>500 employees) compared to firms with 10-99 employees.

4. SMEs seem to rely more often on informal practices and they prefer informal practices as mechanisms for competence development because they are less costly, can be easily integrated in the firm's everyday activities and can be focussed on the employee's specific individual and work role needs. These practices are in line with the overall preferences of SMEs to operate in an informal and flexible way. The smaller the enterprise the less often

formalised management tools and HRM tools are used. Small enterprises prefer informal mechanisms for disseminating information and knowledge.

5. Most SMEs do not explicitly plan their competence development activities but behave more intuitively on an ad-hoc basis. Although some formal methods for identification of skills gaps have been introduced, especially in the field of HRM-policies, these seem not to have been adopted by SMEs on a large scale. SMEs seem to desire to be very flexible and are afraid to lose flexibility when formalising. Informal practices are widespread among SMEs and SMEs prefer informal training above formal.

6. Clients and suppliers are by far the most relevant sources of knowledge and competence for manufacturing SMEs. The importance of external sources grows with the size of the enterprise, in particular the recruitment of new personnel. Medium sized enterprises do regard external actors more often as important sources of knowledge and competencies than small enterprises do. In particular the relevance of 'recruitment of personnel' and contact with 'universities' and 'R&D centres' is much bigger for medium sized enterprises, probably because of the fact that medium sized enterprises use these instruments and contacts for competence development more frequently.

7. Both internal and external practices are used for increasing the enterprises knowledge, competence and skills. Of the external practices 'visits to expositions and trade fairs' and 'attendance to external training courses' are relatively important as well as 'collecting written information from magazines and the internet'. Internal practices most valued are 'on the job training' and 'coaching and guidance' activities' and for medium sized companies, 'job or task rotation'.

8. The groups benefiting most from external activities are 'managers' and 'middle management and technicians'. 'Middle management and technicians' and 'manual workers and operators' benefit most from internal activities. This pattern applies to small as well as medium sized enterprises. The position, size and type of competences of the different occupational groups probably determine this pattern.

9. The biggest barrier for competence development in SMEs is the workload of employees that allows limited time to spend on formal competence development activities. Costs are also mentioned as an important barrier. Costs however do not seem to have a predominant influence on decisions about training within companies. Perceived need for training and quality of training are more likely to influence decisions. If perceived need is low, costs may be more influential. In these cases spending on training is regarded as cost rather than as an investment. If perceived need (of the decision maker) is high then a reduction of costs will have little influence on decisions.

10. Characteristic for Dutch SMEs in general seems that they are 'formalised' a bit more than their European counterparts. The use of formalised management and HRM tools, availability and accessibility of databases, preference for informal dissemination methods, is more characteristic for Dutch SMEs.

11. It seems that the need for competence development and the barriers preventing competence development are somewhat less in The Netherlands compared to the other countries studied. This might be caused by the fact that relatively good infrastructures for competence development is available in The Netherlands and that relatively many SMEs use this infrastructure.

12. It seems that Dutch SMEs place more value on cooperation with other companies (employers associations, colleagues, suppliers and clients). This might be explained by a different structure of cooperation between companies. Many Dutch enterprises are part of larger structures of joint ownership and of structural supplier and customer relationships.

13. The position of the Dutch government on vocational education and training can be summarized in four main policy responsibilities:

- to provide for initial education
- to provide for basic vocational education to guarantee a starting qualification for everyone
- to care for disadvantaged groups, unemployed and low skilled groups with a large risk to become unemployed
- to create equal opportunities for entering the labour market (women, immigrants, school leavers, age groups, etc)

14. The role of Dutch government in competence development and in keeping knowledge and skills of employees up to date is limited. The main responsibilities in this area have to be carried by employers, employees themselves and their organisations. The role of government in this area is supplementary and limited to stimulating and facilitating investment in 'human capital'. To this end pilot projects and experiments are subsidised (individual learning accounts, investors in people label, training impulse projects, technocentra, etc.). There is a preference for public-private cooperation in developing instruments aimed at stimulating competence development.

15. The Sectoral training funds (O&O funds) form the backbone of the Dutch policies on training of the employed. O&O-funds (development and training funds) are sector initiatives by the social partners in sectors and subsectors. They are based upon collective labour agreements. The funds are acquired by payment of a certain percentage of the wages of every enterprise in the sector subject to the collective labour agreement. O&O-funds are preventing 'free rider- behaviour' by enterprises with regard to training employees in the sector. The goals of O&O-funds are generally to promote training of employees in the sector and to stimulate new initiatives in training. In this way they contribute to employability of employees in their sectors. O&O-funds pay the costs of training and, often, for the hours of training within certain limits, depending on the number of employees in the enterprise.

16. O&O-funds are a very powerful instrument for promoting training within companies. They not only pay for training but also help develop new training; they experiment with new forms of training, pay for research in training needs, advice employers to develop training policy, etc. Competence development will probably be a major subject in negotiations about collective labour agreements in the coming years.

17. In the future Dutch government policies on competence development will probably be integrated into the wider area of regulations concerning peoples course of life (from the cradle to the grave), in which periods of education and training, of working, of care for children or family and of rest will alternate in individual patterns. Also policies on competence development will be intertwined with regulations concerning distribution and manage-

ment of knowledge and stimulating innovation (new products, new production techniques and application of scientific research results). A close relationship between needs for competence development and innovation processes within the enterprise can be observed. Therefore coordination between regulations in those two fields is required because of their mutual dependence.

18. Through the dual education and training system there is a close connection between initial vocational education and competence development activities in manufacturing SMEs. The infrastructure of vocational educational institutions that are responsible for initial vocational education is of much significance for continuing competence development. Many of the courses offered are also open to people in the workforce striving to extend their professional skills (evening and weekend courses).

19. At the moment Dutch government is reconsidering its policies taking a "complementary responsibility of government, social partners and educational institutions" as the starting-point. The cabinet announced to reconsider the effectiveness of the present instruments to promote lifelong learning and competence development activities and to review its alternatives, to develop a working plan for the implementation of Accreditation of Prior Learning, to develop a plan for new dual training routes, to study the possibilities to create a greater transparency of training supply and to suggest ways to diminish the proportion of working people without a starting qualification.

20. The instruments that are considered to further competence development in SMEs are:

- settlements between O&O-funds to allow for a wider range of choice for employees in employer sponsored training (social partners)
- employees rights to use a percentage of working time for competence development activities (social partners)
- vouchersystems (experiments sponsored by O&O-funds)
- individual learning account systems (experiments sponsored by governement subsidies)
- systems for accreditation of prior learning in order to strenghten the effects of competence development on labour market positions of employees

6. ANNEXES

6.1. EXPERTS CONSULTED

Mr. Stan Oude Mulders, General manager NORMA BV
Mr. Andre van der Leest, Secretary Education and Training Metaalunie
Mr. J.P.M. de Kok, research expert on HRM-policy in SMEs
Mr. J. Warning, policy expert FNV Bondgenoten

6.2. LITERATURE REVIEW

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