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

Austrian Final Report

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Executive Summary

More than 99 % of the Austrian companies constitute small and medium sized enterprises and the growth in the number of Austrian businesses in recent years is mainly to be attributed to micro enterprises. Against a background of globalisation and the resultant "competition between national economies" the availability of upto-date knowledge, also within the smallest enterprises, is of increased significance not only for the individual company but also for the economy as such.

Additionally, about two fifth of Austrian SMEs presently indicate to experience a shortage of skilled labour. As a result, particularly for smaller companies facing more severe problems with regard to the acquisition of qualified employees, the improvement of the competence base available in the company becomes more and more important.

Austrian SMEs can be seen to have widely recognised the importance of competence development going beyond "pure" qualification of employees for the sustainable success of the company. Nevertheless, compared to other European countries (Finland, France, Spain and The Netherlands) Austrian SMEs are convinced to a lesser extent that the activities intended to develop the enterprises' knowledge and skill base are a key element for the competitiveness of the enterprise.

SMEs are generally characterised by a higher level of flexibility and a co-operative working climate than larger enterprises which is advantageous for implementing competence development activities. The maintenance of the ability to adapt to the changing framework conditions in order to remain competitive (i.e. the necessity to update obsolete knowledge) constitutes the main trigger for Austrian SMEs to engage in competence development. Smaller companies are, however, confronted with a wider range of barriers hindering the engagement in competence development than larger ones. The most important one constitutes the lack of time to both, strategically plan and participate in respective measures due to the dominance of the daily business.

As a result, the share of SMEs participating in competence development is lower than the respective one for larger enterprises - the participation rate is positively related to the company size. Nevertheless, those SMEs actively promoting the further qualification of their personnel generally do so to a similar extent as the larger enterprises (e.g. with regard to the hours or financial means spent on





competence development per capita). Among the different economic sectors it can be shown that those companies being confronted with more dynamically changing framework conditions (such as chemistry or metal/electronics) are more active in the field of competence development than more traditional economic sectors (such as personal services).

Also the planning of competence development methods and the identification of skill gaps and qualification needs is found to depend on the company size. While larger companies often dispose of a wide range of formalised human resources management tools resulting in a standardised approach for planning and carrying out competence development activities the majority of smaller companies rely on a more "ad-hoc" procedure which is, again, due to the prevalent lack of time and the dominance of the daily business. Due to the limited company size (and the resulting lack of a particular person being responsible for personnel development) it is mainly the owner or general manager who decides that and which measures should be taken. As a result, the degree of involvement of the company in competence development activities strongly depends on the entrepreneur's attitude towards further vocational education.

Generally, SMEs are observed to apply a rather wide range of different competence development activities. They prefer practices for increasing the enterprises' knowledge, competence and skill base that are comparatively easy to manage. Activities which can be assumed to be rather time-consuming and/or less directly associated with the daily work are often rated as being of little relevance for increasing the companies' skill base. Furthermore, SMEs rather rely on more "traditional" education methods (such as on-the-job-training) while larger companies also apply more "modern" instruments (e.g. quality circles). This also implies that Information and Communication Technologies (ICTs) are used to a lesser extent for qualification purposes in SMEs than in LSEs. But also in large companies ICTs are, by now, comparatively rarely used for improving the competence base although a broad range of qualification measures is offered via the internet. Nevertheless, due to their advantages (flexible training schedules, independency of location and time etc.) it is assumed that growth potential is inherent.

No distinct conclusion can be drawn as to whether external or internal methods are more important for Austrian SMEs, yet. Both types are relevant, depending on the topic to be covered and/or the occupational group to be addressed. Therefore, a





combination of external and internal methods is generally seen to be advantageous in order to effectively provide both, an external-to-the-company perception and a transfer of specific in-house knowledge. It might, however, be assumed that in many cases internal competence development methods are not recognised as such although they are widely applied in companies.

The most important providers for external competence development measures constitute - both, in Austria and at the European level - clients, suppliers and training providers (here, particularly the Austrian Chamber of Commerce's Institute of Business Promotion (WIFI) is important for Austrian SMEs). Thereby, suppliers are used more often the smaller the companies are, whereas with regard to training providers the opposite could be observed.

The major topics covered by competence development measures within Austrian SMEs might be summarised to include industry specific knowledge, management, computer/IT skills and soft skills. Generally, the smaller the company the less soft skill/personality training and the more industry specific/technical training is conducted being in line with the already mentioned preference of the smallest companies for directly applicable knowledge.

Regarding the occupational groups benefiting from competence development measures it is mainly qualified white- and blue-collar workers who participate in respective activities. This is particularly to be attributed to the fact that people already having attained a higher educational level during their primary vocational education are less averse to further education than persons disposing of a lower level degree.

Next to continual learning of individual persons, organisational learning becomes more and more important in Austrian SMEs. Organisational learning and knowledge management are seen to result not only in better products/services but also in positive effects within the company (e.g. higher level of creativity or motivation among employees). Nevertheless, although a range of knowledge management tools applicable for SMEs are identified in the existing literature no information about their actual application is available. The survey, however, shows that the majority of SMEs (and in particular medium sized enterprises) dispose of databases to store relevant-to-the company knowledge. Furthermore, the share of enterprises allowing all the enterprises' staff to access the respective database is markedly higher in Austria than at the European level. As a result, Austrian SMEs





are rather convinced that the relevant knowledge and information is well disseminated throughout their organisation.

In Austria, there exists a number of public initiatives to foster small and medium sized enterprises to engage in competence development measures, both at the national and regional level. These initiatives either aim at raising entrepreneurs' awareness about the importance of this topic or at providing financial incentives for companies as to this regard. Nevertheless, there still seems to be improvement potential concerning public support for competence development of SMEs' employees.





1 General introduction to the national report

In an economy characterised by an ageing population and continuous structural change the topic of life long learning becomes more and more important. This does not only hold true for individual employees but also for enterprises that have to develop towards "learning organisations" providing a favourable learning climate to their staff.

Supranational, national and regional governments have recognised the necessity to actively promote the development of learning at the work place and also enterprises and employees are generally aware of the importance of continual vocational education. Nevertheless, comparatively little is known about the learning needs of SMEs (where learning typically takes place in a rather informal context) and the measures they apply in order to develop and foster the knowledge already available in the enterprise.

Against this background the study on hand was elaborated with the aim to gain new insight into the attitudes of SMEs towards competence development as well as the benefits expected of and the barriers hindering companies' involvement in respective measures. Furthermore, the study pays special attention to the practices and approaches applied in SMEs for improving the skills and competences available among their employees.

This study being supported by the LEONARDO Da VINCI II-programme of the European Commission was simultaneously carried out in Austria, Finland, France, Spain and The Netherlands. By drawing on an identical methodology, national and cultural differences could be pointed out next to differences among SMEs related to size or sector. The report on hand constitutes the National Report for Austria showing the specific situation for Austrian SMEs in an European context.

The first part of the report provides an overview of the literature published in Austria on competence development in SMEs since 1990 (a catalogue of which is shown in Annex 2). Chapter three summarises the results from an empirical survey among about 160 Austrian manufacturing SMEs being interviewed in 2004 about their attitudes towards competence development, the applied practices and the most important barriers hindering their involvement in further education. In order to provide a substantial analysis of the topic, additional interviews have been carried out with Austrian experts in the field of vocational training (e.g. representatives of employers' organisations, training providers, researchers in the





field of labour market development - for details see Annex 1). The findings of these qualitative in-depth interviews are summarised in chapter four. These analytical chapters are supplemented by "good practice" case studies about an Austrian public initiative fostering SMEs' access to external consultancy and advice in the field of competence development and an Austrian SME having developed a practicable and innovative competence development measure for its employees. The final chapter provides implications drawn from the whole research with regard to the situation of competence development in Austrian SMEs as well as recommendations aiming at public and private actors to facilitate and promote SMEs' participation in competence development.





2 <u>Results from the national literature review. What do we know in</u> <u>Austria on competence development in SMEs so far?</u>

2.1 Definitions used in the national literature on competence development

In Austria, there exists a wide range of different publications dealing with personnel development, vocational training or qualification. Nevertheless, no consistent definitions for the various concepts can be found which is also explicitly mentioned by different authors (e.g. *Kailer*, 2001, p. 13). Regarding the specific concept of competence development the existing research and publication activities are also assessed to be "substantial" (ibid.) but here the identification of a definition is even more difficult. Although many authors discuss different measures and instruments of competence development and their application in Austrian enterprises, respectively, almost none of them provide a definition of the concept.

From a rather general viewpoint, competence development refers to the capability to acquire general strategies to guarantee the development of a suitable behaviour according to the respective situation (see *Markert*, 1998, in *Geyer*, 1999, p. 46ff). As to this respect, the main skills and abilities which are necessary for a competent working process are identified to constitute the following:

- > Knowledge about the importance of job-related tasks for every individual¹
- > Skills and abilities which are necessary to solve the task
- Decision making competence
- Social competence
- Interest in the activities
- > Competence to assess the degree of fulfilment of the tasks

On the basis of this, *Fasel/Kailer* (2001, p. 16ff) as well as *Kailer/Steinringer* (2000, p. 8) understand competence as a combination of the following factors:

<u>Capacity to act</u>: constituting an interaction between explicit knowledge (which can be expressed in words and numbers and disseminated by means of data,

¹ The importance of job-related tasks can be seen to be different for employees and employers. This importance attributed to one's job affects the occupational acting and constitutes the basis of orientation for the other aspects of decision-making and responsibility.





formulas, pre-determined avenues of approach or universal principles) and implicit knowledge (i.e. knowledge based on experience strongly linked to individual persons and difficult to express by words and numbers) as well as skills (abilities that can be trained and routinised)

- > <u>Willingness to act</u>: in how far an individual is motivated to act as foreseen
- > <u>Responsibility</u>: organisational legitimation to act in a specific way

A similar approach is considered by *Kasper/Mühlbacher/Rosenstiel* (2005) who differentiate five aspects of competence:

- Professional-methodical competence referring to the capability to solve problems analytically
- > <u>Social competence</u> in terms of non hierarchic social interaction
- <u>Self-dispositive competence</u> referring to the ability to realistically assess one's own resources (e.g. time management)
- Leadership/management competence in terms of hierarchical social interaction (e.g. management tools, motivation, selection of personnel and personnel assessment)
- > <u>Personal competence</u> referring to specific character traits and attitudes

According to these definitions competence development goes beyond qualification (which is referred to as participation in training courses, learning on-the-job and self-directed learning) in so far that competence development also takes place outside of organised processes for education or further training. This implies that companies have to take into account measures related to the work place and career trace as well as the organisational responsibility of the respective person. Competence development is thereby understood as an interactive process between employees and the company.

2.2 Degree and extent of involvement of SMEs in competence development activities

2.2.1 General aspects on the involvement of SMEs in competence development

The organisation of SMEs is generally characterised by a simple structure which is transparent and easy to over-look. An advantage of SMEs compared to LSEs can





also be seen in their higher degree of flexibility making it easier to integrate qualification activities into the working process. In SMEs also often exists a cooperative working climate facilitating the communication and the exchange of information between employers and employees. (see *Dohnbostel*, 1993, in *Bruckner*, 1996, p. 57ff)

Kailer (1990b, in *Gusenbauer*, 1995, p. 101) distinguishes five groups of small enterprises regarding the implementation of further training activities showing, thereby, the varying intensity of further education activities in small enterprises:

- > Companies without formal further education activities
- Companies where mainly the management attends further education programmes
- > Companies with intermittent education activities
- > Companies with a large number of further education activities
- Companies with an integrated system of further education, consulting and organisational development

2.2.2 Share of Austrian SMEs involved in competence development activities

A study of *Kraus/Kailer* (1991, in *Kailer*, 1991, p. 117) shows that further education is seen as a very relevant topic in Austrian enterprises. More than 70 % of the enterprises think that further education is (very) important for their enterprises.

As a result, *Leitgeb* (1999, p. 60) finds in her thesis that in 1996 about 65 % of Austrian manufacturing SMEs participated in further education activities whereby mainly all medium sized companies (91 %) but only a comparatively small share of micro enterprises (39 %) were involved in such measures.

Schneeberger/Kastenhuber (1998, p. 121) find similar results, namely that 71 % of the Austrian enterprises² participated in further training activities in the last three years. Thereby, the respective share increases with the company size. Very small enterprises show a restrained further education rate whereas almost all medium sized and large companies train their employees.

² of all size classes





Table 1Percentage of enterprises participating in further education activities
within the last three years, by enterprise size

	Participation in further training activities		
1 – 5 employees	61,5		
6 – 14 employees	86,3		
15 – 29 employees	94,9		
30 – 99 employees	97,7		
100 and more employees	100,0		
Total	71,4		

Source: Schneeberger/Kastenhuber, 1998, p. 87

In 1999, about 72 % of the Austrian companies with 10 or more employees active in the production or services sector³ were engaged in vocational training (EUaverage: 62 %). Here, again, a positive correlation between involvement in vocational training and the company size could be found: About two thirds of the companies with 10-19 employees and three quarters of those with 20-49 employees, respectively, offered training measures to their employees. With regard to companies with 50 or more employees the respective share was 90 % or higher. (see *Statistik Austria*, 2003, p. 22f) This positive correlation is also supported by the *Austrian Institute for Small Business Research* (1997, p. 1) and *Kailer/Steinringer* (2000, p. 23f). The latter one come, however, also to the result that the engagement in such activities widely varies among SMEs, so that there exist SMEs even investing per capita more in further education of the personnel than LSEs.

With regard to the different economic sectors, a survey of the *Austrian Institute for Small Business Research* (1997, p. 1) referring to 1996 finds that particularly SMEs of the chemical industry and plastics as well as enterprises in the metal industry were conducting further training activities. The results of the CVTS II-survey for Austria shows that the share of companies⁴ being involved in training activities is lower in the food and textile manufacturing as well as in retail trade than, for example, in the banking sector. The lowest participation rate could be found in tourism (about 44 %). (see *Statistik Austria*, 2003, p. 22f)

³ NACE sections C - O

⁴ NACE sections C - O with 10 or more employees





Not only among economic sectors, but also among companies of the same sector differences concerning their engagement in competence development activities can be found being triggered by various framework conditions. A survey of the *Austrian Institute for Small Business Research* (1997, p. 2), for example, shows a correlation between the performance of an enterprise and further education activities. 67 % of the SMEs with a bad economic performance do not conduct further education activities while only 36 % of SMEs with a good performance are not involved in training activities. However, the direction of causality has not been established in this study.

2.2.3 Intensity of competence development in SMEs

In total, about one quarter of all employees of Austrian production or services SMEs⁵ with more than 9 employees participated in competence development activities in 1999. In general, no difference between genders regarding the participation in further education could be observed. On average, each participant spent 29 working hours of the year 1999 in training activities whereby almost no difference among company size classes could be identified. In case of participation, women generally spent slightly more hours in courses than men (31 vs. 28 hours). (see *Statistik Austria*, 2003, p. 13ff)

A similar share of the active population participating in vocational training is found for the year 2002/03. Thereby, it could be proven that the higher the level of formal education (i.e. school- or university-based education) a person has attained the higher is the probability that he/she will participate in further education. A similar correlation is also found for informal learning. The rate of participation in further vocational education is particularly high for the first few years after leaving the formal education system. An empirical survey among university graduates shows, for example, that 42 % of the interviewed persons take part in longerlasting vocational training and 69 % in shorter further training events within 4 years of completing their studies (see *Schneeberger*, 2002, in *Kailer*, 2003, p. 21f).

