

Skill Gaps related to e-commerce in Austria
English Version

Name of the country: Austria

Date: December 2015

I- State of the art of the commerce sector on e-commerce, opportunities, barriers and challenges: statistics

1. General statistics of the sector (separated by wholesale and retail and given in total and %)

	Wholesale in %	Wholesale in total	Retail in %	Retail in total	Trade (wholesale + retail)
a. Number of enterprises:	38 %	68.675	62 %	112.050	180.726
b. Number of enterprises per size:					
0-9 empl.	85 %	58.373	89 %	99.724	87 %
10-49 empl.	12 %	8.241	10 %	11.205	11 %
50-249 empl.	2 %	1.373	1 %	1.120	1 %
250+ empl.	1 %	688		1	1 %
c. Turnover:	72 %	148 Mrd	28 %	60 Mrd	208 Mrd

Almost two-thirds of Austrian businesses in the field are in the retail sector. The turnover shows exactly inversely proportional. The vast majority of all of them are small enterprises with up to nine employees.

2. Employment situation of the sector (separated by wholesale and retail and given in total and %)

	Wholesale in %	Wholesale in total	Retail in %	Retail in total	Trade (wholesale + retail)
a. Numbers of persons employed:	36,8 %	175.950	63,2 %	302.176	478.126
b. Number of persons employed per size of enterprises:					
1-9:	18 %	31.671	20 %	60.435	78.652
10-49:	31 %	54.545	20 %	60.435	105.561
50-249:	30 %	52.785	8 %	24.174	88.095
250+:	21 %	36.949	52 %	157.132	205.818
c. Number of persons employed and gender:					
female	39 %	68.621	74 %	223.610	292.231
male	61 %	107.329	26 %	78.566	185.895
d. Number of persons employed and age:					
average age		39,6 years old		36,9 years old	37,6 years old
<20 years	3 %	6.271	8 %	26.441	
20 to <25 years	8 %	15.793	14 %	45.156	
25 to < 30 years	11 %	20.465	12 %	38.671	
30 to < 35 years	12 %	23.473	11 %	35.158	
35 to < 40 years	12 %	23.503	10 %	33.953	
40 to < 45 years	14 %	26.830	12 %	39.531	
45 to < 50 years	15 %	29.341	13 %	42.681	
50 to < 55 years	12 %	23.722	11%	36.421	
55 to < 60 years	7 %	14.187	6 %	20.065	
60 to < 65 years	2 %	4.343	1 %	4.930	
>= 65 years	1 %	2.344	..1 %	3.223	

e. Number of persons employed and qualification level: non manual workers manual workers apprentices					354.922 100.429 22.775
f. Number of persons employed and educational level: university secondary school vocational middle school apprenticeship 9 obligatory schoolyears					38.250 (8 %) 66.938 (14 %) 52.594 (11 %) 248.625 (52 %) 71.719 (15 %)
g. Evolution of the number of persons employed in the sector Evolution of the number of persons employed in the sector:					- 2,7 % (2013: 481.441)

Overall, 478 126 persons are employed in commerce. Two thirds of them as non-manual workers. (commercial clerk)

63% of all employees have completed an apprenticeship or middle vocational school, 15% have none vocational training but only compulsory education.

Women work mainly in retail. 74% of those, who work there, are women, but only 39% in wholesale.

With regard to the age structure the two sectors do not differ. The average age is between 35 and 40 years.

3. Use of ICT by enterprises (%)

a. Enterprises with internet connection per size of enterprises:	90 %
10-49 empl.	98,1%
50-249 empl.	99,7 %
250+ empl.	99,5 %
b. Use of e-commerce (to make and/or receive orders) per size of enterprise:	67,4 %
10-49 empl.	65,8 %
50-249 empl.	73,5 %
250+ empl.	82,9 %
c. Enterprises using Internet to interact with public agencies, and others entities per size of enterprises:	24,4 %
10-49 empl.	23,3 %
50-249 empl.	23,1 %
250+ empl.	13,1 %
d. Enterprises using application software (CRM- Customer relationship manager) per size of enterprise:	25,5 %
10-49 empl.	20,5 %
50-249 empl.	28,6 %
250+ empl.	28,7 %
e. Enterprises using application software (ERM- Enterprise resource planning) per size of enterprise:	
10-49 empl.	
50-249 empl.	
250+ empl.	
Enterprises with a presence on the Internet per size of enterprise:	70 %
10-49 empl.	84,7 %
50-249 empl.	94,4 %
250+ empl.	97,4 %
Enterprises with human resources with ICT skills per size of enterprise:	no data available

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Almost all companies have an Internet connection.

Use of e-commerce to make and/or receive orders correlates with the size of the company, the bigger the more.

Only approximately a quarter of the enterprises are using application software (CRM- Customer relationship manager), the bigger ones a little bit more than the small ones.

70% of all enterprises come with a presence on the Internet, small firms much more rarely, those with 50 or more employees to almost 100%.

4. Trends in the sector

- a. Employment opportunities in the sector
- b. Development of employment by qualification levels
- c. Variation in the employment by qualification levels
- d. Jobs opportunities by qualification levels
- e. Employment trends and anticipated vacancies
- f. Identification of change drivers on the jobs

Austria is a popular export country

After Germany, France and Great Britain, Austria is in fourth place in the ranking target markets, seeking to expand in the commercial business in the year 2014. This emerges from a recent study among 150 European, American and Asian retailers. As a result, new job opportunities arise.

