Where are we now and where should we go?

GAP ANALYSIS OF WOOD SECTOR

CREDO KRAJINA

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thinkworkshop

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Uvod

CREDO Krajina is a project financed by the Swedish International Development Agency – SIDA and implemented by the Development Agency EDA, Banja Luka, in cooperation with the Association for Development – Nerda, Tuzla. The aim of the project is improvement of competitiveness of medium and small size companies in the area of Krajina, in order to create and maintain jobs, reduce poverty and improve the economic status of this area. The project should support creation of around 200 new jobs and maintain up to 1000 jobs in the companies/sectors encompassed by the project interventions. The CREDO Krajina Project lasts for 30 months and it consists of several phases and components. Through an initial analysis of the priority commercial sectors, a selection of industrial sectors with a significant potential for creation of new jobs was done and representatives of companies from these sectors, through sectoral boards, defined priority needs for advisory assistance and training. Additionally, a part of an advisory and financial assistance is directly aimed towards the municipalities with intention to significantly improve local business environment and establish a permanent and efficient dialogue with the private sector.

This analysis is based on the two previously performed analyses within the CREDO Krajina Project. The first one is "Baseline Study of the Industrial Sectors", the aim of which was to explore and identify the sectors with the biggest potential for growth of competitiveness and growth of employment. On the basis of this analysis, a decision was brought that the CREDO Krajina Project will focus on the sector of metal industry, food processing industry, wood industry and leather and footwear industry. The second analysis is the value chain analysis for wood sector. The focus of this analysis was on the production, processing, distribution and sales together and this has enabled us to analyze each step in its comparison to the previous one and to compare it to the next step in the chain. The results of this analysis are being used to a great extent as a basis for the GAP analysis.

GAP analysis has offered an overview of the situation in the wood industry, from the point of view of comparing the current reality with desirable possibilities offered at the market. GAP analysis is a business analysis tool, which implies defining of differences between the current and desired state and manner of functioning of the branch.

In its basis, the GAP analysis asks two questions:

- Where are we now?
- Where do we want to be?

This document consists of the three basic parts. The first part is a description of the current situation, which starts from the situation on the market and it describes a way in which the producers and the whole value chain correspond to the demand from the market. The second part shows what a desired situation would be, that is, it responds to the question what this branch would look like, if its developmental potentials would get achieved. The third part is related to determining the gap between these two states, the so-called gaps and their description. Specific measures for overcoming the gaps are defined in the process of work with the Wood Processing Sector Board.

We thank all the companies that participated in the survey, sectoral coordinator Goran Janković, sectoral expert Dragan Savić, members of the Sectoral Board and workshop participants. We owe special gratitude to Shawn Cunningham and Frank Waeltring from German company Mesopartner and Zdravko Miovčić, the director of Eda, for the advisory support in preparation of the analysis.

1. Where is the wood processing today?

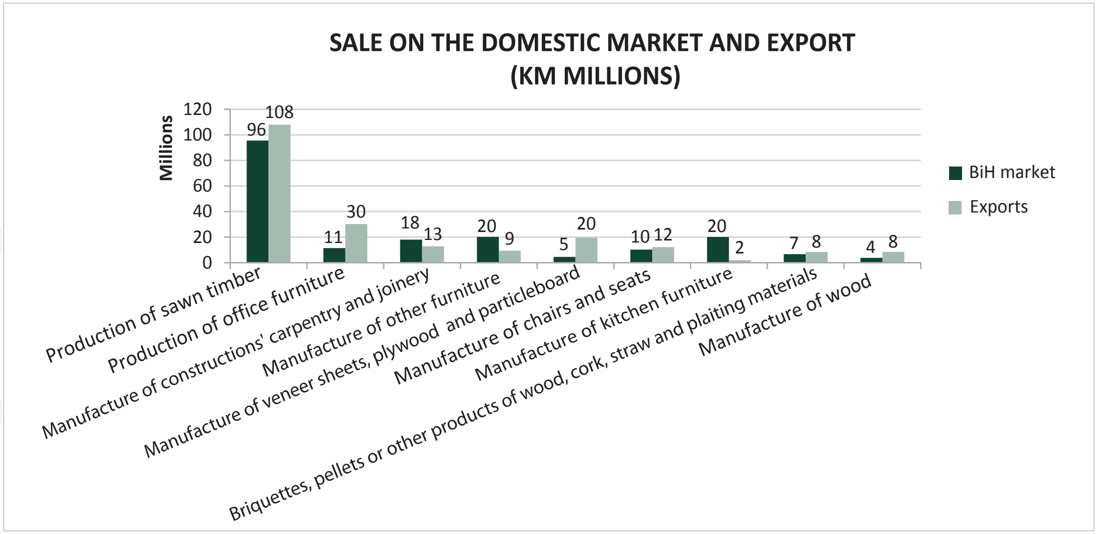
The area at which the CREDO Project is implemented has a long tradition and good international reputation in the production of good quality products made of wood and furniture that meet both the domestic and international demand. Relatively cheap and skillful labor force ensures competitive advantage for furniture industry. Still, this branch is still unable to fully achieve this advantage, mainly, because of the lack of skills in creation of final products, primarily in the modern market-oriented design.