The active population in the health sector as well as that in education or cultural occupations tend to participate in vocational training more often than those of other sectors. The least active sector constitutes the services sector (also see

⁵ NACE sections C - O





above). Interestingly, more women than men in technical occupations attended vocational training whereas in industry and manufacturing craft sectors the opposite is the case. The latter might be explained by the fact that in those sectors less women than men are working in highly-qualified positions which negatively affects the involvement in further education. (see *Statistik Austria*, 2004, p. 40f)

2.2.4 Expenditure on competence development in Austria

Expenditure for training by companies is an important indicator for further education. The total cost for employees' training⁶ (costs for courses, travel expenses, daily allowances etc.) amounted to about \in 287 millions, constituting 1.3 % - 1.5 % of the annual costs for personnel of the companies in 1999. (see *Statistik Austria*, 2003, p. 13ff)

In 2001, Austrian LSEs invested about \in 2,762.- per manager in further education. With small companies these expenses amounted to \in 2,373.-. In spite of the worse cyclical development, almost half of the SMEs (48 %) and 62 % of LSEs increased their budget for further education of their personnel. (source: newspaper article (Der Standard of September 28th, 2002): Österreichs Managementbildung. Großbetriebe investierten 2001 etwa 2762 Euro jährlich pro Führungskraft (Austrian Management Education. Large-Scale Enterprises invested about 2762 Euro annually per Manager in 2001.)

2.2.5 Competence development methods applied

The various Austrian studies analysed show different results regarding the importance of external and internal training methods for SMEs. *Kailer/Steinringer* (2000, p. 11f), for example, find that for SMEs it is particularly necessary to cooperate with external experts in the field of training (i.e. education companies, consultants etc.) or other companies, if they want to apply a systematic competence development which is due to the lack of specialists in the field of personnel development in the company. The only exemptions constitute very specialised SMEs as well as fast-growing companies ("gazelles"). Similar is also found by *Leitgeb* (1999, p. 68) for manufacturing SMEs in 1996. 71 % of them indicated that further education in their enterprises more often takes place externally than internally. Training inside the company occurs more often in medium sized (24 %) than small (5 %) or micro enterprises (0 %).





In another study it is, however, shown that almost half of the Austrian SMEs engaging in competence development use internal courses for further training activities, about 40 % organise external courses and only about 10 % use both (see *Austrian Institute for Small Business Research*, 1997, p. 3). In the framework of the CVTS II-survey this latter percentage was found to be considerably higher. 55 % of those production and services companies⁷ being involved in vocational training measures in 1999 used both, in-house and external methods (see *Statistik Austria*, 2003, p. 23ff). This is in line with the findings of *Kailer* (1990a, p. 25) stating that the majority of Austrian SMEs apply both external and internal further education measures for their personnel (also see case study below). *Kailer* (2001, p. 23) also shows that enterprises with a higher budget for further training activities use a broader variation of learning methods with regard to both, internal and external methods.

Case Study: Computerkabel Kaminek (Computer Cable Kaminek)

The Viennese company "Computerkabel Kaminek" (Computer Cable Kaminek) is active in the field of computer integrated manufacturing. The enterprise was founded in 1985 and is still owned by the founder, Mr. Erwin Kaminek. In 2004, it employed seven persons. Four of them were full-time employees, one worked part-time and two were marginal part-time workers. Three employees were white-collar workers and four were blue-collar workers. Four of the employees have completed upper secondary level education (two by apprenticeship training, two by school-based education), the remaining three have attended lower secondary level.

The enterprise won different awards such as the award for the women and family friendliest enterprise as well as the small enterprise award. The competence development instrument described in the following ("IQ-ABC") was nominated for the KNEWLEDGE-Prize for lifelong learning in 2004.

The owner and manager, Mr. Kaminek, regards measures for competence development as very important for his enterprise because expertise can be seen as a precondition for sustainable success of the company. He stresses the importance of qualified employees and, therefore, the company engages in competence development measures as the improvement of knowledge and qualification of the employees is considered as the main instrument for success.

⁶ in SMEs being active in NACE sections C - O with 10 or more employees

⁷ NACE sections C - O, 10 or more employees





Current and future skill gaps are identified by both, the employer and the employees. Proposals for respective measures or activities are submitted by Mr. Kaminek to his employees but also vice versa. Knowledge gaps with regard to technical improvements of products are identified by paying attention to customers' demands.

Computerkabel Kaminek uses training-on-the-job as well as external methods for improving competences. With regard to the external-to-the-company activities, training provided by suppliers can be considered to be most important and is mainly attended by the technicians of the company. Also the commercial/ administrative staff attends external seminars (e.g. accounting courses) if qualification needs arise.

Mr. Kaminek has identified two major barriers for the enterprise to develop and engage in competence development strategies and respective measures, namely the lack of time and a lack of availability of suitable educational training provision for his employees.

As a result, Mr. Kaminek has developed a specific questionnaire game called "IQ-ABC". The IQ-ABC is supposed to be transferable to other enterprises and was, for example, presented to a number of enterprises in 2004. IQ stands for Internal Qualification and ABC stands for Allgemeine (general), Betriebliche (organisational) and "Competitive" questions.

The general questions refer to daily life in the enterprise (e.g. How can the company be reached by public transport?), the organisational questions include company specific commercial subjects, work procedures and the course of business (e.g. Describe the shape of cable x!) and in the competitive field questions refer to the knowledge about products, costumers and competition (e.g. Tell us the names of our five most important customers!).

The owner and the employees (ideally all of them participate in each session) play the questionnaire game and thus improve their knowledge about the enterprise. In general, the game is played once or twice a month, usually in the leisure time of the employees (but sometimes also during working hours).

The game requires that one person (either the owner or an external advisor) plays the role of a master of ceremonies. The players choose in turn a card from the packages A, B or C according to their preferences. If they know the correct answer, they get a reward (e.g. money provided by the company and, therefore, acting as a "bonus"). There are about 45 cards in every package for approximately eight players. The reward for the correct answer depends on the type of question whereby C-questions are, for example, rewarded highest. If a player does not





know the correct answer, it is possible to ask a colleague for help which should foster teamwork. If this colleague is able to answer the question, both of them will be rewarded. The average duration of the game is approximately two hours.

An advantage of the game is its flexibility. New questions (e.g. questions arising in the daily business that cannot be dealt with immediately) may be included very easily and old questions can be removed which is generally done by Mr. Kaminek. The individual, company specific preparation of the set of questions also enables the transfer of the most appropriate knowledge for the company. Furthermore, the game can be played as often as necessary, whenever new expertise is seen to be required. This is a very simple way to disseminate new knowledge within the enterprise. As a kind of "social" factor is included it is expected that the improvement of competence is further facilitated. Additionally, the topics addressed and the structure of the game makes it also better accessible to persons that can be considered to be averse to traditional/formal education. Different levels of knowledge and qualification among the employees are compensated by a wide range of questions. In larger enterprises it would probably be easier to play the game with more homogenous groups of employees.

Computerkabel Kaminek considers the combination of external and internal competence development activities as very advantageous and uses the possibility of including knowledge gained by, e.g. external seminars, into the IQ-ABC.

43 % of the enterprises^a applying competence development measures took advantage of external courses, exclusively. Thereby, more small than larger companies did so which might be explained by the higher availability of different professional skills (and, as a result, possible trainers) in larger companies compared to smaller ones. (see *Statistik Austria*, 2003, p. 23ff) Also *Kailer* (1995b, p. 380f) finds that in small enterprises further education particularly takes places in form of participation in specialised courses of training institutes or other companies (mentioned by 84 % of enterprises with less than 50 employees). Next to external training courses, 73 % of the enterprises sent their staff to trade fairs.

More than 60 % of the Austrian companies (all size-classes) often use on-the-job training for competence development (see *Fasel/Kailer*, 2001, p. 77). Similar is found by *Schneeberger/Kastenhuber* (1998, p. 96) mentioning that two thirds of small enterprises (and three quarters of the companies with less than 15 employees) prefer on-the-job training activities. Also *Kailer* (2001, p. 21) shows

⁸ NACE sections C - O, 10 or more employees





that on-the-job-training activities are of considerable importance for SMEs (74 % of the companies take advantage of this competence development method occasionally or even frequently) but even more so for LSEs (applied by 91 %). Also seminars (both external and internal) are very popular for small enterprises. Sometimes the enterprises also use learning methods like working in projects, coaching, training abroad, job-rotation programmes, group- and self study methods or are co-operating in networks and associations.

	Enterprises with less than 100 employees	Enterprises with more than 500 employees	Total
External seminars	94	99	95
In-house seminars	77	95	85
On-the-job-training	74	91	84
Attendance of trade shows	65	86	80
Project working	41	82	65
Producer-/Costumer Trainings	47	74	66
Learning of and with other enterprises	35	61	50
Different forms of group learning	17	56	41
Self study	41	44	40
Coaching	21	49	40
Stay abroad	24	42	37
Job-rotation	9	48	33
Co-operation in networks, associations	21	42	32
Computer based trainings	18	13	17
Video conferences	9	14	10
Discussion forum	12	8	8

Table 2	Percentage of enterprises, according to their (occasional or fre-
	quent) usage of different training activities, by enterprise size

Quelle: Kailer, 2001, p. 21

These percentages for internal training are, however, considerably higher than the respective one found by the CVTS II-survey showing that 19 % of the production and manufacturing companies with 10 or more employees organised scheduled training on-the-job (see *Statistik Austria*, 2003, p. 23ff).

Whereas the table above shows that the application of Computer Based Training is more widespread among SMEs than LSEs another survey among SMEs with up to 200 employees shows that SMEs are using CBT measures not as much as larger enterprises. Only 7 % of enterprises with less than 20 employees use CBT programmes for their further education activities while 33 % of enterprises with





more than 1 000 employees make use of these programmes. (see *Pichler/Heinrich*, 1998, in *Taus*, 2001, p. 77)

2.2.6 Sources for obtaining external competence

The most important sources for external training in production and services companies^o in 1999 (about 37 % of all training hours) constitute private and profitoriented training companies, followed by suppliers (14 %). Thereby, considerable differences among size-classes could be detected. Whereas "only" 13 % of the training hours of companies with 10-19 employees were attended at private training companies this share was about 24 % for companies with 20-49 employees and as high as 61 % for enterprises with 1,000 or more employees. With regard to suppliers, an inverse relation was observed (15 % for companies with 10-19 employees vs. 8 % for companies with more than 999 employees). (see *Statistik Austria*, 2003, p. 36)

Kailer (1995, p. 358) identifies the Austrian Chamber of Commerce's Institute of Business Promotion (WIFI) to be the most important external partner as regards personnel development and further education (mentioned by 65 % of the Austrian enterprises), followed by private trainers and advisors (48%) and management institutes (45%). Universities (6%) and language institutes seem to be of less importance (4 %). Similar is found by Schneeberger/Kastenhuber (1998, p. 66f), the Austrian Institute for Small Business Research (1997, p. 3) and Leitgeb (1999, p. 69). The latter identifies employers' representatives and private trainers as most important external sources for competence development whereby the first ones are particularly important for micro enterprises. This might be attributed to a less costly provision of courses by e.g. employers' organisations and the fact that enterprises with a smaller budget for personnel development activities particularly engage with the Austrian Chamber of Commerce's Institute of Business Promotion (WIFI) for further training activities, contrary to enterprises with a higher budget which engage more often with private trainers and consulting groups. (see Kailer, 2001, p. 23)

Also enterprises which just begin to get engaged in the field of further education activities mainly prefer the Austrian Chamber of Commerce's Institute of Business Promotion (WIFI) or visit seminars of suppliers. If the enterprises are intensifying further education, they also make use of management institutes, private trainers

⁹ NACE sections C - O, 10 or more employees





and advisors. Enterprises which dispose of a fully developed further education department co-operate with different further education institutes. They often try to intensify the firm-intern further training measures and also make use of external private trainers and advisors (see Kailer, 1990a, in Gusenbauer, 1995, p. 101).

Regarding the different sectors of the economy the WIFI is particularly popular in the industry and transport sector for further training activities of the employees. Training departments of other companies are chosen of nearly 80 % of the enterprises in the field of financial intermediation and by nearly two thirds of enterprises operating in the field of technical services and consulting. This industry sector also often chooses private trainers and providers for their further training activities of their employees (51 %). (see Schneeberger/Kastenhuber 1998, p. 68)

Table 3	Percentage of enterprises which have often or sometimes sent the employees to further training activities in the past three years, source of training activities	neir by

	WIFI	Training departments of other companies	Private Trainers, advisers and further training providers
Manufacturing and industry	48	18	15
Industry	86	30	44
Hotels and restaurants	42	19	18
Personal services	45	26	23
Trade	46	22	16
Transport	85	18	32
Technical services and consulting	57	64	51
Financial intermediation	41	78	32

Source: Schneeberger/Kastenhuber, 1998, p. 69

Regarding training for Austrian managers it was found that the main suppliers of courses were private training centres, the Austrian Federal Economic Chamber (particularly for micro enterprises) and public training institutions. 29 % of the managers were trained by their own personnel. Consultants, public bodies, suppliers, sector associations and research or technical service centres were hardly ever mentioned. Self-study programmes were not really popular as they were believed to be not adequate to the training needs. (see Kaufmann/Mandl, 2001, p. 16)



Leonardo Programme



2.3 Identification of competence needs and planning

2.3.1 Methods for the identification of competence needs

Kailer (2001, p. 26) mentions that the identification of competence deficits at individual, group, department and company level constitutes the first step for targeted personnel development activities. Thereby, the identification in the framework of appraisal interviews with employees is most common. In about 47 % of Austrian companies with 100 or less employees the identification of competence needs takes place according to the personal preferences of the respective superior. In about 12 % of the enterprises binding routines have been drafted and in 41 % of the companies it takes places completely informally.

Kailer (1995a, p. 342f) finds that the availability of formal instruments for personnel development (e.g. in order to identify the qualification needs of the employees) increases with the number of employees in the company. This does not mean, however, that these instruments are also regularly used and updated, respectively. He concludes that a comparatively low strategic significance is attributed to personnel development.

Also *Kraus/Kailer* (in *Kailer*, 1991, p. 117f) show that the involvement of further education in the planning systems of an enterprise increases with size of the enterprise. 18 % of larger enterprises with more than 500 employees integrate their competence development activities in their strategic planning. In contrast, one third of the enterprises with less than 100 employees and 42 % of the companies with 101 to 500 employees do not include the further education plans into the general planning of the enterprise.

	Enterprises with less than 100 employees	Enterprises with 101 to 500 employees	Enterprises with more than 500 employees	Total
No inclusion	33	42	6	22
Operational (annual budget)	37	27	53	39
Medium-term	25	23	33	27
Strategic	4	7	18	12

Table 4Percentage of the inclusion of further education in the planning of
the enterprises, by size of the enterprise

Source: Kraus/Kailer in Kailer, 1991, p. 117





In 1999, about 37 % of the Austrian production and services companies¹⁰ with 20-49 employees being involved in competence development activities also engaged in measures to identify current and future skill gaps. With companies with 50-249 employees the respective share was as high as 44 %. 22 % of the enterprises with 20-49 employees (and 42 % of those with 50-249 employees, respectively) disposed of a written plan for vocational training. (see *Statistik Austria*, 2003, p. 25ff)

Similar results are found in a survey of the *Austrian Institute for Small Business Research* (1997, p. 1) showing that 25 % of the SMEs are using a formal written plan for further education activities. Regarding the enterprise size, 50 % of the enterprises with more than 50 employees make use of such a plan.

These results are also in line with *Kailer/Steinringer* (2000, p. 14) finding that due to the dominance of daily business activities and the therefore resulting lack in time for competence development strategies, the majority of SMEs respond to an ad-hoc basis when deciding upon qualification measures (also see *Kailer/Mugler*, 1998, p. 254 or *Kaufmann/Mandl* (2001, p. 13). Particularly SMEs with less than 100 employees are found to hardly dispose of any binding process routines for the identification of skill gaps. The authors assume that due to the limited size of the company the majority of SMEs do not dispose of employees specialised in distinctive "administrative" fields.

According to *Leitgeb* (1999, p. 64) more than half of the medium sized manufacturing companies refer to a formal written plan with regard to planning further education of their personnel. In contrast, only about 6 % of micro enterprises and 17 % of the small enterprises, respectively, dispose of a formal written plan for this purpose. The majority of plans referred to one year, another third referred to several years. With regard to further education in micro enterprises, unplanned activities or activities on the initiative of employees were dominant. As a result, training activities on an ad-hoc basis occur more often in smaller than in medium sized manufacturing SMEs.