Employment opportunities - Employment growth

The trading sector is among the largest industries in Austria and is the second largest employer in the country. In the Austrian Retail there has been a continuous increase in employment in recent years. The greatest opportunities for employment are in retail on part-time basis and marginal employment. The high part-time rate applies particularly to women. The proportion of part-time jobs in the retail sector is extremely high and is on average around 45%.

By 2016, a dynamic growth of sales occupations is forecasted, which inter alia, is because increasingly skilled jobs are in demand rather than unskilled work.

In general, the prospects for saleswomen are still sector- and filial specifically different: Good employment opportunities can be expected in the growing corporate chains, currently especially in the food and cosmetics sectors. Reasons for this are the very high turnover and the permanent replacement demand. For women on re-entry who have no specialized training, there are good employment opportunities if they can demonstrate commitment and willingness to learn. Generally in urban areas increasingly skilled workers are required.

The Retail sale of cosmetic, sporting goods and books and stationery achieved the highest sales growth in recent months. Also retail trade in various goods, shoes and the food sector rose in percentage terms. Overall, the retail sector is on a stable level of sales, and companies are confident about the coming months. More than half of workers in the sector can be found in retail stores. Most companies are active in selling clothes, food and in the DIY and interior needs. Around 40% of employees in wholesale are female the rate in retail is around 70%.

Especially in this branch people work with completely different training profiles and qualifications. This also allows career changers access to this sector. Due to the high turnover those who worked in the sales sector represent the third largest group among the registered jobseekers.

Structural Change and trends

The pressure on the stationary sale has increased enormously. More and more stationary retail employers put on a scattered distribution strategy with **retail store and online store**. A long-term trend in e-commerce issue is the establishment of **showrooms**: Locally customers get consultation and try out/on, and then they buy online. In **cross-channel sale** they order online, the goods can be tried and picked in the business of choice, and taken away if wanted. If not customers can leave the product in the store. Clothing, electronics and books are still leaders in distance selling. Moreover, franchising gains relevance. An increasingly closer integration of suppliers and manufacturing companies promotes international cooperation, especially in the sale sector.

The issue of sustainability is in many commercial enterprises already on the agenda. Targeted goals are to protect the environment, social responsibility and strengthening of image and confidence. The revolution in e-commerce increasingly leads to international competition. Technologically, purchasing via smartphone is no longer a rarity. Trade associations appeal to companies to react on the cross-border online trade and to be active on the internet. Experts point out, that in addition to the online trading stationary retail will still exist. Here the creation of salesrooms becomes increasingly important, with parallel reducing of retail space and fixed costs. A both-even strategy is recommended: online combined with steady trade. As the largest opportunities for small commercial enterprise service and specialization were identified. The next step in e-commerce represents a tailored selection from the variety of offers, which is generated by user's settings at online stores.

A large proportion of employees in sales have completed an apprenticeship. Shop assistant is the most frequently chosen of all professions, especially of young women. The proportion of part-time working women in trade is very high, particularly in the food sector.

The retail sector is of great importance in the apprenticeship behind trades and crafts. Approximately 15% of all apprentices are trained here. However, more and more commercial enterprises cannot cover their demand for apprentices. The reason is that schools are often more attractive than apprenticeship and cohorts with a low birthrate.

If perspectives and opportunities can be identified, it is more interesting for young people to decide for apprenticeship. The Chamber of Commerce increasingly runs image campaigns for apprenticeship and apprenticeship with "Matura" as well as the current development of new attractive professions, especially in the field of e-commerce.

Lifelong learning will get more and more important for elder employees in the sector to fill the gap caused by demographic development.

The newly established vocational academy for Trade Management in the WIFI-education centers in Styria, Lower Austria, Upper Austria, Salzburg, Vorarlberg and Vienna contribute with courses and master programs.

A few women in leadership positions

Despite a slight upward trend in the proportion of women in management positions in the commercial sector with 4,4%, it still remains at a low level. In view of the high female employment in this sector, the gender imbalance at the top of companies appears more striking.

(read more: <http://bis.ams.or.at/qualibarometer>)

5. How technologies affect jobs in commerce

a. Impact

E-commerce and e-commerce applications are an essential part of business world and private life. The expansion of internet and the rapid development of various information and communication technologies are constantly new impulses in the areas of e-commerce: Social networks like Facebook, twitter & co., smartphones, tablet PCs and apps open up new opportunities in the fields of communication, marketing, advertising, sales and distribution. Of high importance in this context is social commerce: Customers get online in contact with other companies or customers and communicate their feedback or recommendations for products or services. Internet reports published by buyers are in some sectors already the most important information for consumers and influence their purchase decision considerably. But also more and more companies are actively looking for contact with the consumers in social media networks like Facebook.

The main areas of application of e-commerce are:

B2C (Business to Consumer, E-Commerce for final customers): The use of online shopping is increasing in Austria. More and more stationary traders rely on multi-channel retailing and create online shops in addition to their retail stores.

B2B (Business to Business, e-commerce between companies): This form of e-commerce is much more widespread than the public generally perceives. Companies are taking advantage of information gathering, rapid ordering as well as the comparisons of industry-specific portals.