The wood processing sector employs, at 432 companies registered for these business activities, about 6,000 employees. In the area covered by the CREDO Project, this is the largest processing industry sector. The biggest number of companies works in the production of cut timber, than production of carpentry finish and production of furniture.

The market position of wood processing industry

The total sale the wood processing industry realized in the area of all the 34 municipalities is about KM 418 million. Out of this, KM 218 million is attributed to export. This confirms that the sector, on the whole, has been, to a great extent, oriented to export.

Graph 1 - Sale on domestic and foreign markets (in KM millions)



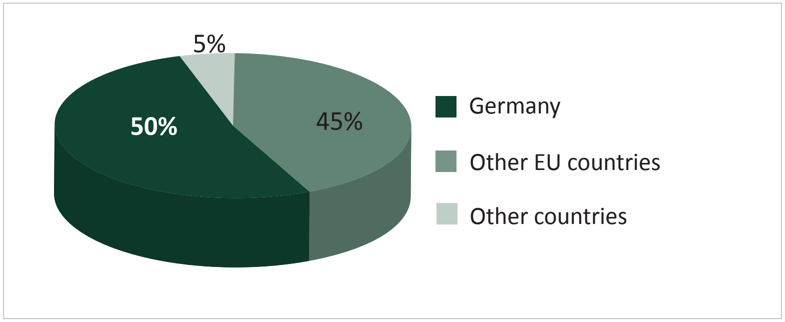
Source: APIF RS and AFIP FBiH

On the basis of this research, it may be concluded that the biggest dynamics and the biggest potential for creation of added value lies in the sector of furniture production. This is confirmed by the quantitative and qualitative indicators (qualitative evaluation of participants in the research). All other activities have a lower potential in the value creation. This is particularly related to furniture producers made of lumber, while, in the production of plate furniture, one company, A.D. Standard, Prinjavor, has been extremely dominant and has exported more than 2/3 of the total amount of exported plate furniture from this area.

The companies that have marked high degrees of production growth and growth of the number of jobs are mainly oriented to the external market. There is also sale on the domestic market, but this can satisfy only small producers. In the case of large producers, they cannot survive without large quantities, meaning, that they cannot function without external markets.

The most significant market, which the wood processing producers work for, is the market of the EU. As we can see on Graph 2, the very Germany absorbs 50% of B&H furniture export, whereas the rest of 45% goes to the EU, hence we export 95% of our furniture to the EU.

Graph 2 - Total export of furniture from B&H



Source: Trademap

The key reason why our companies are present on the EU market is the ability to produce standard high-quality furniture, at a price that is lower than that of the competition, for that quality level. Foreign customers know that our companies may produce products of a good quality, as we used to be, before the war, amongst those who were better, globally, in terms of the quality of raw materials (Bosnian beech is recognizable by its quality), quality of products and professional labor force (in the eighties, B&H was the second country by furniture export to the USA, immediately after Italy). When compared to the competition, in terms of quality, we are better than the Eastern countries (Romania, Bulgaria, etc.), whereas they offer lower prices. However, the EU customers know that our companies produce much better quality products and this is where are producers are trusted.

However, if we have in mind the size of the EU market, we can see than that our production and export are very small and that there is a lot of room for our producers. Namely, in 2013, the EU imported furniture in the value of Euros 57.4 billion. Germany itself, our largest furniture market, imports about Euros 14.2 billions of furniture.

The key problem of our manufacturers in approach and appearance on EU market is that they often wait buyers to find them, rather than actively seeking buyers. Access to the European market is usually through wholesalers who contact our manufacturers, offer them the types of products they need, agree on the price, give requests and then companies enter the production under these requests. Also, there are companies that have direct contact with foreign retail companies. However, these relationships are often the result of random contacts and acquaintances (usually through our people in the Diaspora), rather than the result of a systematic approach to the market.

When it comes to the market, the European demand has been increasing and our producers could increase production and export, if they would be able to find more markets for their products, which would mean a better contact with the market. This implies bigger activity to the market, more flexible and better design process and better product design. However, the lack of people and capacities for high quality market approach has been noticed in the companies.