Half of the Austrian small and medium sized enterprises receive information about training courses directly from the further education institutes. 37 % get information from the Austrian Federal Economic Chamber and 28 % from

¹⁰ NACE sections C - O





manufacturers and suppliers. 15 % of the enterprises gather information from newspapers and magazines and only 9 % of the SMEs get informed by external consultants. (see *Austrian Institute for Small Business Research*, 1997, p. 4)

2.3.2 Person or group in charge for identifying competence needs

More of the half of the Austrian enterprises (56 %) do not have specialised fulltime employees being responsible for personnel development or further training activities. Whereas large enterprises often employ a person who undertakes these tasks or have a specific personnel department SMEs often do not employ a particular person (part- or full-time) for this purpose (see *Kailer*, 1995a, p. 359f)

Durchschlag (2000, p. 67) finds that it is mainly the board of directors (32 %), superiors (27 %) or the owner of the company (15 %) who are in charge of personnel development measures in SMEs. Similar is proven by *Machacek* (2001, p. 55) where 45 % of the interviewees (companies of all size-classes) indicate that the head of the department identifies the training requirement and chooses the seminars to attend. Further 45 % state that the skill gap is identified by the head of the department, but the respective seminar is selected by the personnel department (multiple answers possible).

Also *Schneeberger/Kastenhuber* (1998, p. 20) and the *Austrian Institute for Small Business Research* (1997, p. 1) come to the result that in many cases (about 50 % and 33 %, respectively) further education of employees is initiated by the general manager/owner of the company. Nevertheless, in almost one third of the interviewed companies the employees themselves approach the board of directors or the owner if they think to have any demand in further education. In another fifth of the enterprises the employees themselves choose for the seminars to attend. In only 11 % of the companies the employees have to be actively addressed to attend a specific seminar. 21 % of the interviewed companies mention that SMEs are characterised by a less structured companies. 45 % of the interviewees indicate not to have a structured personnel development scheme in their company. (see *Egger*, 2000, p. 74)





2.4 Rationale and barriers for SMEs to engage in competence development activities

Schneeberger/Kastenhuber (1998, p. 4) think that investment in further education is mainly made to be able to fulfil changing requirements (e.g. from clients) by making the necessary qualification available within the enterprise and to update obsolete knowledge. Reasons for SMEs to become involved in personnel development activities are important organisational or structural changes, product innovation or the introduction of new technologies (see *Kailer/Steinringer*, 2000, p. 18ff).

Awareness of both, the importance of competence development and respective competence gaps in the company is a pre-condition for SMEs to engage in competence development activities. 64 % of those production and services companies¹¹ with more than 9 employees that did not engage in vocational training in 1999 stated as a reason for this that their staff disposed of sufficient competencies (see *Statistik Austria*, 2003, p. 24). Similar is found by *Leitgeb* (1999, p. 71) mentioning that of those manufacturing SMEs not being involved in competence development activities in 1996, 41 % indicated that there was no need for such activities in the company. Furthermore, 18 % of the Austrian SMEs have problems to identify the needs of further training (see *Austrian Institute for Small Business Research*, 1997, p. 5). The argument that the company currently has no training needs is particularly fostered by micro enterprises (see *Kaufmann/Mandl*, 2001, p. 20).

According to Fasel/Kailer (2001, p. 144f) competence development in SMEs (and in micro-companies in particular) has to cope with the following problems:

<u>Time restrictions:</u> Due to the lower number of employees, downtimes of employees weigh much more in SMEs than in larger companies. Furthermore, the head of the company is strongly integrated in the daily business and is hardly able to spend time in the establishment of personnel development schemes. This is supported by the latest CVTS survey for Austria were the second most important reason (after a lacking awareness, see above) for not engaging in competence development was that the employees were too much involved in the daily business of the company so that they did not have enough

¹¹ NACE sections C - O





time for competence development activities (mentioned by about 28 % of the companies¹²) (see *Statistik Austria*, 2003, p. 24). Similar is also found by *Durchschlag* (2000, p. 73) where 26 % of Austrian SMEs name the lack of time to be the main reason for the failure of the realisation of personnel development measures.

- Proxy problem: Again, due to the low number of employees it is a problem to find a proxy for the employee participating in competence development measures; this leads to the perception that for SMEs competence development measures near to or integrated into the work place are favourable. In Austrian small enterprises with less than 100 employees managers and employees use only 5 % of their working time for further training activities. This mainly results from the lack of proxies who are able to continue the work in the enterprises. (see Kailer, 2001, p. 44f)
- Sceptical attitude towards advice by external persons and towards further education: SMEs are often sceptical towards external advice and training as they are not informed about what is offered and/or are unsure about the quality or the price-performance ratio. Furthermore, the programmes offered do in most of the cases not correspond exactly to their needs. This is supported by empirical data showing that problems with regard to acceptance hinder personnel development in 18 % of Austrian SMEs, and another 7 % assess personnel development to be ineffective (see *Durchschlag*, 2000, p. 73).
- Lack of career chances for employees: Due to flat hierarchies and the resulting rare career chances in SMEs, employees do not see any need for further education. A survey of the Austrian Institute for Small Business Research (1997, p. 5) shows that 24 % of Austrian SMEs mention a lack of interest of the employees when talking about competence development. Additionally, SMEs fear that higher qualified employees will leave the company because of a lack of incentives (higher salaries and career chances in larger enterprises) (see Bruckner, 1996, p. 21f).
- Financial problems: Low equity in SMEs might result in an avoidance of investment into the education/training of employees (also see *Bruckner*, 1996, p. 21f). So, 12 % of the enterprises involved in the CVTS II survey thought that training was too expensive (see *Statistik Austria*, 2003, p. 24). When concentrating on SMEs, about one fifth to one third of them assesses the high

¹² NACE C - O, 10 or more employees





costs as the main barrier for personnel development (see *Durchschlag*, 2000, p. 73 and *Leitgeb*, 1999, p. 71 and *Austrian Institute for Small Business Research*, 1997, p. 5). For the enterprises in the provincial state Burgenland this is even a more severe problem: For two thirds of the small enterprises financial barriers constitute the reason for not engaging in competence development measures (see *Hirschler/Kraly*, 2003, p. 150).

- Lack of competence development specialists in the company: Very few SMEs dispose of experts in the field of competence development leading to a lack of a systematic competence development scheme. This barrier is also mentioned by *Bruckner* (1996, p. 21f) in terms of lacking plans and, as a result, unsystematic activities, lacking personnel for conducting the training or a lacking identification of competence needs (also see above).
- Problems with the identification of competence gaps: 6 % of the Austrian companies explicitly mention that the identification of competence gaps is difficult (again being a particular important reason for the smallest companies) (see *Statistik Austria*, 2003, p. 24).
- Lack of information about available courses: Particularly for SMEs it is difficult to gain information of available training providers and their range of courses (see Kaufmann/Mandl, 2001, p. 20 and Leitgeb, 1999, p. 71).

Kailer (1995a, p. 335) mentions that the involvement in personnel development activities also depends on the economic framework conditions so that in times of cyclical downturns the rationalisation and justification on enterprise-internal services (such as personnel development) increases.

2.5 Topics and employment categories benefited by the competence development activities

2.5.1 Topic fields covered by competence development activities

Generally, four broad topic fields covered by competence development activities of SMEs can be identified by an analysis of the available Austrian literature. These refer to industry specific knowledge, computer/IT skills, management and soft skills.

Schneeberger/Kastenhuber (1998, p. 71), for example, show that industry specific knowledge and skills, sales training and commercial computing-related training are the most frequently consumed further education fields of the past three years. But





also "soft skills" such as communication, leadership and personality development were relatively popular. Differences between micro enterprises and larger enterprises are shown in industry specific training activities as well as in the field of personality development where small enterprises with one up to five employees conduct less training activities than larger enterprises. The survey of *Hirschler/Kraly* (2003, p. 156) shows that small enterprises in the provincial state Burgenland prefer technical education (54 %) for the further education activities in the next three years. Further education in the field of personality development is not that important as in larger enterprises.

In 1999, the topic fields most frequently attended by the staff of Austrian production and services companies¹³ with more than 9 employees referred to computer/IT (16 % of all training hours), followed by technical subjects (15 %) and marketing/management/administration (14 %) (see *Statistik Austria*, 2003, p. 13). Similar is found by *Kailer* (1990a, p. 54) mentioning that – with the exemption of the management of the company – the main topic field refers to technical know-how. For the management, commercial and juridical knowledge is of higher importance.

	Management	Qualified white-collar workers*	Other white- collar workers	Semi-skilled workers
Technical Know-How	23	60	43	17
ІТ	25	55	30	5
Commercial and Juridical Know-How	31	46	20	5
Leadership	30	40	7	1
Communication	22	32	15	4
Personality Development	18	26	12	2
Foreign Languages	11	23	14	3
General Know-How	4	6	6	2
Other Contents	2	3	3	1

Table 5Percentage of companies engaging in different topics of competence
development, by employment categories benefiting from the
activities

* e.g. foremen, master craftsmen in SMEs, middle management in larger companies Source: Kailer, N. (1990a), p. 54

Also in *Kaufmann/Mandl* (2001, p. 16), *Kailer* (2001, p. 22ff) and *Kailer* (2003, p. 23) it is found that the main topics of the courses attended by

¹³ NACE sections C - O





directors/managers were marketing and management strategy, particularly as far as micro enterprises are concerned. Language and finance courses were of comparatively minor importance.

About one out of four courses attended by the Austrian active population between June 2002 and June 2003 referred to social sciences, business or legal matters. 18 % were computer courses (mainly attended by older employees) and about 11 % referred to engineering, manufacturing crafts, construction (the three of them are mainly attended by younger employees) or services, each. (see *Statistik Austria*, 2004, p. 42)

2.5.2 Employment categories engaged in competence development activities

A differentiation among occupational groups shows that about 70 % of the enterprises¹⁴ offering vocational training in 1999 mentioned that managers and/or administrative staff did participate in the courses. About 60 % say so about technicians and highly qualified occupations. (see Statistik Austria, 2003, p. 31) Also the survey of the Austrian Institute for Small Business Research (1997, p. 2) shows that mainly administrative staff (78%) participated in further training activities. Kailer (1990a) finds out that mainly qualified white-collar workers (88%) participate in further training activities, followed by other white-collar workers and skilled blue-collar workers (71 %). Nearly two thirds of the managers attend training measures. Machacek (2001, p. 61) finds that on average 53 % of the training provided by Austrian enterprises is aiming at white-collar workers and 37 % is provided for managers. In this publication it is also mentioned that companies in stable markets provide a higher share of training for managers (42 % vs. 29 % in instable markets) whereas in enterprises in instable markets more white-collar workers receive training (61 % vs. 47 % in stable markets). 40 % of the participants in vocation training between June 2002 and June 2003 referred to highly-qualified white-collar workers or managers (see Statistik Austria, 2004, p. 41).

In 1999, half of the companies engaging in competence development activities sent operational/manual workers to courses (see *Statistik Austria*, 2003, p. 31). Similar results are found by *Leitgeb* (1999, p. 65) indicating, furthermore, that the

 $^{^{\}rm 14}$ $\,$ NACE sections C - O; 10 or more employees





involvement of personnel of the production increases with increasing company size. *Kailer* (1990a) comes, in contrast, to the result that only 28 % of un- and semi-skilled employees have the possibility to participate in further training activities. Between June 2002 and June 2003 blue-collar workers were comparatively rarely involved in further education (19 %) (see *Statistik Austria*, 2004, p. 41). The respective share is even lower in *Machacek* (2001, p. 61) were it is mentioned that 10 % of the training provided by Austrian enterprises is aiming at blue-collar workers.

Although generally the majority of company-related further education is carried out during working hours considerable differences can be shown among occupational groups. While half of the training provided for managers is attended in the leisure time the respective share for employees is "only" about 30 %. Thereby, it is also found that the smaller an enterprise the higher is the share of further education to be participated in leisure time which holds true for both, managers and employees. (see *Kailer*, 2003, p. 25).

Table 6Percentage of hours spent in further education during working
hours, by size of enterprise

	Enterprises up to 100 employees	Enterprises with 101 to 500 employees	Enterprises with more than 500 employees	Total
Managers	5	50	77,5	50
Employees	5	65	87,5	70

Source: Kailer, N. (2003), p. 25

2.6 Organisational learning in SMEs

Freundlinger (1997, p. 90) comes to the conclusion that a learning organisation constitutes the pre-condition for life-long-learning which is, in turn, necessary for coping with the knowledge gaps arising due to a comparatively short half-life of knowledge. He mentions that a learning organisation has to be built in a way fostering individual learning processes. A rigid hierarchy, very strict division of labour, an authoritarian leadership, routine work, a bad company atmosphere and a lacking corporate culture can be seen as barriers for organisational learning. Organisational learning promotes the transfer of know-how and experience between employees by encouraging communication among the personnel and the possibility of producing one's ideas.





One important aspect of organisational learning constitutes knowledge management which shows the following **advantages** for SMEs (see *Schlögel*, 2003, p. 54ff):

- Positive effects within the company: e.g. motivation of the employees with regard to the acquisition, dissemination and usage of knowledge, re-utilisation of already found solutions, reduction of errors, reduction of the time span necessary for development and production; Austrian, German and Swiss SMEs implementing knowledge management indicate problems regarding the information flow and the storage of knowledge within the company as well as the wish to attain a higher level of flexibility and an increasing efficiency of the enterprise as important motivators (see *Mayr/Fischer-Colbrie*, 2002, p. 208ff).
- Improved products and services: e.g. target group oriented products/services due to a better understanding of clients' needs, shorter time span for fulfilling clients' inquiries; Reasons for implementing knowledge management in Austrian, German and Swiss SMEs can accordingly be seen to refer to the provision of more or better benefits for the customers and in the improvement of the innovative strength of the company (see *Mayr/Fischer-Colbrie*, 2002, p. 208ff).
- External advantages and effects: e.g. higher market value for products/ services, higher level of customer satisfaction, increasing demand, higher market share; Also Mayr/Fischer-Colbrie (2002, p. 208ff) find that Austrian, German and Swiss SMEs implement knowledge management in order to raise their competitive advantage.

In the majority of cases the owner/general manager of the enterprises is also the **initiator** of activities in the field of knowledge management, in larger enterprises a person of the middle management is responsible for these tasks.

Instruments for organisational learning in SMEs have to fulfil certain preconditions in order to be of advantage and not to disturb organisational procedures. Thereby, the following aspects are mentioned (see *Schlögel*, 2003, p. 56 and *Rath*, 1999, p. 80):

- Easy to use: in terms of being independent of persons or work places
- Easy to understand: in order to make them easy to communicate and learn
- > Low employment of resources: in terms of financial and human resources





Focus on objectives and orientation on practical applicability: in order to be immediately applied in the SME

Schaider (2001, p. 58ff) identifies a range of knowledge management methods and their suitability for SMEs (however, it is not mentioned whether or how often they are applied in practice):

- Target/actual comparison: On the basis of the knowledge which will be required in the future to fulfil certain tasks and an analysis of the knowledge available in the company, skill gaps are identified. This instrument seems to be very suitable for SMEs because of its flexibility and simplicity.
- Stakeholder management: In particular, customers are an important information and knowledge source for SMEs. The co-operation with clients might range from including their requests into the organisational structure to collaborative learning. Other stakeholders with whom might be co-operated with respect to knowledge management are suppliers, competitors or enterprises in other industries. This instrument might be valuable for SMEs, however, a loss of independence has to be accepted.
- Knowledge maps: Knowledge Maps are supposed to inform all employees which knowledge is available in the company and where it can be found. This instrument offers the advantage that it can be continuously updated, but may be rather time consuming.
- Knowledge brokers: A knowledge broker assists employees seeking for certain information within the company. Whereas this instrument is rather convenient for larger enterprises, small companies would probably not need such a person.
- Regular meetings: These offer the possibility of learning from the success and failure of colleagues as well as of gaining further knowledge via talking to other employees with similar tasks. Furthermore, simulations might be used to assess the outcome of new strategies. This instrument is very flexible as the included content might vary considerably. However, it is rather time-consuming and therefore probably hard to establish in SMEs on a formal basis.