C2C (Consumer to Consumer, e-commerce between clients): Electronic business relationships between individuals play an increasingly important role. On internet market places and evaluation platforms products are sold and evaluated.

E-Government (communication between citizens and administrative authorities or the State): This field of application refers primarily to the settlement of administrative tasks using information and communication technologies (eg electronic delivery).

b. New Jobs /c. New skills

Detailed job descriptions are available, qualifications range from **apprenticeship to University**.

Consulting

- E-Commerce Consultant
- E-Lawyer
- Online Marketing Consultant
- SAP Consultant

Organisation

- Database administrator
- Data security expert
- E-business manager
- Ecommerce developer
- E-logistician
- E-procurement manager
- Online merchant
- Specialist for e-tourism

(Read more under: http://www.ams.at/b_info/download/handel.pdf, 2015)

New occupations – results questionnaire

Employers	very imp. + imp.	very imp.	not relevant
E-commerce employee front Office/e-shop assistant	72,90%	25,00%	2,10%
Entrepreneurial e-commerce employee	66,00%	27,70%	2,10%
E-merchandiser	57,10%	22,40%	2,00%
Expert in digital CRM	53,50%	16,30%	2,30%
e-commerce operator	53,50%	16,30%	4,70%
Technical specialist in e-commerce	55,20%	28,30%	2,20%

More than half of the surveyed entrepreneurs consider all these new occupations as important or very important for the future. "Very important" was ticked for all mentioned professions by 16 – 28% of the respondents.

It is notable that "Technical specialist in e-commerce" is considered with 28% most often as being very important.

II- Skills, competences and training needs related to the use of ICT

1. Results from qualitative research

2 Focus groups (employees, employers) - duration: 90 min

9 individual interviews with stakeholders/political actors

Focus Group Interview - Employer, 18.11.2015 - 6 participants

6 men, various products (food, clothes, cars and machines, ICT, medical technology, ..), two large companies, one medium sized, three small companies

Results:

Challenges of the sector:

- High skepticism of staff, EC is experienced as endangering competition
- Customers often know more about the Internet as sales staff (multichannel customer)
- Connection of online trading and “traditional” sales is not considered by employees in the shops. Online sale often does not flow into the stores revenues.
- The status of the apprenticeship in retail is low. Therefore, many people are unable to cope with the demands of e-commerce.
- Apprentices (15 years) are too young to work in e-commerce. The low Image prevents.
- Motivation for lifelong learning needs to be increased. (Incentives)

Impacts on the jobs/occupations:

- The demands on employees’ skills have increased. (technical and soft skills)
- Small companies need “allrounder” (overlapping of the different fields of work)
- New forms of customer retention are required
- Internal communication has changed.
- Internal training often is offered via e-learning - this requires a change of attitude to new forms of learning.
- Employees who have never used e-commerce in private life, have problems/fear to deal with e-commerce in professional life
- Identification with the product is different if you work in online-shops.

Skills needs related to the use of ICP and digital competences

- In addition to traditional skills in sales it takes spelling and language skills, skills in communication, text design, marketing and an affinity for computers.
- IT should be used constantly in the job, practical relevance and experience is important

Focus Group Interview - Employees, 16.10.2015 - 7 participants:

All members of work councils, 4 women and 3 men, 2 men not so active, 1 man very active, all women active, 2 more dominant

(attendance list available)

Results:

Challenges of the sector:

- Office jobs are gone – store manager/sale assistants have to do everything
- E-commerce is increasing – e.g. Billa
- Advertisement for online-shopping is increasing even in the food-sector
- Shopping around the clock
- Easy – just press a button
- customers behaviour changed- sales, percent, ...

Impacts on the jobs/occupations:

- Job loss if IT systems get more common, not only online:
automation of cashier systems
- Less frequency in retail shops because of www
- Companies adapt to these requirements
- Ordering with “new technology” is difficult for elder people (advertising leaflets)
- Exclusion of some groups (elder,..)
- Fear of job loss causes no use of internet, no individual confrontation with the topic vs using for individual, private things
- Rejection and prejudices against online-shopping – o.k. for textile but not for food-sector – on the other side there were always delivery services in the food-sector
- do not even know the online-shops of their own company
- Shop assistants loose job, more technical staff
- Value of their work is gone, call center are somewhere, work agencies
- They never had a really high value, even this is lost – but expectations are higher

Skills needs related to the use of ICP and digital competences

- IT knowledge very important
- Practical experience regarding IT
- Continuity is important
- Enough time for learning -
- discussion about time factor – qualification on their own responsibility in spare time with low wages – no solutions presented
- IT sector changes and grows very quickly – have to “follow”
- heated discussion concerning “warehouse-systems” – no knowledge, less information which causes insecurity and fear

Individual interviews with 9 stakeholders/political actors

Martina Moser, employment service Styria

Bernadette Pöcheim, chamber of labour

Barbara Hainzl, province school board for vocational schools

Michaela Marterer, Peter Härtel, StVG (VET)

Walter Christian, regional secretary, GPA-djp

Johann Seitinger, work council, GPA djp

Manfred Wolf, interest group for people in sales and commercial, GPA-djp

Gerhard Seitinger, director, vocational school/retail sale

Dieter Frei, CEO LFI (VET)

(attendance lists available)