Production and technology

Concerning the equipment, about 2/3 of our wood processing companies have machines that are 5-10 years old. With this type of equipment it is possible to achieve the desired quality of the production. However, for the further development it will be necessary to renew the technology, especially if we take into account the requirements of foreign buyers in terms of a constant, high-quality products. This, in itself, does not mean a complete orientation to CNC machines, as some of our producers base their competitiveness exactly on cheap labor and orientation towards labor-intensive technology. Such producers find that it is better to hire more workers on the «old», cheaper machines than to buy new equipment, which needs fewer workers, but cost much more. It would therefore be of great benefit to make improvements concerning the organization of production, the flow of raw materials, improvement of certain operations (egg. lacquering of wood is the problem of most of our businesses and there are companies where the lacquering of wood and its sending is performed in the same room).

The production facility of ,,Drvoprodeks"

Also, majority of companies in the wood processing sector have a problem with design process and technical preparation of production, i.e. they lag in this area behind the European competition. Our wood processing producers usually get a product or a picture of a product and on the basis of that they start their production. Except for individual cases, majority of companies have not been capable enough to turn those inputs, obtained in such a manner, into technical documentation necessary to prepare the production. Sometimes the preparation of a prototype is done in a crafts-like manner. In better companies, the products are designed using AutoCad, after which technical drawings are then printed, but it is also not a rare case that technical drawings and technical documentations are manually drawn. This frequently results in poor solutions and slow reaction to customer demand.

Some domestic companies, which are the leaders of technological development, apply new techniques in designing (Solid Works and parameter 3D projections) and they achieve good results. For example, D.I. Vrbas has, by applying of these techniques, managed to significantly increase the productivity of its production.

When it comes to the design, some of the companies have their designs, but it is difficult to expect that domestic companies develop this capacity on their own. The most common practice is to hire external designers or designing companies. However, in this case, the companies must be ready and have qualified staff to be able to communicate with the designers in a good quality manner.

Supplying of raw materials

Wood processing industries producers, who make lumber products, purchase the biggest part of their raw materials and semi-products on the domestic market. It must be emphasized that beech from B&H is a recognizable raw material, which additionally opens many doors at a global level to our producers. On the other side, the producers of plate and upholstered furniture mainly import semi-products necessary for their production.

There are significant problems in supplying domestic raw materials. Domestic producers have problems related to the quantities of delivered wood, its quality and continuity of deliveries, particularly during winter, as forestry holdings do not supply wood in winter. According to producers' statements, in some periods, they cannot accept requests of the customers because of being unable to provide raw materials.

Generally, the situation in the forestry sector is pretty unorganized. It often happens that those tradesmen, who have better "connections" with forestry companies and who export the wood while still raw or slightly processed, get the raw wood rather than producers who use the wood to process it and add value and create jobs. There are some examples where processing companies have 100 and more employees and they cannot get contracts, while the companies, which only do trading, with only 2-3 employees get the wood. This is, altogether, one chaotic and unorganized situation and, if the state, as a monopoly owner of forestry holdings, wants to create and add value in the country, as well as create new and maintain the existing jobs, then they will pay due attention to organizing this area.

Things here should be organized in such a way that the primary goal becomes that the final processing companies and those, who are in the chain of final processing companies, have a priority in obtaining raw materials or have better terms or incentives to use the raw materials for the production of final products. The situation now is totally opposite to that. Some of the companies, which export cut lumber abroad, have some incentives for that, through export subsidies (this subsidy has been renamed into the competitiveness subsidy for purely administrative reasons) and if this lumber is sold to our final producer, there will be no incentives, as the sale is done on the domestic market. It is clearly understandable, then, that there is a lower interest of tradesmen in wood and sawmills to supply domestic final wood processing companies rather than export.

People and knowledge

In terms of quality and expertise of labor force, B&H is well known in wider international circles. In the pre-war period, when ŠIPAD operated (a holding company, which gathered all the wood processing companies in B&H), knowledge and skills of the labor force were developed systematically and we benefit from it even today. The present labor force in this sector is relatively well qualified and trained; however, there is a problem here that the age structure of employees in this industry is unfavorable. The biggest part of well qualified employees are those who used to do this job in the previous system, they are of a relatively older age and it may be expected, in some time, that they will complete their employment and retire. This staff is one of our advantages. However, this advantage may easily be lost, as there is no continuity and systematic approach in providing new staff.

Some of the companies manage in renewing their human resource structure, however, there are cases that the companies lose their key people and the market offers no one to replace them. Such companies cannot respond to the market demands, as they do not have a sufficient number of qualified staff. The biggest problem here is presented by the lack of newly qualified employees, who could replace those, who are to retire, thus responding to the increased production needs.