Mayr/Fischer-Colbrie (2002, p. 208ff) differentiate the methods applied for organisational learning in the German speaking countries (i.e. Austria, Germany, Switzerland) according to the different levels at which they are used:





- Technical level: Nearly all enterprises use technical solutions, in the majority of cases they make use of an intranet as a platform. Additionally, the enterprises use different software-solutions or systems for documentations etc.
- Personal level: Regarding to the opinion of the interviewed SMEs in Austria, Germany and Switzerland the personal level is not that important for the implementation of knowledge management as the technial solutions. Only few enterprises motivate their employees to exchange or storage their knowledge or integrate the employees in the initiation of knowledge management activities.
- Organisational level: The half of the enterprises arrange meetings to exchange knowledge between the employees.

Schlögel (2003, p. 55f) points out that - due to the large differences among SMEs - the need for and **usage** of particular knowledge management tools considerably varies among SMEs. In practice, the realisation and design of specific instruments differs according to the financial means in SMEs and personal preferences of their owners/general managers. The limited resources (financial and human resources) make it more necessary in SMEs than in LSEs to assess each instrument before the introduction in the company in order to avoid a waste of scarce resources. Accordingly, the lack of time is mentioned to constitute the major **barrier** for SMEs to engage in knowledge management, followed by a lacking awareness of the importance of the respective topic by the general manager/owner (ibid., p. 58).

Similar is found by *Eibl* (1999, p. 15) who particularly focuses on technology oriented SMEs. She identifies the following **problems** SMEs are confronted with concerning knowledge management:

- Limited resources: Knowledge management in SMEs is considerably affected by the limited financial and human resources. As a result, both the company owner/manager and the employees do not have enough time for engaging in knowledge management activites.
- Awareness problem: Particularly SMEs are often characterised by a rather "traditional" organisational culture favouring approved and already applied methods to new ones. Sometimes, there is a lack of sensitivity to see the value of particular skills and knowledge. As knowledge aspects are often not explicitely expressed and a large part of the knowledge within the enterprise is




"part of" the general manager/owner it is seen as a matter of course and not necessary to deal with.

- Delegation problem: SMEs are characterised by a dominance of the general manager/owner who tends not to delegate in order not to lose too much control. This results in an "island of knowledge" which has to be come up against by a higher level of delegation.
- Dependency: Due to their more limited company size SMEs are more dependent on external actors (e.g. suppliers) than larger companies. This does not favour the increase of knowledge within the enterprise and results in a higher level of dependency.

2.7 General conclusions to be obtained from the available literature

The literature review upon competence development in SMEs shows that there exists a rather wide range of publications in Austria indicating a comparatively high level of importance attributed to this topic. Although the strategic value of competence development for the competitiveness and success of enterprises is increasingly recognised, no common definition for the concept can be found. Nevertheless, the authors agree on the aspect that competence goes beyond qualification by integrating different knowledge/skill factors as well as the personal and organisational level.

The increasing awareness of the importance of competence development can also be derived from the increasing number of Austrian companies and employees involved in respective activities over time. This is, however, also to be ascribed to a higher level of basic (vocational) education (e.g. higher share of academics in the population) which positively influences the participation in competence development as the empirical results show.

Regarding the engagement of Austrian SMEs in competence development activities it could be found that their share is comparatively lower than the respective one for LSEs. This is not very surprising keeping in mind the range of constraints SMEs are confronted with due to their more limited company size (i.e. limited financial and human resources). Nevertheless, depending on the framework conditions (e.g. sector, client requirements etc.) some of the SMEs invest per capita even more in competence development than larger enterprises. Furthermore, in case employees participate in respective measures, those of SMEs and those of LSEs spend the same average number of working hours per year in them. Therefore, it cannot be





concluded that SMEs in general are more opposed to competence development activities than LSEs.

When engaging in competence development activities SMEs rather rely on more "traditional" instruments (such as external or internal seminars, visiting trade fairs or training on-the-job) compared to more "modern" methods (such as quality circles). This might, again, be contributed to the limited time for competence development measures in SMEs hindering that the owner/general manager busies himself with new concepts (particularly if the familiar ones have proven to work well).

SMEs generally depend more on external sources for competence development than LSEs do as a more limited number of (qualified) employees are available in the company to play the role of the trainer. As a result, SMEs might be confronted with higher costs for qualification of their employees when exclusively relying on courses or seminars for further education. Therefore, and in order to generate knowledge more oriented on practical issues (which can be seen to be of comparatively higher importance in SMEs than in larger companies) the majority of SMEs draw on suppliers or clients for raising their competence level. Furthermore, courses/seminars provided by employers' organisations are of higher importance for SMEs than for LSEs which can be attributed to the lower costs of these compared to ones of private education providers. In Austria, many SMEs start with the WIFI as external supplier of training courses and later extend the respective activities to other providers.

Interestingly, the assessment of the importance of further education within the company (e.g. on-the-job training) considerably varies among the different empirical research studies. This might be explained by the difficulty for the interviewed entrepreneurs to identify such internal measures as competence development activities. It can be assumed that on-the-job training is rather widespread but due to this "normality" not assessed to constitute a particular qualification measure. Therefore, the share of companies indicating to adopt internal competence development activities might be higher than some empirical surveys suggest.

The different (empirical) research studies found that the formalisation and standardisation of competence development (both, with regard to a special person responsible for these tasks and the availability of plans or procedures) is positively





correlated to the company size, so that smaller companies rather act on an ad-hoc basis. On the one hand, this is to be attributed to the higher availability of financial and human resources to implement a "system" of competence development. On the other hand, a higher number of employees makes it necessary to make the (available or new) knowledge accessible to a higher number of persons which only works on a formalised and standardised basis. It is, however, also mentioned that competence development works more efficiently and brings better results, if there is at least some level of formalisation/standardisation involved.

Concerning the occupational groups benefiting from competence development activities and the topics covered a kind of "segregation" can be observed. Generally, the participation in competence development is positively correlated with the level of basic (vocational) education. This is to be attributed to the fact that persons that have already been involved in education for a longer time show a more positive attitude towards further education.

Persons occupying positions at the top of the organisational hierarchy of the enterprise (owner, management) generally attend courses/seminars dealing with management abilities and soft skills whereas other employees rather participate in technical courses. Due to their lower level of practical work experience younger people refer to qualification activities fostering their basic competences whereas older employees rather update their existing knowledge or engage in rather "new" competence fields (such as IT).

Limited financial and human resources constitute the main barriers for SMEs to engage in competence development activities. Generally, employees are too much involved in the daily business life to have time to engage in qualification measures and due to the restricted number of employees no proxy is available in many cases. While these barriers can hardly be overcome, the partly lacking awareness of SMEs on the importance of competence development and their sceptical attitude about its benefits could be counteracted by information activities by labour market or economic policy or employers' organisations, for example.

Knowledge management and organisational learning can be considered to constitute a comparatively "new" topic, both within research and companies. As a result, hardly any publications exist dealing with the particularities of organisational learning in SMEs. It is, however, realised that these particularities





exist and that they have to be dealt with in order to design knowledge management being advantageous for SMEs.





3 <u>Competence development activities in national SMEs: Results from</u> <u>the survey</u>

3.1 Methodological considerations

Austria is characterised by an economic structure being dominated by small and medium sized enterprises. SMEs account for 99.5 % of the companies and employ about 65 % of the employees of the market oriented economy (sections C – K of NACE Rev. 1). The average company size refers to about 11 employees per company. Between 1995 and 2003, the number of enterprises increased by about 12 % which predominantly is to be attributed to micro enterprises (less than 10 employees). In the same period, the number of employees has grown by about 7 %.

	Table 7	Structure of the m	arket oriented eco	nomy* by size class	, 2003**
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Size Class	Companies		Emplo	yees
	Number	%	Number	%
1-9 employees	179,132	84.3	497,520	21.5
10-49 employees	27,811	13.1	530,619	22.9
50-249 employees	4,565	2.1	472,750	20.4
>249 employees	968	0.5	815,453	35.2
TOTAL	212,475	100.0	2,316,342	100.0

* sections C – K of NACE Rev. 1

** preliminary data

Sources: Austrian Institute for SME Research, Statistik Austria, Main Association of Austrian Security Institutions

A large proportion of the Austrian companies is active in trade, followed by the real estate, renting and business activities. Although only 11.5 % of the enterprises belong to the manufacturing sector these companies employ more than one quarter of all employees. Generally, the services sector is characterised by a growing importance while both, the number of companies and the number of employees in manufacturing is declining (about -4 % and -7.6 %, respectively, between 1995 and 2003).





Sector	Companies		Emplo	yees		
	Number	%	Number	%		
Mining and quarrying	300	0.1	5,446	0.2		
Manufacturing	24,430	11.5	601,619	26.0		
Electricity, gas and water supply	812	0.4	31,578	1.4		
Construction	19,159	9.0	227,617	9.8		
Wholesale and retail trade	62,045	29.2	556,687	24.0		
Hotels and restaurants	38,564	18.1	215,609	9.3		
Transport, storage and communication	12,659	6.0	246,196	10.6		
Financial intermediation	5,338	2.5	116,592	5.0		
Real estate, renting and business activities	49,169	23.1	314,998	13.6		
TOTAL	212,475	100.0	2,316,342	100.0		

Table 8 Structure of the market oriented economy* by sector, 2003**

* sections C - K of NACE Rev. 1

** preliminary data

Sources: Austrian Institute for SME Research, Statistik Austria, Main Association of Austrian Security Institutions

In March and April 2004, about 160 managers of Austrian manufacturing companies were interviewed concerning their enterprises' attitudes towards competence development activities, the practices applied as well as the barriers hindering the company's participation in such practices.

The interviews were conducted by means of a telephone survey and referred to Austrian companies with 10 - 249 employees being active in one of the seven manufacturing sectors (see Table below). About 18 % of the interviewed enterprises have their main activity in the field of metal products, machinery and equipment. 13 % - 14 % of the interviewed companies belong to each of the other sectors.

Table 9 Sample breakdown by companies' size and sector

COMPANIES' CHARACTERISTICS	Number of companies	%
Size (Employment)		
10-49	76	48.1
50-249	82	51.9
Sector		
Food and beverage	22	13.9
Textile, clothing, leather and shoes	22	13.9
Woods and furniture	21	13.3
Paper and print	22	13.9
Fuel, chemical an plastic	21	13.3
Metal products, machinery and equipment	28	17.7
Electric and electronics	22	13.9
TOTAL	158	100.0

Source: Ikei and ENSR partners, CODE Leonardo project





As this sample does not reflect the actual distribution of companies in Austria the information gained from the interviews has been re-weighted. In the following, the re-weighted results are presented.

3.2 Attitudes of the enterprises towards competence development activities

In general, Austrian SMEs show a rather positive attitude towards competence development activities. About two thirds of companies are of the opinion that the activities intended to develop the enterprise's knowledge and skill base constitute a key element for the competitiveness of the SME (average rank of 2.9 where 1=not important and 4=very important). Medium sized enterprises (50-249 employees) award a somewhat higher importance to the respective topic than small companies (10-49 employees) do. Whereas about 16 % of medium sized enterprises (tend to) disagree to the statement that competence development activities are a key element for the competitiveness of the enterprise more than one third of the small enterprises answer this way.

Graph 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

Regarding the acquisition of external competence Austrian SMEs identify clients (mentioned to be (very) important by about 87 % of the companies) and suppliers (assessed as (very) important by 75 % of the enterprises) by far as the most important sources of knowledge. Both groups of actors are assessed slightly more relevant by small enterprises than by medium sized ones which is in line with the results found in the available Austrian literature.

According to the companies' experience during the last three years, universities and training centres as well as government and public agencies are of comparably little relevance for fulfilling the enterprises' needs for external knowledge and competence upgrading. About two thirds of the Austrian manufacturing SMEs mention to hardly or never draw on universities as a competence source, and three quarters never or rarely approach government or public agencies for this purpose, where the latter are used slightly more often by small companies than by medium sized ones.

	Enterprise size		ize
	10-49	50-249	Total
Recruitment of new external personnel with required new competencies	2.4	2.8	2.5
Suppliers	3.2	3.0	3.1
Clients	3.6	3.4	3.5
Competitors and business colleagues	2.7	2.6	2.7
Consultants and accountants/auditors	2.9	2.7	2.9
Universities and training centres	2.0	2.1	2.0
R&D centres and technical experts	2.4	2.5	2.4
Business and Trade Associations	2.8	2.3	2.7
Government & public agencies	2.1	1.8	2.0

Table 10Relevance for the enterprises of different actors as sources of
knowledge and competencies, by enterprise size

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

3.4 Practices for increasing enterprises' competence levels

Due to their limited size (see above) Austrian SMEs prefer practices for increasing the enterprises' knowledge, competence and skill base that are comparatively easy to manage. As a result, visits to expositions/trade fairs and reading information available in various publications (including the internet) are identified as being the most relevant ones regarding external-to-the-enterprise practices. The most important practices for acquiring competence refer, however, to internal activities





- namely on the job training and internal coaching for existing staff (it might be supposed that there exists some interrelation between those two practices). More than three quarters of the Austrian manufacturing SMEs assess these practices for increasing the enterprises' competence base as (very) relevant.

Activities which can be assumed to be rather time-consuming and/or less directly associated with de daily work (such as the attendance of external training courses, the analysis of patents and licenses or regular personnel meetings for knowledge exchange) are generally rated as being of little relevance for increasing the companies' skill base. This might be due to the dominance of the daily business being particularly characteristic for SMEs; an assumption that is supported by the fact that these practices are assessed slightly better by medium sized companies than by small ones.

The practice for increasing enterprises' competence levels ranked as being the least relevant one by Austrian SMEs is job rotation and exchange with other firms (assessed by more than 80 % of the companies to be of no or little relevance), followed by study visits to other enterprises (about two thirds of the SMEs indicate no or little relevance of this practice for upgrading the company's competence base). Nevertheless, general co-operation with other enterprises is assessed to be of some relevance.

Internal training courses (i.e. training provided by the enterprises' staff for the enterprises' staff) are awarded a medium degree of importance for increasing the companies' competence base, and apprenticeship schemes are seen to be of little relevance for this purpose. Tutoring and mentoring schemes for new employees are ranked as the least important internal-to-the-enterprise practice for increasing the skill base of Austrian companies. About 70 % of the SMEs assess this competence development practice as being not or little important whereby particularly small enterprises do not evaluate this tool as useful for the respective purpose: Almost three quarters of the Austrian manufacturing companies with 10-49 employees mention tutoring/mentoring systems as being of no or little relevance for increasing the competence base; the respective share for medium sized companies (60 %) is considerably lower.





Table 11Relevance of different practices for increasing the enterprises'
knowledge, competence and skill base, by enterprise size

	Enterprise size		ize
	10-49	50-249	Total
External-to-the-enterprise practices			
Visits to expositions/trade fairs	2.9	2.9	2.9
Attendance to conferences/seminars provided by external personnel	2.5	2.7	2.5
Attendance to training courses provided by external-to-the enterprise personnel	2.2	2.7	2.3
Co-operation with other enterprises	2.5	2.5	2.5
Study visits to other enterprises/institutions	2.1	2.2	2.1
Job rotation and exchanges with other enterprises	1.6	1.6	1.6
Reading of information available in trade and sector magazines, publications	3.0	2.8	2.9
Reading of information available in Internet (websites, databases, etc)	2.9	2.8	2.8
Analysis of patents and licenses	2.2	2.2	2.2
Internal-to-the-enterprise practices			
Internal training courses/seminars provided by own personnel	2.5	2.8	2.6
Self-study activities during working time	2.4	2.5	2.4
On the job learning/learning in the daily work (for current personnel)	3.2	3.4	3.2
Job /task rotation (in-house)	2.6	2.3	2.5
Coaching/guidance activities for staff by other people in the enterprise	3.0	3.0	3.0
Tutor/mentoring systems for new employees	2.0	2.2	2.1
Apprenticeship schemes	2.2	2.4	2.2
Meetings amongst personnel for knowledge exchange/quality circles	2.2	2.4	2.3
Innovation and R+D activities	2.5	2.7	2.5

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.