Challenges of the sector:	
Internet changing production and consumption patterns (e-business; etc.)	100%
Different forms of communication because of multi-channel consumers	100%
Technological innovations equipment	90%
Changes in occupations/ jobs profiles	90%
Changes in consumer's needs and behaviours	80%
Introduction of tools to automate business processes	80%
More use of e-business apps	80%
Introduction of tools to manage relationships with customers and suppliers	70%
Internationalization process	70%
More use of social media and e-business apps	60%
Introduction of tools to analyse performance	50%
More use of promotional and marketing campaigns	50%
More competitiveness	50%

Impacts on the jobs/occupations:

- Large enterprises - perfect automation
- Customer loyalty through cards no longer through personal contacts - power of trade sector through data sales, employees are technicians no sales-persons
- Online trading is logistics not sales
- "Revenge of the industry" - producer as a trader
- Additional activities: parcel service, service stations (less collective than trade)
- Technique replaces humans, automated ordering systems
- "Traditional sales employees" find less employment opportunities
- Skilled saleswomen disappear because of less small businesses
- Wholesale does not require skilled workers
- Connection of e-commerce with personal advice - customers use retail for consultation and then buy online
- Training is not paid by companies
- Vocational schools in the sales sector do not manage to implement IT

Skills needs related to the use of ICP and digital competences	
Working with new technological applications	90,00%
Training concerning digital purchase processes	90,00%
General computer literacy skills	77,80%
Training concerning role and function of e-commerce	77,80%
General e-commerce skills	70,00%
Training concerning the behaviour of digital users	70,00%
Training concerning online consumer motivation/purchase/marketing	70,00%
Using e-commerce and social media as a mean to increase sales	70,00%
Using social media to communicate with clients	70,00%
Training concerning foreign language and intercultural skills	66,70%
Training concerning dynamic digital management	50,00%

Conclusions of qualitative research

All groups agree that e-commerce leads to changes in job profiles and everyone agrees that e-commerce has an impact on employment opportunities. On the part of employees is associated with anxiety and rejection.

The changed behavior of customers causes high demands regarding the skills of employees.

The system of apprenticeship does not cover the expanding demands brought by e-commerce. Further education and continuous on-the-job trainings and practical experiences has to get a more central role with focus on IT-competences, basic knowledge about e-commerce, simple technical application, role and function of e-commerce, changing behavior of customers to enable employees (especially in retail) to connect e-commerce to their existing work.

For employers and employees it appears to be important to acquire competences, which allow the existing staff to meet the new requirements.

2. Results from quantitative research

2.1. Results from Employers questionnaire

Proportion of women and men

women	men
29,8	70,2

Although the vast majority of employees in the trade are women: According to the sex ratio in the Austrian labor market only 29,9% of the entrepreneurs are women.

Level of Qualification

Level 1	6,30%	16,80%
Level 2	6,30%	
Level 3	4,20%	
Level 4	18,80%	
Level 5	27,10%	
Level 6	31,3%	
Level 7	35,4%	
Level 8	10,4%	

80% have a qualification level 4 and upwards.

Number of employees questionnaire employer

no employees	3	6,10%
1 - 4 employees	8	16,30%
5 – 9 employees	4	8,20%
10 - 19 employees	4	8,20%
20 - 49 employees	8	16,30%
50 - 99 employees	5	10,20%
100 - 250 employees	4	8,20%
More than 250 employees	13	26,50%

The distribution by size of the company is approximately equal to the Austrian distribution.

Annual Turnover

less than 50.000 €	4	8%
50.000/ 149.000 €	2	4%
150.000/ 249.000 €	4	8%
250.000/ 499.000 €	1	2%
500.000/ 999.000 €	3	6%
1.000.000/ 1.999.000€	5	10%
2.000.000/ 4.999.000 €	10	20%
more than 5.000.000 €	21	42%

Wholesale/Retail

Retail	76%
Wholesale	24%

With 24% proportion entrepreneurs from the wholesale companies are slightly underrepresented. (Austria 36%)

Use of ICT in company- employers

Internet connection	42	89,40%
Use of internet to interact with customers (to receive orders)	27	57,40%
Use of the internet to interact with public agencies, and others entities	27	57,40%
Use of the internet to interact with suppliers (to make orders)	39	83%
Use of application software (CRM- Customer relationship manager)	15	32%
Use of application software (ERM- Enterprise resource planning)	10	21,30%
Presence on the Internet (site)	40	85,10%
Presence on the Internet (social media)	29	61,70%
Presence on the Internet (online shop)	25	53,20%

Almost 90% of the represented companies have internet access and internet presence, 83% interact with suppliers via internet. Approximately 60% use internet to interact with customers, public agencies or to be present in social media, and more than half of the respondents, have an online shop. Use of application software (CRM 32%, ERM 21%) is less common.