Although more than half of the Austrian SMEs mention that formal and informal training practices are equally effective there exists a tendency that informal training is preferred (stated by more than one third of the companies). This is, again, to be attributed to the limited resources of SMEs and the dominance of the daily business, leaving, in many cases, more room for informal than for formal qualification practices. Furthermore, there exists the tendency that smaller enterprises opt for more practical qualification means resulting in directly applicable know-how. As a result, the share of medium sized enterprises preferring formal internal or external training (about 8 %) is considerably higher than the respective share of small enterprises (about 2 %).





Table 12Percentage of enterprises, according to their preference of
formal/informal training practices, by enterprise size

	En	ze	
	10-49	50-249	Total
The formal training acquired in a course (external or internal)	1.6	7.8	2.9
The informal training and knowledge acquired on the job	37.6	22.3	34.5
Both equal	55.4	69.9	58.4
Don't Know/ No answer	5.4	0.0	4.3
TOTAL	100.0	100.0	100.0

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

3.5 Occupational groups benefited from competence development activities

With regard to both, external and internal competence development activities, two thirds of Austrian SMEs mention that the middle management and technicians belong to the main target groups of qualification activities being in line with the results of previous studies mentioned in the overview of the existing literature (see above). Thereby, the share of enterprises indicating this group as a main target group is considerably higher for medium sized enterprises than for small ones. This may also be ascribed to the fact that – due to the limited company size – in many small enterprises no middle management exists.

While in more than half of the SMEs directors and managers participate in external competence development activities they are involved in internal activities in "only" one quarter of the companies. This might be explained by the fact that the additional qualification needed by this occupational group cannot be gained, in many times, from internal-to-the-company-sources.

Manual workers and operators constitute the second most important target group for internal competence development activities (mentioned by half of the Austrian SMEs), but the least important one for external training (mentioned by about one fifth of the companies). In contrast to the analysed Austrian literature available, the present survey shows that with regard to both kinds of activities the share of small enterprises indicating manual workers as main occupational group benefiting from competence development measures is considerably higher than that for medium sized ones.

For about 36 % (external activities) and 40 % (internal activities) of Austrian SMEs, clerks or administrative personnel constitute a main target group benefiting





from competence development initiatives. Here, more medium sized enterprises than small ones offer respective training to this group of personnel which might, again, be due to the limited occurrence of this occupational group in small companies.

Table 13Percentage of enterprises, according to the occupational groups
mainly benefited from enterprises' external and internal competence
development activities, by enterprise size

Croup estagorias	Exte	External activities Inte			rnal activities		
Group categories	10-49	50-249	Total	10-49	50-249	Total	
Directors and managers	51.9	52.2	52.0	26.1	17.7	24.4	
Middle management, technicians	61.7	85.8	66.7	63.1	76.1	65.8	
Manual workers, operators	21.6	11.5	19.5	52.9	42.9	50.9	
Clerks, administrative personnel	33.3	44.4	35.6	34.7	58.3	39.5	

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.

3.6 Formalisation and diffusion of the in-house knowledge

3.6.1 Formalisation of in-house knowledge

The existence of formalised management tools can be seen to constitute a precondition for the formalisation of human resources management (i.e. personnel selection and development). In Austria, about 63 % of the manufacturing SMEs dispose of a formal organisation chart and 65 % have elaborated a formal strategic plan. In about 60 % of the enterprises there exist written work place and job descriptions and two thirds have written manuals concerning the workflow management and quality management systems, respectively. A comparatively low share of SMEs (about 40 %) has ISO certifications.

Generally, medium sized enterprises are characterised by a higher degree of formalised management than small ones. The largest differences between the size classes can be seen with regard to ISO certifications. While about 70 % of medium sized enterprises dispose of them, "only" one third of small companies do so. Similar holds true for formal organisation charts. Although in more than half of the small enterprises such a management tool is available the share of medium sized companies having such a chart is considerably higher (almost 90 %).





Table 14 Percentage of enterprises with formalised management tools, by enterprise size

Variables		Enterprise size			
		50-249	Total		
A formal organisation chart	56.1	88.7	62.8		
A formal strategic plan	63.6	70.2	65.0		
Written manual(s) describing the main tasks and activities of each working post	55.8	74.8	59.7		
Written manual(s) describing the productive standards and routines	63.9	77.0	66.6		
Quality management systems	61.9	85.5	66.7		
ISO certifications (9000, 14000, others)	32.2	70.8	40.1		

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

More than three quarters of the Austrian SMEs regularly inform their employees about the main changes and new developments related to their job and the enterprise whereby almost no difference between small and medium sized enterprises can be found. About 40 % of SMEs have defined processes for the recruitment and selection of personnel and formal systems for evaluating the personnel performance, respectively. As with general management tools, more medium sized than small enterprises dispose of such instruments.

About 30 % of Austrian SMEs have established formal systems for evaluating the personnel training needs and a written training plan, respectively. Thereby, the share of medium sized enterprises is almost twice as high as that of small ones.

One half of the companies offer their employees the possibility of uttering suggestions related to work issues on a formalised basis. Here, again, the share of small enterprises is lower than that of medium sized ones, whereby the difference is not as markedly high as with the other indicators.

Table 15Percentage of enterprises with formalised human resources
management tools, by enterprise size

Variables		Enterprise size			
		50-249	Total		
Defined process(es) for the recruitment and selection of personnel	34.0	54.3	38.2		
Formal system(s) for evaluating the personnel performance	37.8	45.7	39.4		
Formal system(s) for evaluating the personnel training needs	28.2	55.5	33.8		
A written training plan	26.1	51.5	31.3		
System(s) for collecting employees' suggestions related to work issues	47.2	56.9	49.2		
Meetings to inform employees on changes/developments about job/enterprise	77.6	75.0	77.1		

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project





3.6.2 Diffusion of the in-house knowledge

Austrian SMEs are rather convinced that relevant knowledge and information is well disseminated throughout their organisation. On average, this is assessed with a rank of 3 (from 1=very badly disseminated to 4=very well disseminated). About three quarters of the Austrian manufacturing SMEs (totally) agree to the statement that relevant knowledge and information is well disseminated within the company. Generally, small enterprises think that the diffusion of in-house knowledge works slightly better than medium sized enterprises do. This result is not very surprising keeping in mind that the relevant information is to be provided to a more limited number of persons in the company.

Graph 2 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

Like with training mechanisms, Austrian SMEs also prefer informal tools for the dissemination of relevant knowledge and information within the organisation. 46 % of the companies assess this method as more useful compared to formal mechanisms. Thereby, considerable differences can be identified between company size classes. Whereas more than half of the small enterprises prefer informal tools, "only" about 30 % of medium sized ones do so. This might be due to the higher efficiency of informal mechanisms in small enterprises where less people have to be reached.





Although it might be assumed that in larger companies, where more formal mechanisms exist, formal tools for disseminating knowledge would be preferred the data on hand shows that this is not the case. Rather, the majority of medium sized enterprises are indifferent regarding the usefulness of formal versus informal tools for existing in-house knowledge available for their personnel.

Table 16Preference of enterprises of formal versus informal tools for
disseminating relevant knowledge and information within the
organisation, by enterprise size

Variables	Enterprise size				
Variables	10-49	50-249	Total		
Formal mechanisms	10.5	5.5	9.5		
Informal mechanisms	50.4	29.6	46.1		
Both equal	37.6	61.4	42.5		
Don't Know/ No answer	1.5	3.4	1.9		
Total	100.0	100.0	100.0		

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

57 % of the Austrian SMEs dispose of databases where relevant-to-the-enterprise knowledge, experiences and documents are stored for subsequent use. Here, again, considerable differences between size classes occur. Almost 75 % of the medium sized manufacturing companies have established such knowledge management databases. With 53 %, the share of small enterprises is markedly lower. Nevertheless, if compared to the availability of formalised general management and human resources management tools (see above) the percentage of small companies having access to respective databases appears rather high.



Graph 3 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



Source: Ikei and ENSR partners, CODE Leonardo project

In order to have continuous access to the latest knowledge, almost all Austrian SMEs disposing of knowledge management databases periodically update their contents. In half of the companies the databases are accessible through ICT-based systems such as an intranet. 80 % of the medium sized enterprises state to have such ICT-based databases – the share being twice as high as with small enterprises. This might be contributed to the more informal way of knowledge diffusion in smaller enterprises.

The majority of companies disposing of knowledge management databases (58 %) generally provide this tool for a specific group of the personnel, further 28 % to the whole staff and about 14 % limits the access to the management board, only. Small enterprises seem to be more restrictive than medium sized ones. While in 46 % of the companies with 50-249 employees all the staff has access to knowledge management databases, this is the case in "only" 22 % of the small enterprises.





Table 17Characterisation (updating and accessibility) of databases available
within enterprises, by enterprise size (% of enterprises)

Variables		Enterprise size			
		50-249	Total		
Databases are periodically updated	98.3	95.6	97.6		
Databases are accessible through ICT-based systems (i.e. Intranet)	42.2	80.1	52.2		
These databases are accessible to					
All the enterprise's workforce	21.6	46.4	28.1		
Only allowed personnel (including management board)	63.1	44.4	58.2		
Only the management board	15.3	9.2	13.7		
Don't know/no answer	0.0	0.0	0.0		

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

3.7 Scanning competence development needs

In 81 % of the Austrian SMEs a special person or group is responsible for the identification of current and future skill needs which is considerably more than in previous studies analysed in the framework of the literature review (see above). Although smaller companies are characterised by a lesser degree of formalisation (see above), more small enterprises (83 %) have appointed such a person or group than medium sized ones (75 %).

Graph 4 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



Source: Ikei and ENSR partners, CODE Leonardo project





In the majority of Austrian SMEs having appointed a special person responsible for identifying current and future skill needs it is the owner or general manager who has to do so. The respective share is considerably higher for small enterprises than for medium sized ones whereas in these larger companies it is more often the task of the management board or the human resources manager to identify current and future skill needs. In 14 % of Austrian SMEs this task is fulfilled by a group formed by representatives of both, the management team and employees, where the share of medium sized enterprises indicating this possibility is slightly higher than that of small companies.

Table 18Percentage 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	66.3	38.0	61.0
The human resources manager/training director (if different from above)	2.3	15.8	4.8
The management team	18.4	28.9	20.4
A group formed by representatives of the management team and employees	13.0	16.6	13.7
Other	0.0	0.8	0.1
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

3.8 Skill shortages/gaps identified by enterprises

39 % of the Austrian SMEs indicate to presently experience a shortage or even lack of skilled labour. With about 40 % this percentage is slightly higher for small companies than for medium sized ones (36 %). This might be due to the fact that it is more difficult for smaller companies to acquire qualified personnel because of restricted opportunities for advancement and a lower level of wages and the general worse image of smaller companies compared to large ones.



Graph 5 Percentage of enterprises agreeing or totally agreeing with the statement 'My enterprise is currently experiencing a lack (shortage) of skilled labour', by enterprise size



Source: Ikei and ENSR partners, CODE Leonardo project

54 % of the small and medium sized enterprises indicate that they presently see a need for upgrading the current competencies and skill base of the workforce. This means that also companies that do not experience a lack or shortage of skilled labour want to develop the competences of their staff in order to remain competitive. The need for further qualification seems to be higher for medium sized enterprises than for small ones.







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

Regarding the different areas, sales and marketing has been identified by the Austrian SMEs to constitute the field where an upgrading of the enterprises' knowledge and skill base is most urgent. Almost two thirds of the SMEs assess a medium or very urgent need for upgrading the competencies in this field. Other important areas are - as identified in previous studies (see literature review above) - engineering and manufacturing as well as personal skills mentioned to be (urgently) upgraded by more than half of the companies, each. Thereby, a higher share of medium sized than small enterprises evaluates this upgrading need as medium or very urgent. With regard to environment protection and office work the companies generally see little need for improving the competences available in the enterprise. However, there exist considerable differences between the size classes. Whereas more than one third of the small enterprises assess the upgrading need in those two competence areas as medium or very urgent the respective share for medium sized enterprises refers to less than one quarter.





Table 19 Relevance of different competence areas according to the enterprises' identified needs, by enterprise size

Variables	Enterprise size		
Valiables	10-49	50-249	Total
Engineering and manufacturing	2.6	2.6	2.6
Sales and Marketing	2.8	2.7	2.8
Management, finance	2.5	2.4	2.5
ICTs, computers	2.2	2.3	2.3
Office work	2.2	2.1	2.2
Personal skills	2.6	2.6	2.6
Language abilities	2.3	2.5	2.3
Environment protection	2.2	2.0	2.1
Health and safety issues	2.3	2.2	2.3

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

3.9 Barriers for enterprises to engage in competence development activities

The most important barrier for Austrian SMEs to engage in activities intended to develop the knowledge, skills and competencies of their personnel is the fact that the employees' workload makes these activities difficult to organise, confirming the findings of the literature review that the lack of time is a considerable problem for the involvement of SMEs in competence development activities. About two fifth of the companies mention this factor to constitute a "big barrier" (rank 2.3 from 1=no barrier to 3=big barrier). Interestingly, this factor (i.e. that the daily business leaves not enough time for the staff to engage in competence development activities) is a bigger problem for medium sized enterprises (more than half of them assess this barrier to be considerable) than for small ones (about one third of them thinks that this barrier is very essential). Also the costs of respective activities and the lacking motivation of the employees hinders Austrian enterprises to be more active in the field of competence development. These barriers, however, are more important for small companies than for medium sized ones. Whereas 30 % of the small enterprises see the lack of motivation as a big barrier the share for medium sized ones refers to about 12 %.

Generally, companies indicate that the assessment of the own knowledge and skill needs as well as the identification of possible sources for this purpose do not constitute an important barrier. Here, again, the situation is less bad for medium sized than for small enterprises. About 60 % of the companies with 50–249 employees do not see the identification of skill needs as a problem at all. In





contrast, "only" half of the small enterprises mention that the assessment of the company's knowledge/skill needs is no problem at all.

The quality of the available sources is generally seen as a moderate barrier for Austrian SMEs. About 60 % of the medium sized enterprises assess this possible barrier as being not relevant at all. With regard to small enterprises the respective share is, however, considerably lower (about half as high).

A lacking public support and the risk of trained employees being poached away by competitors are also seen as moderate barriers, generally.

Table 20Relevance of different barriers for enterprises to engage themselves
in competence development activities, by enterprise size

Variables		Enterprise size		
		50-249	Total	
Insufficient budget/costs are too high	2.1	1.9	2.0	
Employees' workload makes these activities difficult to organise	2.2	2.5	2.3	
Too difficult for the enterprise to assess its own knowledge/skill needs	1.6	1.4	1.5	
Lack of information on the possible sources of knowledge/skills	1.5	1.5	1.5	
The available sources of skills and knowledge are unsatisfactory	1.8	1.5	1.7	
Lack of motivation from the employees	2.0	1.6	1.9	
Risk of trained employees being 'poached away' by competitors	1.8	1.7	1.8	
Lack of support by the government (guidance, subsidies,)	1.8	1.8	1.8	

Results from '1'= It is not a barrier for my enterprise to '3'= it is a big barrier for my enterprise All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

3.10 Comparison with European average results

3.10.1 Attitudes of the enterprises towards competence development needs

Compared to the other European countries considered in this study (i.e. Finland, France, Spain and The Netherlands), Austrian SMEs are convinced to a lesser extent that the activities intended to develop the enterprises' knowledge and skill base are a key element for the competitiveness of the enterprise. While on European average competence development activities are ranked 3.3 (from 1=not important to 4=very important for sustaining the competitiveness) Austrian companies grade them 2.9. Only in the Netherlands, competence development is seen of being less relevant for sustaining the competitiveness of the enterprises than in Austria.