Challenges in e-commerce

Employers

Changes in consumer's needs and behaviours	80%
More competitiveness	64%
Introduction of tools to manage relationships with customers and suppliers	64%
Internet changing production and consumption patterns (e-business; etc.)	62%
Different forms of communication because of multi-channel consumers	60%
Technological innovations equipment	60%
More use of social media and e-business apps	58%
More use of e-business apps	54%
Internationalization process	54%
Changes in occupations/ jobs profiles	52%
Introduction of tools to automate business processes	66%
Introduction of tools to analyse performance	44%
More use of promotional and marketing campaigns	30%

“Changes in consumer’s needs and behaviours” is regarded as the highest challenge. All other changes resulting from e-commerce are mentioned with 52-68%. “Introduction of tools to analyse performance” and changes regarding “promotional and marketing campaigns” are ticked least often. (44% resp. 30%)

Competences available in the target group

Digital and technological skills	
General computer literacy skills	90%
General e-skills	82%
Knowledge of the role and function of e-commerce	70%
Knowledge of the behaviour of the digital user	66%
Knowledge of online purchase motivation	62%
Knowledge of digital purchase processes	62%
Using social media to communicate with clients	54%
Knowledge of foreign language and intercultural skills	50%
Working with new technological applications	46%
Knowledge of online consumer motivation	46%
Using e-commerce and social media as a mean to increase sales	46%
New working techniques	36%
Knowledge of dynamic digital management	34%
Guidance to multi-channel consumers	26%

Soft Skills	
Focus on results	74%
Autonomy	72%
Teamwork: working within a team environment, cooperation, positive communication	70%
Problem-solving skills	66%
Responsibility and commitment to perform tasks assigned	66%
Creative thinking skills	64%
Leadership: motivation, conflict management, communication, delegation	64%
Communication skills	64%
Self-Motivation: define personal goals, proactivity	58%
Planning skills	56%
Openness to change: acceptance of diversity, collaboration in change	52%
Emotional control: stress management, emotional control	36%

Employers assumed that competences in “General computer literacy skills” are available to the extent of 90%.

Employers see between 62 and 82 percent availability of “General e-commerce skills “, “Knowledge of the role and function of e-commerce”, “Knowledge of the behaviour of the

digital user”, “Knowledge of online purchase motivation” and “Knowledge of digital purchase processes” in their firms.

The mentioned ability-rate of “Using social media to communicate with clients” and “Knowledge of foreign language and intercultural skills” is 54% resp. 50%.

46% marked “Working with New Technological Applications”, “Knowledge of online consumer motivation “ and “Using e-commerce and social media as a mean to increase sales” as available.

“New working Techniques” and “Knowledge of dynamic digital management” get 36 and 34 percent.

Taillight regarding the availability in the company is “Guidance to multi-channel consumers“ with 26%.

Eight of the competences in the field of soft skills are considered to be available to the extent of 64 to 74%.

“Self-Motivation: define personal goals, proactivity”, “Planning skills“and “Openness to change: acceptance of diversity, collaboration in change“are available to the extent of 52% to 58%.

Only the availability of “expertise in the field of stress“ falls below the 50% mark, with 36 percent.

Competences required in the target group

	very imp. + imp.	very imp.	not relevant
Digital and technological skills			
General e-commerce skills	100,00%	64,60%	0,00%
General computer literacy skills	97,90%	83,30%	0,00%
Knowledge of the behaviour of the digital user	89,20%	45,70%	0,00%
Working with new technological applications	80,40%	17,40%	0,00%
New working techniques	80,00%	24,40%	0,00%
Knowledge of online consumer motivation	73,90%	30,40%	0,00%
Using e-commerce and social media as a mean to increase sales	71,10%	24,40%	8,90%
Knowledge of the role and function of e-commerce	70,90%	27,10%	2,10%
Guidance to multi-channels consumers	68,20%	18,20%	0,00%
Knowledge of digital purchase processes	68,10%	29,80%	2,10%
Using social media to communicate with clients	66,70%	26,70%	0,00%
Knowledge of online purchase motivation	65,30%	37,00%	2,20%
Knowledge of foreign language and intercultural skills	51,10%	17,80%	2,20%
Knowledge of dynamic digital management	35,60%	8,90%	2,20%

Soft Skills			
Self-Motivation: define personal goals, proactivity	100,00%	68,90%	0,00%
Focus on results	97,90%	68,10%	0,00%
Teamwork: working within a team environment, cooperation, positive communication	95,90%	81,30%	0,00%
Responsibility and commitment to perform tasks assigned	95,60%	56,50%	0,00%

Problem-solving skills	95,60%	57,80%	0,00%
Communication skills	95,40%	53,50%	0,00%
Autonomy	94%	54,20%	2,10%
Openness to change: acceptance of diversity, collaboration in change	89,90%	66,70%	0,00%
Creative thinking skills	89,10%	47,80%	0,00%
Leadership: motivation, conflict management, communication, delegation	85,40%	45,80%	0,00%
Emotional control: stress management, emotional control	81,80%	50,00%	0,00%
Planning skills	75,00%	36,40%	0,00%

“General e-commerce skills” are considered by entrepreneurs as the most required competence (100% marked very important or important), followed by “General computer literacy skills” with 98%.

The importance of all other “Digital and technological skills” is valued between 65,30% und 89,20%.

The requirement of “Knowledge of foreign language and intercultural skills” is considered as lower important with 51,10% and “Knowledge of dynamic digital management” is deemed to be the least important. (35,60%)

None of the soft skills, (except “Autonomy” which was marked once), was marked as not relevant.

All soft skills an importance greater than 75 percent is attributed. (very important or important).

As the most important competence is " Self-Motivation: define personal goals, proactivity " called (100%), followed by “Focus on results” with 98% and “Teamwork: working within a team environment, cooperation, positive communication”, “Responsibility and commitment to perform tasks assigned”, “Problem-solving skills”, “Communication skills”, “Autonomy” – all approximately 95%.

Planning skills - with still 75% - are lagging behind all other soft skills.

Summary focusing on skills, competences and training needs:

Comparing those skills that are in a low percentage available (lower than 50%) in the businesses with those competences that are mentioned as important in future it can be derived that in the fields of

- Knowledge of online consumer motivation
- Using e-commerce and social media as a mean to increase sales
- Self-Motivation: define personal goals, proactivity
- Stress management, emotional control
- Openness to change: acceptance of diversity, collaboration in change
- Planning skills

The gap between requirements and availability of competences is the biggest from the perspective of employer.

2.2. Results from Employees questionnaire

Proportion of women and men

women	men
68,80%	31,20%

Level of Qualification

Level 1	22,90%	37,50%
Level 2	14,60%	
Level 3		
Level 4		41,70%
Level 5		12,50%
Level 6		
Level 7		
Level 8		

IT-Workplace - Employees

non IT Workplace	95,70%
IT-workplace	4,30%

Number of employees in company - questionnaire employees

no employees	0	0,00%
1 - 4 employees	0	0,00%
5 - 9 employees	0	0,00%
10 - 19 employees	4	8,20%
20 - 49 employees	8	16,30%
50 - 99 employees	4	8,20%
100 - 250 employees	7	14,30%
more than 250 employees	27	55,10%

Wholesale/Retail

Retail	72%
Wholesale	26%

63,2 % of employed persons in Austria work in the retail sector, 74% are women. This number is also reflected in the target group selected by us (72% retail, 68,8 % women). The majority of respondent employees came from the age group of 30-49-year-olds, which also corresponds to the national average (see report WP 2). 41,7% of respondents have an apprenticeship; a very high proportion (37,5%) only completed compulsory schooling without further qualification.

Only 4,3% work on IT-workplaces.

A high number of respondents work in companies with more than 250 employees (55,1%) and in the food sector, what reflects the current situation on the Austrian labour market especially in the sector of retail.

Use of ICT in company- employees

Internet connection	35	81,40%
Use of internet to interact with customers (to receive orders)	22	51,20%
Use of the internet to interact with public agencies, and others entities	27	62,80%
Use of the internet to interact with suppliers (to make orders)	28	65%
Use of application software (CRM- Customer relationship manager)	21	49%
Use of application software (ERM- Enterprise resource planning)	23	53,50%
Presence on the Internet (site)	36	83,70%
Presence on the Internet (social media)	32	74,40%
Presence on the Internet (online shop)	26	60,50%

A little bit more than 80% said that there is internet access and internet presence, 74% of their companies use internet to be present in social media. More than 60% of the companies use to interact with public agencies or interact with suppliers via internet and have an online shop. Use of application software (CRM 49%, ERM 53,5%) is estimated quite high.

Competences available in the target group

Digital and technological skills	
General computer literacy skills	97,80%
General e-skills	43,50%
Knowledge of the behaviour of the digital user	43,50%
Knowledge of foreign language and intercultural skills	34,80%
Knowledge of the role and function of e-commerce	23,90%
Using social media to communicate with clients	23,90%
Knowledge of online purchase motivation	21,70%
Using e-commerce and social media as a mean to increase sales	17,40%
New working techniques	17,40%
Knowledge of digital purchase processes	13,00%
Knowledge of online consumer motivation	10,90%
Knowledge of dynamic digital management	8,70%
Guidance to multi-channel consumers	8,70%
Working with new technological applications	8,70%

Soft Skills	
Teamwork: working within a team environment, cooperation, positive communication	58,70%
Autonomy	50%
Creative thinking skills	43,50%
Leadership: motivation, conflict management, communication, delegation	41,30%

Openness to change: acceptance of diversity, collaboration in change	41,30%
Communication skills	41,30%
Self-Motivation: define personal goals, proactivity	34,80%
Problem-solving skills	34,80%
Emotional control: stress management, emotional control	32,60%
Emotional control: stress management, emotional control	32,60%
Responsibility and commitment to perform tasks assigned	28,30%
Focus on results	21,70%

Almost 100% of employees surveyed said that they have “General computer literacy skills”. There is a large gap to the following competence “Teamwork: working within a team environment, cooperation, positive communication” with 59%. Less than half of the workforce has “General e-skills” “Knowledge of the behaviour of the digital user”, “Creative thinking skills”, “Leadership: motivation, conflict management, communication, delegation”, “Openness to change: acceptance of diversity, collaboration in change” , “Communication skills”, approximately one third come with “Knowledge of foreign language and intercultural skills” , “Self-Motivation: define personal goals, proactivity”, “Problem-solving skills “, “Emotional control: stress management, emotional control” “Emotional control: stress management, emotional control”

All other competences lie between 28% and 9% (“Knowledge of dynamic digital management”, “Guidance to multi-channel consumers”, “Working with new technological applications”).