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

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

Like in Austria, also at European level clients and suppliers have been mentioned by the SMEs to be the most important sources of knowledge and competencies whereby the assessed relevance is higher in Austria than in the other observed countries. This holds true for all the considered actors with the exemption of universities and training centres (which are rated less advantageous for this purpose in Austria than at European level) and the recruitment of new personnel as well as government and public agencies which are assessed equally at both levels. With regard to R&D centres and technical experts as well as business and trade associations it shows that the Austrian SMEs attributed the highest degree of relevance to these knowledge sources compared to the other observed countries.





Table 21Relevance for the enterprises of different actors as sources of
knowledge and competencies, comparison between the national and
the European average

Variables	AT	European Average
Recruitment of new external personnel with required new competencies	2.5	2.5
Suppliers	3.1	2.9
Clients	3.5	3.2
Competitors and business colleagues	2.7	2.6
Consultants and accountants/auditors	2.9	2.6
Universities and training centres	2.0	2.2
R&D centres and technical experts	2.4	2.1
Business and Trade Associations	2.7	2.4
Government & public agencies	2.0	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

3.10.3 Practices for increasing enterprises' competence levels

On-the-job learning is the most important competence development practice not only in Austria but throughout Europe. However, internal coaching is of considerably higher importance in Austria than in the other observed countries. In contrast, mentoring of new employees is seen to be more relevant at European level than in Austria; indeed, the lowest level of relevance of this training practice among the analysed European countries can be found in Austria. Similar holds true for personnel meetings for knowledge exchange, internal job rotation and external training courses. Job rotation with other enterprises is, also at European level, ranked as the least relevant practice for increasing the knowledge, competencies and skill base of the SMEs.

Although it was shown above that internal training practices are more relevant for Austrian SMEs than external ones, the European comparison shows that with regard to five of the external training practices (namely the attendance of trade fairs and seminars, gathering information from publications or the internet and the analysis of patents and licences) their importance for competence development is ranked highest in Austria.





Table 22Relevance of different practices for increasing the enterprises'
knowledge, competence and skill base, comparison between the
national and the European average

Variables	АТ	European Average
External-to-the-enterprise practices		
Visits to expositions/trade fairs	2.9	2.7
Attendance to conferences/seminars provided by external personnel	2.5	2.1
Attendance to training courses provided by external-to-the enterprise personnel	2.3	2.5
Co-operation with other enterprises	2.5	2.2
Study visits to other enterprises/institutions	2.1	2.0
Job rotation and exchanges with other enterprises	1.6	1.5
Reading of information available in trade and sector magazines, publications	2.9	2.6
Reading of information available in Internet (websites, databases, etc)	2.8	2.5
Analysis of patents and licenses	2.2	1.9
Internal-to-the-enterprise practices		
Internal training courses/seminars provided by own personnel	2.6	2.3
Self-study activities during working time	2.4	2.3
On the job learning/learning in the daily work (for current personnel)	3.2	3.0
Job /task rotation (in-house)	2.5	2.7
Coaching/guidance activities for staff by other people in the enterprise	3.0	2.5
Tutor/mentoring systems for new employees	2.1	2.5
Apprenticeship schemes	2.2	2.2
Meetings amongst personnel for knowledge exchange/quality circles	2.3	2.5
Innovation and R+D activities	2.5	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

Like in Austria, the majority of SMEs at European level show no clear preferences regarding formal versus informal training practices. However, the share of companies assessing formal and informal training equally effective is slightly lower than in Austria (54 % compared to 58 %). Only France shows an even higher level of indifferent SMEs than Austria. As a result, the shares of enterprises strictly preferring one of the alternatives are somewhat higher at European level, each. As was mentioned for Austria, also the SMEs of the other European countries tend to prefer informal training practices.





Table 23Percentage of enterprises, according to their preference of
formal/informal training practices, comparison between the national
and the European average

Variables	AT	European Average
The formal training acquired in a course (external or internal)	2.9	5.5
The informal training and knowledge acquired on the job	34.5	38.9
Both equal	58.4	54.4
Don't Know/ No answer	4.3	1.1
TOTAL	100.0	100.0

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

3.11 Occupational groups benefiting from competence development activities

Regarding the occupational groups mainly taking part in competence development activities it follows from the data on hand that in Austria lower skilled persons benefit more from qualification measures than in the other European countries considered. This is particularly true for internal-to-the-enterprise practices. Whereas at European level the share of SMEs naming directors and managers as well as middle management and technicians as the main target group for internal training is considerably higher than in Austria, the shares of enterprises indicating manual workers are almost equally high and the share of companies in which clerks mainly participate in training is more than twice as high in Austria (constituting the highest share among the European countries).

Table 24Percentage 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	АТ	European Average
External-to-the-enterprise practices		
Directors and managers	52.0	67.0
Middle management, technicians	66.7	67.6
Manual workers, operators	19.5	19.3
Clerks, administrative personnel	35.6	14.1
Internal-to-the-enterprise practices		
Directors and managers	24.4	31.0
Middle management, technicians	65.8	74.4
Manual workers, operators	50.9	54.7
Clerks, administrative personnel	39.5	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





3.12 Formalisation and diffusion of the in-house knowledge

In general, the degree of availability of formalised management tools within Austrian SMEs widely corresponds to the European average. Nevertheless, the share of Austrian companies disposing of a formal strategic plan and a written workflow management, respectively, is considerably higher in Austria than on the European average. In contrast, fewer enterprises have elaborated work place and job descriptions in Austria than in the other European countries considered.

Table 25Percentage of enterprises with formalised management tools,
comparison between the national and the European average

Variables	АТ	European Average
A formal organisation chart	62.8	62.4
A formal strategic plan	65.0	48.2
Written manual(s) describing the main tasks and activities of each working post	59.7	66.0
Written manual(s) describing the productive standards and routines	66.6	56.8
Quality management systems	66.7	66.6
ISO certifications (9000, 14000, others)	40.1	40.5

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

Austria is above the European average regarding the availability of defined processes for the recruitment and selection of personnel and formal systems for evaluating the personnel performance within SMEs. In contrast, Austrian SMEs seem to be less transparent than companies in other European countries. The share of enterprises regularly conducting personnel meetings for informing employees about main changes and new developments related to their job and the enterprise is lower in Austria than on the European average. Similar holds true for the availability of a written training plan.

Table 26Percentage of enterprises with formalised human resources
management tools, comparison between the national and the
European average

АТ	European Average
38.2	34.1
39.4	34.4
33.8	32.7
31.3	36.9
49.2	50.7
77.1	80.0
	AT 38.2 39.4 33.8 31.3 49.2 77.1

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project.









Regarding the assessment whether relevant knowledge and information is well disseminated throughout the organisation no difference could be identified between Austrian SMEs and the European average. Companies generally indicate to dispose of a good working dissemination system. This is interesting, taking, for example, into account the fact that the share of SMEs organising personnel meetings is below the average in Austria (see above).

Assessment of the degree of dissemination of relevant knowledge Graph 8 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

Almost no differences could be identified between Austrian SMEs and the European average regarding the assessment of the usefulness of formal versus informal tools for disseminating relevant knowledge and information within the organisation. At the European level the share of small and medium sized enterprises preferring informal mechanisms is slightly higher than in Austria.





Table 27Preference 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	АТ	European Average	
Formal mechanisms	9.5	9.7	
Informal mechanisms	46.1	48.3	
Both equal	42.5	41.8	
Don't Know/ No answer	1.9	0.2	
Total	100.0	100.0	

All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

The availability of databases where relevant-to-the-enterprise knowledge, experiences and documents are stored for subsequent use is higher in Austria than on the European average. At the European level, 52 % of SMEs dispose of such a knowledge management database, whereas in Austria this share lies about 5 %-points above the European average.

Graph 9 Percentage of enterprises that suggest having databases where relevant-to-the-enterprise knowledge, experiences and documents are stored for subsequent use, comparison between the national and the European average



Source: Ikei and ENSR partners, CODE Leonardo project

A higher share of Austrian SMEs disposing of a knowledge management database regularly updates the information contained therein than on European average. Furthermore, the share of enterprises allowing all the enterprises' staff to access the respective database is markedly higher in Austria than at the European level





(28 % versus 23 %). Only in France even more companies provide their whole staff access to these knowledge databases. Although considerably less Austrian SMEs make their databases available via ICT-based systems than on the European average, in the other European countries considered (again, with the exemption of France) more companies restrict the access to the database to a specific group of the personnel than is the case in Austria.

Table 28Characterisation (updating and accessibility) of databases available
within enterprises, comparison between the national and the
European average (% of enterprises)

Variables	АТ	European Average
Databases are periodically updated	97.6	94.2
Databases are accessible through ICT-based systems (i.e. Intranet)	52.2	68.7
These databases are accessible to		
All the enterprise's workforce	28.1	23.4
Only allowed personnel (including management board)	58.2	64.1
Only the management board	13.7	11.7
Don't know/no answer	0.0	0.8

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

Source. Rel and ENSR particles, CODE Econardo project

3.12.1 Scanning competence development needs

In Austria, the share of SMEs having a special person or group being responsible for identifying current or future skill needs is markedly higher than in the other European countries considered (81 % versus 49 %). This is in line with the higher degree of formalisation of management tools (both, general ones and those for human resources management).



Graph 10 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

While Austria is characterised by a dominance of the company owner or the general manager fulfilling the task of identifying current or future skill gaps, on European average the share of SMEs in which the human resources manager or the management team is responsible for doing so is much higher. Nevertheless, the share of companies in which this task is fulfilled by a group formed by representatives of both, the management team and employees is almost twice as high in Austria than on European average, representing the highest share among the analysed countries.

Table 29Percentage 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	АТ	European Average
The owner/ the general manager	61.0	30.0
The human resources manager/training director (if different from above)	4.8	16.2
The management team	20.4	38.7
A group formed by representatives of the management team and employees	13.7	7.1
Other	0.1	8.1
Total	100.0	100.0

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

Source: Ikei and ENSR partners, CODE Leonardo project





3.12.2 Skill shortages/gaps identified by enterprises

In Austria, the percentage of SMEs indicating to presently experiencing a lack or shortage of skilled labour is with 39 % slightly lower than on European average (42 %).

Graph 11 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

Regarding the SMEs' assessment of the need to upgrade the competence and skills base of their workforce Austria is in line with the European average. The fact that the percentage of Austrian SMEs currently needing to upgrade their qualification level is slightly higher than the European average while, at the same time, the share of SMEs experiencing a lack/shortage of skilled labour is a little lower (see above) hints at a rather strategic viewpoint of Austrian SMEs, i.e. they intend to strengthen their competence base although there is no actual shortage at the moment.

Source: Ikei and ENSR partners, CODE Leonardo project





Graph 12 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



Source: Ikei and ENSR partners, CODE Leonardo project

Austrian SMEs generally express a higher need than on European average for upgrading their skill base in all of the considered competence areas which is in line with the finding that a higher percentage of Austrian companies indicate to have a need for increasing their qualification level (see above). Particularly with regard to management and finance as well as personal skills the upgrading needs are evaluated to be considerably more severe in Austria than on European average. The sequence of the different areas according to the assessed need of upgrading is approximately the same for Austria and the European average.





Table 30Relevance of different competence areas according to the
enterprises' identified needs, comparison between the national and
the European average

Variables	AT	European Average
Engineering and manufacturing	2.6	2.2
Sales and Marketing	2.8	2.4
Management, finance	2.5	1.9
ICTs, computers	2.3	1.9
Office work	2.2	1.8
Personal skills	2.6	2.1
Language abilities	2.3	2.0
Environment protection	2.1	1.9
Health and safety issues	2.3	2.0

Results from '1' = no need for my enterprise to '4' = very urgent need for my enterprise

Source: Ikei and ENSR partners, CODE Leonardo project

3.12.3 Barriers for enterprises to engage in competence development activities

Both, in Austria and at the European level the sequence of the barriers for enterprises to engage in competence development activities follows the same order. Nevertheless, the fear of having trained employees poached away by competitors, the time aspect and the unsatisfactory quality of available qualification sources seem to be of slightly higher importance in Austria than on European average. For the last two barriers mentioned the relevance attributed to them show the highest degree in Austria compared to the other analysed countries.

Table 31Relevance of different barriers for enterprises to engage themselves
in competence development activities, comparison between the
national and the European average

Variables	AT	European Average
Insufficient budget/costs are too high	2.0	2.1
Employees' workload makes these activities difficult to organise	2.3	2.1
Too difficult for the enterprise to assess its own knowledge/skill needs	1.5	1.5
Lack of information on the possible sources of knowledge/skills	1.5	1.5
The available sources of skills and knowledge are unsatisfactory	1.7	1.5
Lack of motivation from the employees	1.9	1.8
Risk of trained employees being 'poached away' by competitors	1.8	1.6
Lack of support by the government (guidance, subsidies,)	1.8	1.8

Results from '1' = It is not a barrier for my enterprise to '3' = it is a big barrier for my enterprise All enterprises

Source: Ikei and ENSR partners, CODE Leonardo project

All enterprises





4 Results from the expert interviews

4.1 Degree and extent of involvement of SMEs in competence development activities

4.1.1 General information about further education in Austrian SMEs

In general, two paths for basic vocational education are important in Austria, namely apprenticeship training with the possibility to graduate with the degree of a master and the attendance of secondary technical and vocational schools or colleges. Additionally, occupational competences are developed later on continuously by working and gaining practical experience.

The involvement of Austrian SMEs in competence development activities strongly depends on the personality of the entrepreneur but also on the initiative of the employees. As a result of both, the different paths for gaining basic vocational education and the varying levels of participation in further education a broad range of qualification profiles exists among SMEs' employees.

With respect to the entrepreneurs' **satisfaction** with the competences of SMEs' employees, important differences between sectors and occupational groups are mentioned by the interviewed experts. In the field of services (such as financial services or business consultancy) employees are often characterised by a higher level of education. The entrepreneurs are more satisfied with their competences than in other sectors where predominately people having attained a lower educational level work. Moreover, the satisfaction with the competences of employees is also associated with the duration of an employment. In sectors (like manufacturing) where long-lasting employment is predominant the entrepreneurs are, in general, more satisfied with the competences of their employees than in sectors (like tourism) where short-time/seasonal employment is more frequent. This is attributed to the fact that the longer employees are working in one particular enterprise the more familiar they are with their tasks and they act, therefore, more in line with the vision of the employer.

SMEs often face more difficulties with regard to **filling job vacancies** with employees disposing of an adequate level of occupational and social competences than larger enterprises because they are not able to offer the same career opportunities and possibilities for personal development. Large enterprises also





have a competitive edge at the labour market because they are in many cases able to pay higher salaries than SMEs.

SMEs generally do not recruit their employees from universities as they often are not in contact with universities in contrast to many large enterprises. Another problem of SMEs is that they are heavily occupied with daily business and are not able to consider up-to-date trends as much as larger enterprises. So, SMEs are able to follow changes at the labour market to a lesser extent than larger enterprises.

There also exist, however, differences among SMEs concerning their attractiveness for (potential) employees. SMEs located in rural areas or active in highly specialised niche markets are confronted with more difficulties regarding the access to qualified employees than enterprises in urban regions or companies active in mass markets. Due to the more limited labour market the "competition" for qualified employees among enterprises is more severe for those companies.

4.1.2 Methods for improving the in-house competences in SMEs

With regard to **external methods** for improving the in-house competences Austrian SMEs often rely on seminars provided by the Austrian Chamber of Commerce's Institute of Business Promotion (WIFI). In many cases the WIFI is the first contact point for companies engaging in further education activities for the first time which is due to its broad range of training and qualification measures and its publicity activities making companies aware of the offered courses. SMEs often attend seminars at the WIFI exclusively while other training institutes are rarely contacted. In general, the participants of seminars at the WIFI are satisfied with the offered training measures. One advantage of the WIFI is that the seminars are held by practitioners. SMEs also prefer the courses of the WIFI as they are offered at the regional level. Nevertheless, there still exist great differences between cities and rural areas where a lower number of seminars than in urban areas is offered.