Competences required in the target group

	very imp. + imp.	very imp.	not relevant
Digital and technological skills			
General computer literacy skills	89,60%	66,70%	0,00%
Knowledge of the behaviour of the digital user	81,70%	53,10%	2,00%
General e-skills	81,60%	55,10%	2,00%
New working techniques	80,00%	37,80%	2,20%
Using social media to communicate with clients	73,90%	39,10%	4,30%
Using e-commerce and social media as a mean to increase sales	71,10%	33,30%	4,40%
Working with new technological applications	68,80%	31,30%	0,00%
Knowledge of digital purchase processes	67,40%	32,70%	0,00%
Knowledge of foreign language and intercultural skills	66,60%	33,30%	4,20%
Knowledge of online purchase motivation	62,60%	31,30%	0,00%
Knowledge of online consumer motivation	56,60%	28,30%	4,30%
Knowledge of the role and function of e-commerce	55,40%	27,70%	2,10%
Guidance to multi-channels consumers	54,30%	23,90%	6,50%
Knowledge of dynamic digital management	44,20%	18,60%	2,30%

Soft Skills			
Openness to change: acceptance of diversity, collaboration in change	97,80%	67,40%	0,00%
Self-Motivation: define personal goals, proactivity	95,90%	65,30%	0,00%
Communication skills	93,70%	66,00%	0,00%
Teamwork: working within a team environment, cooperation, positive communication	91,70%	68,80%	0,00%
Emotional control: stress management, emotional control	91,30%	67,40%	0,00%
Problem-solving skills	89,10%	63,00%	0,00%
Responsibility and commitment to perform tasks assigned	89,10%	65,20%	0,00%
Leadership: motivation, conflict management, communication, delegation	87,50%	45,80%	0,00%
Focus on results	87,20%	57,40%	0,00%
Creative thinking skills	85,10%	53,20%	0,00%
Autonomy	83%	55,30%	0,00%
Planning skills	80,90%	42,60%	0,00%

Employees see as most important “General computer literacy skills” (89%) followed by “Knowledge of the behaviour of the digital user”, “General e-skills “, and “New working techniques “(app. 80%). The importance of all other mentioned digital and technological skills is valued with more than 50%. Only “Knowledge of dynamic digital management” falls under the 50% mark. (44%).

All topics in the fields of soft skills are considered as important/very important (all between 97% and 80%), none of these skills is marked as not relevant.

Summary focusing on skills, competences and training needs:

Comparing those skills that are not in a pretty low percentage available in the target group with those competences that are mentioned as important in the future it can be derived that in the fields of

- Knowledge of the behaviour of the digital user
- General e-skills
- Knowledge of online consumer motivation
- Using e-commerce and social media as a mean to increase sales
- Knowledge of foreign language and intercultural skills
- New working techniques
- Working with new technological applications
- Guidance to multi-channel consumers
- And all soft skills

The gap between requirements and availability of competences is the biggest from the perspective of employees.

3. General Conclusions

General numbers of the state of the art concerning e-commerce

The use of online shopping by customers is increasing in Austria.

The expansion of internet and the rapid development of various information and communication technologies are constantly new impulses in the areas of e-commerce.

The use of e-commerce to make and/or receive orders correlates with the size of the company, the bigger the more.

The understanding of “e-Commerce” differs between all actors, there is no obvious common definition.

Main trends in the sector

The pressure on the stationary sale has increased enormously. More and more stationary retail employers put on a scattered distribution strategy with retail store and online store.

There is an awareness concerning the fast development of e-commerce which leads to new occupations in the sector. Social partners are dealing with the topic already.

Main challenges in the sector

1. Most mentioned challenges in quantitative research

Stakeholder/Political Actors

Internet changing production and consumption patterns (e-business; etc.)	100%
Different forms of communication because of multi-channel consumers	100%
Technological innovations equipment	90%
Changes in occupations/ jobs profiles	90%
Changes in consumer’s needs and behaviors	80%
Introduction of tools to automate business processes	80%
More use of e-business apps	80%
Introduction of tools to manage relationships with customers and suppliers	70%
Internationalization process	70%
More use of social media and e-business apps	60%

Employers

Changes in consumer’s needs and behaviors	80%
More competitiveness	64%
Introduction of tools to manage relationships with customers and suppliers	64%
Internet changing production and consumption patterns (e-business; etc.)	62%
Different forms of communication because of multi-channel consumers	60%
Technological innovations equipment	60%

2. Challenges resulting from requirements

Competences that are required today and in future do not correlate with the currently available competences of the existing staff – especially in retail.

Job-profiles and vocational trainings have to be adapted with all consequences what means a significant challenge for social partners.

New contents have to be integrated into vocational education as well as into further education for employees, what also means a great challenge for VETs.

The permanent development and change in the sector only can be faced if workplaces are seen as learning-places and life-long learning is part of personnel development which means a great challenge for companies.

The impacts of technology in the sector

Technology affects all parts of the sector – starting from application for a job over management tools to participation on global markets. This means that on all levels handling of ICT has to be a matter of course.

Customers get online in contact with other companies or customers and communicate their feedback or recommendations for products or services. Internet reports published by buyers are in some sectors already the most important information for consumers and influence their purchase decision considerably. Customers are multichannel users and often more informed than stationary staff regarding products and market.

Although an increasing part of communication with customers, suppliers, colleagues etc. happens via ICT the existing VET-offers (complaint management, advisory, teambuilding, customer retention, ...) focus only on face to face situations.

The main skills, competences and training needs concerning ICT

Employers focusing on available competences and required competences see the biggest gaps in “Knowledge of online consumer motivation”, “Using e-commerce and social media as a mean to increase sales”.