Larger enterprises more often contact other training or consultancy institutes than small enterprises. Only if SMEs are well informed in the field of further education they also get in contact with other training providers as the Austrian market of competence development can be considered to be rather intransparent. Besides the WIFI, small enterprises make use of educational training of, for example, the bfi vocational training institute or employees' and employers' organisations (e.g. the Austrian Federal Economic Chamber or the Federal Chamber of Labour). SMEs




also make use of training provided by suppliers and manufacturers or substitute qualification measures by approaching external experts (e.g. consultants).

According to the interviewed experts **universities** mainly offer studies which take a long time or rather expensive post-graduate courses. As a result, more employees of large than of small enterprises make use of the offerings of universities. Employees of SMEs who attend further education lasting for a longer duration (e.g. the participation in courses preparing people for the examination of a master degree) often do not inform the entrepreneur about their further education activities but rather engage in the course independently of the company on their own initiative.

However, in recent years the situation at the universities has improved as they are offering more further education measures like the MBA - but SMEs still rarely make use of these offers. One reason for this is that small enterprises do not need so many university graduates as the more theoretical and strategic work lies in the hands of the owner/general manager. Small enterprises are focussing more on employees for "practical" work.

Furthermore, the offerings of universities are not sufficiently adjusted to the qualification needs in SMEs. Therefore, an intensified exchange between SMEs and universities would be necessary to develop adequate qualification programmes for SMEs' employees. As was mentioned by the interviewed experts this might refer to both, offering further education measures or to specific support in individual projects and tasks. In the manufacturing sector, for example, enterprises also co-operate with universities with regard to research projects. These are, however, mostly larger companies.

Business consultancy generally gains in importance to support SMEs. Especially counselling in the field of external trade and labour issues seems to be very important in recent years. Business consultants are also relevant for competence development activities because a training or qualification measure is often conducted in connection with a counselling. It is assumed that consultancy still has scope for development in this respect as it provides the opportunity to consider the individual situation of the enterprise while in traditional courses predominately general and more standardised knowledge is offered.

However, SMEs are not always satisfied with the services of business consultants. Low satisfaction results from a lack of co-operation and unclear objectives.





Furthermore, SMEs do not assess the price-benefit ratio to be justified and are, therefore, often sceptical with respect to consultancy services. Additionally, consultants are in many cases not specialised enough in different topics which is particularly true for the field of qualification constituting business activity being rather new for consultants.

Some SMEs are very satisfied with the offerings of **business and trade associations**, especially of the Austrian Federal Economic Chamber. With respect to the further education provision by **public agencies** a low satisfaction of SMEs is observed. This is attributed to a lack of flexibility due to their structures of administration.

The usage of the **internet** can be seen as a self-directed type of further education. In the internet a broad range of offerings of qualification measures is available but the respective demand is still low. Nevertheless, the importance of E-learning can be seen to be increasing. Generally, larger enterprises use the internet more often which is also true for E-learning and platforms.

Small enterprises which are active in traditional fields generally do not make use of the internet for accessing external knowledge and competence sources. Particularly enterprises in the trade, production and industry sector use the internet only very rarely contrary to software and high tech enterprises. While SMEs in the trade, production and industry sector often do not even have an internet access, enterprises active in more "modern" sectors regularly integrate ICTs in the daily business. As a result, these technologies are also used for competence development more frequently in these industries.

In small enterprises the usage of new media also depends on the technical interest of the entrepreneur which is also connected to his/her age. Particularly younger persons, both entrepreneurs and employees, make use of the internet for various purposes. There exists a break line at the age of 30, older people use the internet more rarely.

SMEs are also confronted with a lack of time for searching for suitable offerings of internet-based qualification measures. These enterprises show the tendency to accept those offers which they can easily find or are informed about by the providers.





Despite the variety of external methods of competence development SMEs are seen by the interviewed experts to prefer **internal and informal learning methods** and informal practices. One main focus regarding the improvement of in-house competences in SMEs are on-the-job activities. These training activities are carried out during the ongoing business and are normally conducted in an unstructured way. Besides "learning by doing" also self-directed learning, e.g. in connection with the usage of the internet (see above) is important. Methods like the exchange and circulation of information between employees also constitute a form of informal learning. These informal learning activities are seen to be at least as important as external methods for improving the competences in SMEs.

4.2 Identification of competence needs and planning

In general, SMEs do not show a systematic approach for **personnel development**. An exemption constitutes the service sector - also in the traditional field - which has a more systematic approach for developing its personnel's skills and competence base. For example, hairdressers are comparatively often conducting ongoing further education activities as they are in direct contact with customers who know about present fashion trends and choose the company which can provide them.

In the majority of SMEs the entrepreneur is **responsible for the identification of competence gaps** and the decision about the measures to close them. In some cases the master craftsman and/or the employee responsible for personnel management and further education (if available) engage in the respective strategic activities next to the entrepreneur.

Those SMEs with a structured personnel development are mostly very dynamic enterprises which are well managed by a qualified entrepreneur who is himself/herself interested in further education activities. With the increasing size of an enterprise also the systematisation of the **identification of competence needs** and planning increases. So, particularly large enterprises make use of a range of human resource management instruments but also medium sized enterprises, especially those in the field of finance and insurances, wholesale trade, manufacturing (engineering and electrical engineering) and high tech use these instruments. Nevertheless, also some small enterprises pursue a structured personnel development and identification of competence needs. They allow discussions between employees and employer and use a strategic planning of qualification measures. Generally, enterprises of every size increasingly use appraisal interviews with employees to exchange information about work related issues.





The majority of SMEs, and particularly small enterprises in traditional sectors, do not engage in active measures to identify competence gaps until their turnover decreases or they get outpaced by their competitors. These entrepreneurs often do not realise the deficits in the company and are not able to reflect the reasons for the bad development of their enterprise.

So, SMEs generally apply an ad-hoc or reactive planning regarding further education activities and do not have a systematic approach for the strategic identification of existing skill and competence gaps. The further education activities are conducted in an unscheduled way. If they feel the acute need for further qualification, they attend a respective measure. It often occurs that they choose further education activities according to a "trial and error"-method. So it can happen that they also attend "inadequate" courses which might also have an impact about their satisfaction with the course and the future engagement in competence development activities.

4.3 Topics and employment categories benefited by the competence development activities

According to the interviewed experts SMEs mainly identify and cover competence development activities in the following **topic fields**:

- Industry specific further education: The main topic of further qualification activities is industry specific further education. Employees and/or employers mainly choose seminars to improve their industry specific knowledge which can immediately and practically be applied in the enterprise.
- Computer skills: Because of perceived competence gaps SMEs are also intensifying their further education activities in the field of computer skills, e.g. they choose courses in basics like in MS Word, MS Excel etc.
- Technical seminars: SMEs are identifying skill and competence gaps in the field of new production technologies, so they continuously intensify their further education activities in this field.
- Languages: Austrian SMEs take advantage of courses in English and they are intensifying the learning of languages of the eastern neighbouring countries. Especially in the provincial states bordering the eastern neighbouring countries the interest to learn these languages is increasing, e.g. in Lower Austria the enterprises choose more courses in Czech.
- Marketing: SMEs also identify a skill and competence gap in the field of market information and marketing because they realise that not only their





offered products and services are important but also the implementation of marketing measures.

- Sales training and costumer contact: Not only SMEs in the field of trade but also manufacturing enterprises increasingly make use of such further education activities. This is also an indication of organisational change in the enterprises. Enterprises are intensifying the contact to their customers as this is seen to constitute a major factor for success.
- Financial management: Generally, entrepreneurs have relevant industry specific competences but they often show a competence gap in the field of management and other administrative fields (e.g. tax law). To solve these problems the entrepreneurs can also rely on a tax advisor or consultant. However, entrepreneurs are sometimes averse to contact these professionals because their services seem to be too expensive (see also above).
- Social skills: SMEs identify competence gaps of their employees in the field of service orientation, customer contact and team work. Nevertheless, only few SMEs are engaged in areas like personality development because they rather concentrate on industry specific knowledge.

The chosen competence activities of SMEs basically correspond to the identified competence gaps. However, SMEs do not consider the field of management and leadership as much as larger enterprises. Especially regarding EU-relevant issues (e.g. legislation, co-operation), a latent qualification need is perceived because international co-operation gains in importance for SMEs active in other EU countries (or planning to become so).

Regarding the **employment categories**, mainly highly qualified and younger persons benefit from competence development activities. Technicians generally participate more often in competence development activities than employees who are working in commercial departments or fulfilling administrative tasks. The training institutes rarely offer specific courses for women, lower qualified and disabled persons. So the competence gaps of these groups tend to increase and their employability tends to decrease.

Further education institutes also consider the needs of different occupational groups by offering different kinds of seminars. For example, measures for entrepreneurs and managers are often arranged as workshops and evening discussions as they prefer the topics to be presented in a very short and compact way. They do not wish to attend long-lasting training courses which are seen to be more suitable for other employees.





4.4 Rationale and barriers for SMEs to engage in competence development activities

Generally, further education activities are necessary for SMEs to be up-to-date to market development. With respect to the offered products and services specific competences are essential because the customers become more informed, self-confident, critical and express more differentiated wishes. Furthermore, the framework conditions and the know-how are rapidly changing, so an ongoing enhancement and improvement of the knowledge is necessary. Further education is seen to be essential for the sustainable success of an enterprise.

SMEs expect from further education activities that employees develop better abilities to solve current problems as well as up-date and improve their industry specific knowledge. Entrepreneurs also expect to maintain the competitive capacity of the company, secure its survival at the market and improve the company's performance.

Nevertheless, the following major barriers exist for SMEs to engage in competence development activities:

- Lack of awareness of competence gaps: Many SMEs, especially small enterprises, only engage in competence development activities, if a problem is arising (following an ad-hoc or reactive planning of further education activities, see above).
- Lack of time: Entrepreneurs of small enterprises do not have much time for strategic planning of qualification measures due to the dominance of daily business. Furthermore, the smaller an enterprise the greater is the problem of the lack of time of the staff as in small enterprises the employees are indispensable. So, employees are often supposed to attend further education measures in their leisure time. Some employees are, however, either not willing or in a position to do so.
- Lack of forecastings and development strategies: Resulting from the lack of time the enterprises also develop too few forecasts and development strategies. SMEs seldomly define their specific position and develop flexible concepts and strategies also with regard to competence development. As a result SMEs do not use a systematic approach for personnel planning and developing the competences of their employees.
- Lack of suitable offers: There exists a lack of offerings of further education activities at the regional level and suitable ones for specific target groups. The offers of the further education institutes are mainly focussing on larger enterprises and not on SMEs.





- Lack of information: SMEs do not have enough information about available offerings in the area of competence development and they do not have time to make inquiries about qualification measures. As SMEs are not engaged in the field of anticipatory competence planning to a large extent they often need an impulse from outside. So they need ongoing support in the field of further education activities.
- Concentration on existing competences: SMEs tend to concentrate on existing competences and often do not consider relevant important (technical) changes.

4.5 Organisational learning in SMEs

Most SMEs **store** relevant-to-the-enterprise knowledge in-house in an informal and unstructured way. In most cases the knowledge is linked to individual persons.

Nevertheless, a broad range of methods exists to **diffuse** relevant knowledge inhouse ranging from unplanned to well organised knowledge management. In many SMEs the secretary has a central role regarding information dissemination within the company. Furthermore, the employees of SMEs often exchange information in an informal way where they, for example, use circular letters, conduct informal meetings or write technical manuals accessible to all employees.

SMEs generally prefer **informal practices** for information diffusion although also formal practices are used. However, in many cases the informal exchange of knowledge through informal meetings, discussions or circular letters is not recognised as a method for the diffusion of information. So, most SMEs practice knowledge management but often do not perceive that they are active in this field.

The diffusion of knowledge in SMEs strongly depends on the corporate culture of the enterprise and the attitudes of the owner/manager. If entrepreneurs are averse to the exchange of knowledge and do not see the necessity for further education activities the knowledge will not be **well diffused** within the enterprise. Difficulties with the diffusion of knowledge are, however, not specific to SMEs, also larger enterprises are confronted with problems in this field. It is even assumed that in small enterprises the knowledge is better diffused than in larger enterprises because in (very) small enterprises every employee knows "everything" about the enterprise.

The diffusion of information in SMEs has not much improved by the more widespread usage of **information and communication technologies** (ICTs) which is due to the fact that the integration of ICTs into the daily business of SMEs is not as much advanced as in larger enterprises (also see above). In some SMEs not all employees have their own computers and many work processes are still





done in a manual way. ICTs are, therefore, used too rarely to improve the knowledge diffusion. It seems to be that the corporate culture is still more important for the knowledge diffusion than the implementation of the information and communication technologies.

In SMEs the same **barriers** for knowledge diffusion exist as in large enterprises. So, the respective problems and barriers are not specific to SMEs. However, one specific barrier of SMEs is the often prevailing lack of a meeting structure which exists in large enterprises and, there, fosters information diffusion. Other barriers for knowledge diffusion are the carelessness and the lack of awareness of employees and employers regarding the importance of "tacit" knowledge.

4.6 Public initiatives for fostering the development of competences in SMEs

In Austria, there exists a wide range of support devices for fostering the competence development in SMEs. These supportive measures are conducted at different geographical levels and focus on a variety of topics.

At **European level** the European Social Fund (ESF) makes available financial resources for the support of SMEs. In this context, activities to support the competences and skills of Austrian SMEs are implemented in the framework of Objective 3 (Austria) and Objective 1 (Burgenland) of the ESF. This means that there exists a range of initiatives aiming at improving the qualification of Austrian employees being co-financed by financial means of the ESF.

Next to these measures proposed at European level and implemented in Austria there exists a wide range of support instruments at **national or regional level**¹⁵ on behalf of Austrian public authorities. At national level, for example, activities in the field of tax law¹⁶ and financial support for companies engaging in competence development measures have been established. Another example constitute measures to particularly support SMEs. These especially aim at raising the awareness of SMEs about the availability of respective initiatives as SMEs often do not get enough information as to this respect due to their lack of time to search for different supporting opportunities. Also the Qualifizierungsberatung (qualification consultancy) has been established by the Federal Ministry for Economic Affairs and

¹⁵ Generally, in Austria the topic of further education lies in the responsibility of the provincial states giving them the opportunity to act according to regional qualification requirements.

¹⁶ Since the amendment of the taxation legislation in 2000, companies can take advantage of a tax allowance of 9 % of the costs for external further education of their staff. The training measures have to be related to the tasks of the employee and need to be offered by an institution under public law (e.g. Austrian Chamber of Commerce's Institute of Business Promotion (WIFI)) or by an institution targeting at an indefinite person subgroup.





Labour and the Arbeitsmarktservice Austria (AMS, public employment service) to actively approach SMEs and foster their engagement in competence development (see case study).

Case Study: Qualifizierungsberatung für Betriebe (Qualification consultancy for enterprises)

The Austrian Qualifizierungsberatung (qualification consultancy) was set up by the Arbeitsmarktservice Austria (AMS, public employment service) on behalf of the Federal Ministry for Economic Affairs and Labour in 2001 and is supported by financial means of the ESF¹⁷. The Qualifizierungsberatung constitutes one measure of the pillar "Flexibility at the Labour Market" of the Single Programming Document for the Objective 3 Austria (and Objective 1 Burgenland, respectively) 2000 -2006. Therefore, the support measure is valid until the end of 2006 and by now, concerning a prolongation no decision has been made, yet. The Qualifizierungsberatung can be seen as one part of a preventive labour market policy contributing to

- > supporting companies by their planning of personnel development,
- the provision of recent and generally applicable vocational knowledge to the employees of these companies,
- > a higher level of participation in qualification measures, and
- > the reduction of (the risk of) unemployment.

These objectives are to be attained by three operational measures:

- Qualifizierungsberatung zum Aufbau von JobRotation-Projekten: qualification con sultancy for implementing job rotation projects
- Qualifizierungsberatung zum Aufbau von Qualifizierungsverbünden: qualification consultancy for implementing qualification networks
- Qualifizierungsberatung f
 ür Betriebe: qualification consultancy for enterprises (see below)

¹⁷ With regard to Objective 3 the costs are equally shared among AMS and ESF. With regard to Objective 1, 75 % of the costs are financed by ESF and 25 % by AMS.