Employees focusing on available competences and required competences see the biggest gaps “Knowledge of the behaviour of the digital user”, “General e-skills”, “Knowledge of online consumer motivation”, “Using e-commerce and social media as a mean to increase sales”, “New working techniques”, “Working with new technological applications” and “Guidance to multi-channel consumers”.

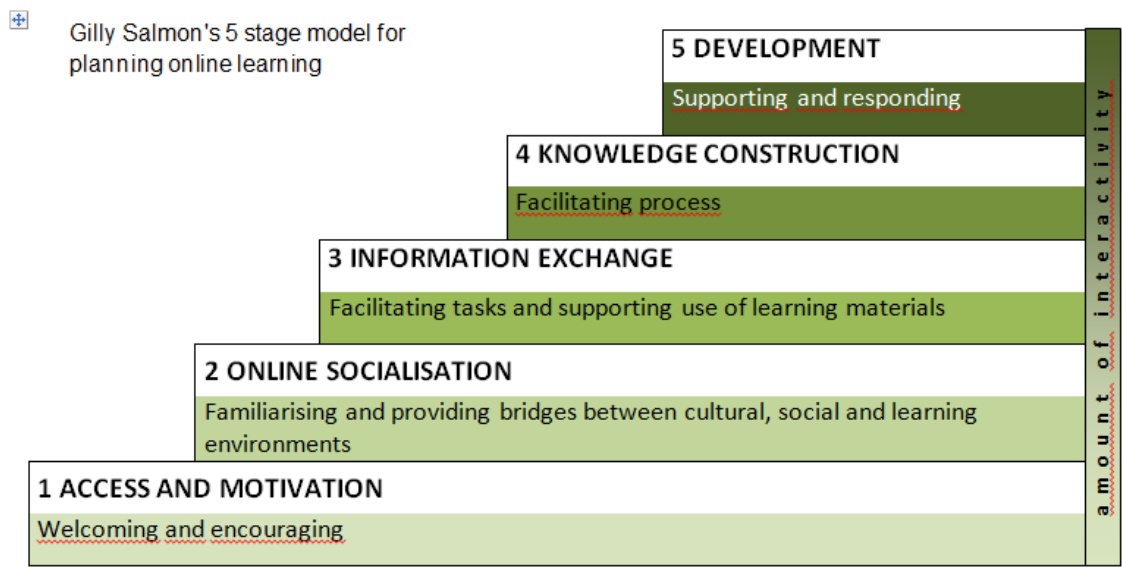
Comparing these two groups it is remarkable, that employers’ perception is much more “optimistic” regarding available competences than the self-rating of the employees.

Basic e-commerce skills and the use of soft skills in ICT-communication appear as very important.

4. Recommendations

What general actions should be addressed to fill the skills gap?

- Depending on the target group and the level of knowledge and experience regarding e-learning approaches on different levels/stages are required and have to be considered.
- The pedagogical approach must not be ranked behind the technical approach.
- In Austria we face the situation that a high percentage of employees especially in retail, comes with a quite low qualification level. This means that (life-long) learning in general has no central position in their life concepts and/or many of them are not used to learn. Additionally their media literacy - beside smartphones - is low.
- If this is not taken into account, no connection can be found, and e-learning will not be accepted and used.



What are the priority skills and the action plan to provide this?

Employer and stakeholder/political actors have a strong reference to classic e-commerce trainings as “general e-commerce skills” and “role and function of e-commerce”. This corresponds with the feedback from the employees, more than 3/4 of the respondents miss trainings in these areas or do not know them.

- 60% of the surveyed VETs do not offer trainings in “general e-commerce skills”, 45% not in “role and function of e-commerce”.
- Trainings in the field of “new technological applications” are also mentioned as necessary by employers and stakeholder/political actors. Stakeholder valued this content as most important.
- Faced with the challenge of changed behavior and needs of customers, trainings concerning online consumers, their behavior and motivation, purchase, marketing and communication via social media, are highly required training contents from the perspective of employers (70% - 80%) and stakeholders (70%). From the perspective of employees these trainings are missed or not known up to 85%. 62,5% of the surveyed VETs do not offer trainings with these contents.

- All groups reported that skills concerning the “use of e-commerce and social media to increase sales” are of high importance, employees miss trainings with these contents to a high extend or do not know it (almost 90%).

Trainings have to be up to date and deal with current topics; VETs need to develop branch-specific offers in cooperation with companies.

The company has to be seen as a learning place by employer and employees. Companies have to provide good trainings conditions (worktime, financial issues,...) to their employees and have to be aware of the added value.

Training offers must be based on existing previous knowledge-levels of employees.

VETs have to provide low threshold, application-oriented and workplace-based trainings with high practical relevance.

What can be done by the different stakeholders/political actors?

Reduce anxiety of this “new” field of work and technology. - “Sell” the benefits of training!

Social Partners have to discuss new standards of vocational training, new occupations and job descriptions.

Job-profiles have to be changed or expanded; the image of the profession has to be increased including all conditions like salary, working times, etc.

The motivation to take part in vocational trainings is higher if employees see career-chances (66% in retail think that there are no chances) - reference to career-opportunities, incentives and salary increase. People have to see better qualification as a possibility for job retention.