While the first and the second measure are also accessible for larger enterprises18, the Qualifizierungsberatung für Betriebe strictly targets at Austrian enterprises with up to 50 employees. The objective of this policy measure is to strengthen these companies by providing adequate qualification for the employees to keep up with competition as the experience from the previous support period had shown that particularly employees of small and micro enterprises participate in further education less frequently than those of larger companies.

This is done by offering specialised consultancy to the companies to find the most appropriate method for human resource management. In the following, only this third measure is described.

The measure is accomplished throughout Austria whereby different business consultants are engaged in the operational advisory services to the enterprises (ÖSB Consulting GmbH, BAB, P&K Zimmermann, Bit).

The Qualifizierungsberatung für Betriebe aims at drawing up a target oriented educational plan for the employees during a promoted consultancy period of two days (maximum), i.e. cost-free consultancy is provided to the small companies. The contact between the enterprises and the consultant agency is established by a pro-active approach of the AMS or the consultant. The result of the consultancy constitutes an educational plan for the company showing:

- a "skills inventory" (comparison between the available and necessary skills and competences for each work place)
- a qualification plan (including the aim and contents of the qualification activities as well as a time schedule)
- a documentation about the general usability of the qualification (going beyond the specific enterprise)
- a documentation about the objectives to be attained by the qualification measure for both, the employer and the employee

The consultant might, however, also come to the result that organisational changes might be necessary and identify, as to this respect, qualification requirements.

¹⁸ The Qualifizierungsberatung zum Aufbau von Qualifizierungsverbünden is only accessible for larger enterprises if at least 50 % of the participating companies are SMEs.





In Austria, the Qualifizierungsberatung (referring to all three operational instruments) is the only active approach to provide advice to the SMEs. Since its implementation about 6 000 Austrian enterprises participated in the measure, two thirds of them were SMEs. In order to raise the awareness of Austrian companies for the measure several promotion activities take place:

- > Presentations at company visits by the AMS
- > Pro-active telephone contacts with potential target companies
- Provision of information folders
- > Advertorials in target group specific magazines

Measures for quality assurance (e.g. survey among the participants regarding their satisfaction) take place every two years. The Austrian Qualifizierungberatung will also be evaluated by the Federal Ministry for Economic Affairs and Labour.

According to the interviewed experts another important topic refers to the upgrading and approval of practical experience and non-formal training practices as a competence. Like in other countries particularly the approval of practical experiences and its implementation into the educational system is seen as a major problem. The approval of practical experiences is especially important for the integration of people with a low educational level. One example where practical experience is already accepted is the field of apprenticeship training where the gaining of occupational experience is a main part of the qualification. Another example are universities of applied sciences where also persons with relevant occupational experience are allowed to attend the university, if they take an additional entrance exam.

Next to "traditional" competence development initiatives the Austrian Chamber of Commerce's Institute of Business Promotion (WIFI) arranges expert-meetings and contacts between entrepreneurs and international institutes as it is also recognised that the exchange of information and/or experience gains in importance

Furthermore, the interviewed experts also mention examples of specific consultancy activities in different provincial states. For example, the Tiroler Zukunftszentren (Tyrolean Future Centres) are establishing a competence balance sheet offering a structured and substantial coaching and consultancy in the field of further education. Other respective initiatives are, for example, set by the Adult Education Centre in Upper Austria.

Nevertheless, not enough measures presently exist to support SMEs according to the interviewed experts. It must be mentioned, however, that not only the number of offered measures but also the question if these are the "right" measures for supporting SMEs is important.





5 Conclusions and recommendations from the whole research

Austrian enterprises, and also the smallest ones, increasingly recognise the importance of continual vocational education for the companies' success. Competence development activities are seen to be necessary to adapt to changing market requirements and update obsolete knowledge available in the company. Although a large number of Austrian SMEs shows a positive attitude towards competence development the data on hand pinpoints that this is not as distinctive in small companies as it is in medium sized ones. Furthermore, Austrian enterprises are convinced to a lesser extent than those of other European countries that competence development activities foster their competitiveness.

During the last years, the rate of involvement of Austrian SMEs in competence development activities has been increasing which is to be attributed to both, the above mentioned higher awareness about its importance and a general higher educational level of the population positively influencing the participation in further education. Although a large number of SMEs participates in competence development measures the share of small and medium sized enterprises providing further education for their employees is lower than that of large enterprises. Also among SMEs a positive correlation between enterprise size and involvement in competence development can be shown resulting in a comparatively low number of smallest enterprises being active in this field. Nevertheless, when considering only companies active in competence development activities, almost no difference can be found between Austrian SMEs and LSEs with regard to the exerted intensity in terms of financial means or time spent.

Considerable differences are discovered, however, concerning the involvement of different sectors of the Austrian economy in further qualification measures. Companies being active in sectors characterised by dynamically changing framework conditions or technology-oriented enterprises have traditionally been engaged in further vocational training to a higher extent than, for example, the personal services sector. Although these latter sectors are still characterised by a lower level of involvement in competence development an improvement of the situation could be recognised during the last years, being at least partly to be attributed to the fact that consumers have become more and better informed and making, as a result, higher demands to the services provided on a more and more competitive market. Consequently, companies striving to successfully and sustainingly survive are almost "forced" to continuously update the knowledge available in the enterprise.

Although the general topic of qualification and the more specific one of competence development has rather substantially been dealt with by a wide range of Austrian scientists, no common definition for the concept can be found in the existing





literature. Nevertheless, the different authors agree that competence development goes beyond qualification in so far that it addresses different components of knowledge. This means that competence development does not only refer to the improvement of the professional knowledge of a person but also, for example, to his/her social skills, i.e. the general work place related behaviour of an employee.

From this understanding of "competence development" it follows that respective measures can only be carried out effectively, if also work place related issues/topics (e.g. organisation specific knowledge such as specific work procedures) are included in their curricula. This points out the considerable importance of internal-to-the-company measures (e.g. on-the-job-training) posing the opportunity of providing enterprise specific knowledge to the employees being directly applicable in their daily work. Furthermore, internal competence development activities are in many cases cheaper than external ones and, if they are established on a rather informal basis, show the advantage of being accepted by employees being averse to formal education. Informal vocational training, in addition, poses the opportunity of an individualisation of further education not only at the company level but also with regard to (a group of) particular work place.

A large number of SMEs has traditionally and successfully been applying such informal and internal qualification instruments, and a part of them would not even recognise them as competence development activities as they are so well integrated into the daily business life. Nevertheless, the smaller an enterprise the more important external methods become as the scope of exchanging knowledge already existing in the company is more limited due to lower number of employees. It might be concluded that both, internal and external competence development activities are relevant, depending on the topic to be covered and/or the occupational group to be addressed. A combination of external and internal methods is generally seen to be advantageous in order to effectively provide both, an external-to-the-company perception and a transfer of specific in-house knowledge.

Therefore, Austrian enterprises, and the smallest ones in particular, also have to rely on the external provision of competence development measures. Due to their comparatively limited resources SMEs prefer competence development measures in directly applicable knowledge immediately fostering resulting the competitiveness of the company. Therefore, their stakeholders (such as suppliers or clients) are assessed to be a more important source for external knowledge than they are for LSEs. The findings of this study also show that the Austrian market for further vocational education is often perceived to be rather intransparent. A large number of providers exists and for SMEs not having enough time for a substantial "market analysis" it is often difficult to assess which institute





provides the most suitable offer for the individual company. As a result, the Austrian Chamber of Commerce's Institute of Business Promotion (WIFI) is in many cases the first training institute to be approached by SMEs when starting to become active in the field of further vocational education, which is due to its relatedness to the Austrian Federal Economic Chamber (and the associated publicity among enterprises), its comparatively cheap and wide range (with regard to different contents) of offered courses, its possibility to adapt to regional qualification needs and the practice-oriented seminars.

In contrast, Austrian SMEs assess universities to be even less advantageous for competence development than small and medium sized enterprises in other European countries do. Generally, the vocational education provided by universities does not respond to the qualification needs of SMEs or is too expensive for them. This situation has, however, been recognised in Austria and is, for example, improved by the implementation of specific professorial chairs at universities for applied economics of SMEs. Nevertheless, also with regard to science-business co-operation still mainly large companies are involved in university projects. As, however, more than 99 % of the Austrian enterprises constitute SMEs the promotion of their co-operation with the scientific sector is recommended as it might be advantageous for the competence development in enterprises.

Independently of whether external or internal competence development activities are applied it can be observed that smaller companies rather prefer "traditional" qualification methods which have already proven to be successful for improving their employees' competence base. In many cases, more "modern" methods (e.g. quality circles) are not used because it would take too much time to become familiar with their concrete implementation and/or a rather sceptical attitude towards their benefits.

In spite of the general tendency of an increasing utilisation of information and communication technologies (ICTs) in daily (business) life it could be observed that SMEs take advantage of these "new" technologies to a lesser extent than larger enterprises. This is also reflected in the field of competence development resulting in a still low demand for ICT-based further vocational education compared to the respective offers available at the market. It might, however, be assumed that such a self-directed and flexible training method poses considerable advantages for companies, and SMEs (generally characterised by an omnipresent lack of time) in particular. As a result, an improvement of the transparency about and an enhanced promotion of the available offers might be one way of fostering competence development in Austrian SMEs.





Next to person-related measures for improving the competence base of an enterprise also the field of organisational learning and knowledge management is becoming more and more popular in Austria. As to this regard, SMEs can be seen to dispose of some better pre-conditions than large enterprises (e.g. favourable corporate climate, low hierarchy, low level of division of labour). Although it has been recognised that SMEs have a need for specific instruments in this respect (i.e. practice-oriented, easy to implement and to use etc.) not much information is available whether such SME-specific instruments already exist and are applied, yet.

Nevertheless, the data collected in the framework of this study show that Austrian SMEs are generally convinced that the knowledge available in the company is well disseminated among the employees. Furthermore, Austrian SMEs can be assumed to be rather "transparent" in terms of allowing a large number of employees access to relevant information. This is, for example, done by implementing databases to store and disseminate the knowledge. Compared to other European countries, a higher number of Austrian SMEs disposes of and regularly updates such databases and the access to them is less limited, too.

With regard to the subjects of competence development measures and organisational learning it was found in the study that Austrian SMEs are particularly interested in improving industry specific and IT-related skills as well as the personal/soft skills of their employees. Thereby, it could be shown that although there exists the general tendency of including management knowledge and soft skills into the curricula of employees' qualification a segregation occurs among company size classes. The larger an enterprise the higher is the probability that it engages in activities addressing these subjects. However, due to the increasing competition on many markets and the tendency that products of different companies become more and more similar to each other also "sales skills" of employees are of growing importance for the sustainable success of enterprises and should not be neglected by small companies.

In Austria (as in the other European countries) mainly highly qualified employees (such as technicians or managers) participate in competence development measures, which is at least partly to be attributed to their assumed higher willingness and self-initiative to become active in this field (see below). Nevertheless, manual workers generally are an important target group for internal-to-the company competence development initiatives and the importance of their engagement in further qualification should not be neglected.

It is generally recognised, also by Austrian SMEs, that the identification of competence gaps constitutes an important pre-condition for the implementation of respective measures and, therefore, the competitiveness of the enterprise. Nevertheless, as was shown in this study the degree of formalisation of personnel





development increases with company size, resulting in a comparatively low degree of competence planning and rather ad-hoc measures in the smallest companies. This problem may, however, hardly be overcome due to the immanent lack of time in SMEs.

The involvement of SMEs in competence development measures requires the initiative and support of both, employers <u>and</u> employees. This at least partly explains why more high skilled than low skilled employees benefit from competence development activities provided by their employers. As was shown, the willingness to participate in both, formal and informal further education is associated with the already attained level of formal education. University graduates are generally more ready to agree to participate in further education measures than persons "only" having a secondary level degree. Furthermore, due to the lack of time being more severe the smaller the companies, a correlation could be found between enterprise size and the tendency of employees participating in competence development measures in their leisure time: The larger an enterprise the higher is the share of working hours spent for qualification activities - which also positively influences employees' willingness to participate.

While some characteristics of SMEs can be seen to favour their engagement in competence development activities (e.g. their flexible structures facilitating the integration of respective instruments or measures, a more favourable and co-operative working climate) compared to larger companies there still exists a range of important barriers hindering SMEs to become active as to this respect. First of all, and in spite of the growing general awareness of the importance of competence development, there still exists a comparatively large number of Austrian SMEs not seeing a need for engaging in competence development activities, either because they assess this as being of minor importance or because they are satisfied with the competences available in the company. Secondly, the prevailing lack of time for both, the planning of and the participation in respective measures, particularly hinders the smallest companies to become active in this field - a problem that can hardly be overcome.

Also the above mentioned dependency on external training providers being more prevalent for smaller companies might pose a considerable problem for their involvement in competence development. Not only that the external provision of further education is, in many cases, linked to higher costs than internal training measures, particularly small companies are often rather sceptical about the quality and usefulness of the measures provided and, therefore, often refrain from approaching training providers. Other important problems concern the lack of information about the offerings of qualification measures available on the market or the lacking motivation of employees to engage in further vocational education





being particularly severe in SMEs characterised by a limited scope of personal development paths for employees.

In order to overcome these problems it becomes obvious that public and/or private initiatives should be fostered to support SMEs aiming at enhancing their competence development activities. Although a range of measures has been established during the last years it is still claimed that additional measures would be needed. The initialisation and implementation of such support activities becomes even more relevant against the background that Austrian SMEs increasingly consider competence development as a strategic topic: Also companies presently not experiencing a lack of skilled labour express a need to upgrade the available competence base of their employees.

First of all (and probably most important), it is assumed that there exists a need for initiatives aiming at raising the awareness about the importance of competence development activities in general or for particular topics (such as marketing and sales, see above) or methods (more "modern" ones, e.g. ICT-based training, see above). These need to be directed at both, entrepreneurs and employees. Particularly in the smallest companies it is the owner who considerably influences the competence development activities carried out in the enterprise - and this holds especially true for Austria as the data on hand shows. Therefore, it is important that the entrepreneur allows and enables a culture of learning in the enterprise and poses a respective infrastructure at the disposal of the employees. Nevertheless, as was mentioned above it also lies in the responsibility of the employees to identify potential skill gaps with regard to their occupational tasks. Therefore, it is necessary to make them aware about the importance of life long learning for their personal development. With regard to both, entrepreneurs and employees a more strategic approach to competence development should be attained so that respective measures are not only taken if problems arise, but also in their forefront in order to avoid them.

Furthermore, training providers and/or employers' representatives might, for example, engage in activities to make the vocational training market more transparent for SMEs (e.g. actively inform companies about the available courses or support them with regard to the selection of the "right" one).

Another possible field for enhanced support activities refers to the adaptation of traditional qualification forms to more competence development-oriented approaches (e.g. inclusion of the improvement of soft skills, personality training, seminars for fostering adequate behaviour patterns such as entrepreneurial thinking, client orientation etc.). Furthermore, the offered activities should be better adapted to the specific needs of SMEs. This might, on the one hand, concern the topics of the courses provided (i.e. more practice-oriented and directly





applicable knowledge being in line with the operational requirements of the enterprises). On the other hand, this might also influence the organisational aspects of respective measures (e.g. more flexible schedules, self-directed learning at the work place etc.).

Summarising, it may be concluded that the strategic importance of competence development for the competitiveness of (small and medium sized) enterprises has been recognised in Austria by policy makers, entrepreneurs and employees. The recent years have been characterised by the establishment of private and public initiatives to foster SMEs' qualification activities and/or support them as to this regard. As a result of both, the higher awareness about this topic and respective initiatives a higher number of enterprises engages in improving the skills and competence base of their employees. Nevertheless, further improvement potential can be identified in order to make Austrian SMEs, and as a result also the Austrian economy as such, more competitive.



Leonardo Programme



Annex 1: Description of interview partners

Interview partner 1

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Interview partner 3

Univ.-Prof. Dr. Norbert Kailer University Professor at the Johannes Kepler University Linz

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Interview partner 4

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Interview partner 5

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Interview partner 6

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