Knowledge at work – solid wood furniture, firm Javor, Prijedor

Under these circumstances, there is a deficit of qualified people at all wood processing levels. It is not easy to cut wood, even the simplest of the logs, without knowledge. Simply speaking, there is a complete specter of wood processing staff missing: from manual workers to production operators and, particularly, engineers. However, our education system does not produce staff that the economy needs.

When it comes to the existing engineering staff, knowledge and skills are based on the knowledge of experienced engineers, out of whom many are very competent in the production and technological parts. However, they are very few for the existing needs, let alone for developmental and future needs of this sector. Also, a very significant problem is the level of engineers' knowledge about the new designing technologies. There could be no adequate communication with the EU market without well trained engineers, who, on the bases of new designing software, could rapidly adjust production to the customers' needs. The point is that the European competition uses those new technologies and often bases their advantage on it.

Some companies are organizing their work in this direction, but currently there is a lack of a good quality engineering and technical staff and this cannot be corrected easily. Experienced engineers get trained and new engineers get educated for the usage of modern technologies, as the Faculty of Mechanical Engineering has licensed software, as the faculties in the EU and elsewhere have. In particular, it must be emphasized that the Faculty of Mechanical Engineering, Banja Luka has a depatment for the mechanical processing of wood, but thi is only "on paper". For many years no one has applied for this department, which is a great pity. One of the problems for the activation of this department is the lack of teachers in the group of subjects related to wood technology.

Cooperation between the companies

There is several wood industry clusters in the project area, which mainly gather small companies. The Banja Luka cluster gathers 10 producers and its Coordinator Vojislav Petković considers that the Cluster should be focused on the products for equipping touristic facilities and interiors, as the advantage of the Cluster companies are flexible production in small batches. Because of this, they have an intention to open a Representation Office in Istria, Croatia. The Prijedor Cluster gathers 22 companies and cooperates with the companies from Prijedor and from other local communities (Banja Luka, Kostajnica, Kozarska Dubica and Novi Grad). The Prijedor Cluster has functioned well, though it does not function well now, because of violated internal relations and different interests. One of the results of this cluster is the introduction of a class for processing of woods in secondary schools. Cluster members mainly see their membership in clusters as beneficial, but also claiming that there is room for improvement, eg. in terms of joint purchasing, etc.

For majority of other companies, cooperation is at a low level. Except for several large companies, majority of others are small and many things operate in an unofficial manner. Producers often purchase raw materials separately, each for themselves, even though with joint purchasing they would be able to have greater negotiation power to the state forestry sector. This is, also, related to the access to the market for its products, where, in a great number of cases, our companies act individually. There is also one more significant cooperation possibility. Namely, one of the largest companies in this area is D.I. Vrbas, which has significant human resources and technological capacities and sale of furniture made of lumber higher than KM 10 millions, etc. At this moment, this company is at a crossroads whether to go in the direction of serial production for one large customer or to have several smaller customers with a wide spectrum of products. They are at a crossroads as to what would they like to invest in and where should they go to. If one such company would get oriented to several smaller European customers with a wide specter of products, then, possibilities would occur for more intensive cooperation with a lot of small producers, to whom the basic advantage would be a great extent of flexibility and small series. On the other side, this would mean that the company D.I. Vrbas may invest less into its capacities compared to the investment for a large-series production, as many small capacities already exist. Also, the large-series production for a large customer is a "lohn" job, with small margins. If small companies would have such a large company as a leader, this could mean mutually beneficial cooperation.

In the previous system, all the producers were organized in the so-called complex organizations of associated labor (SOUR), which used to include the companies from production of raw materials to final products. In our area, SOUR Šipad included all the producers in B&H. As we have already said, many, who work in the present companies in this area, come from the previous system and they have the knowledge and experience in connecting and joint work of several connected companies. This is why it makes sense to think about better connection of the companies in the wood processing sector.

Institutions for support and development

Public policies for the development of this and other industrial sectors are mostly based on empty phrases and those documents are mainly a “dead letter on a piece of paper”. Those policies are also brought without significant consultations with business companies, they are often not developed into specific activities and project tasks, no financial constructions for realization of priority projects are done and no reports on realization of these projects are done at all, either in public or in professional circles.

Majority of companies are members of the Chambers of Commerce. The RS Chamber of Commerce has some results in establishing relations between the forestry and wood processing sectors, and it has also provided information about potential new markets. In some cases, the Chamber of Commerce has provided services of the designers and other forms of support. Some of the companies are members of the local associations and forestry associations and wood processing of the RS. A part of the companies believes that membership at the Chambers of Commerce is not beneficial and that they should offer more, particularly, when compared to the Chambers of Commerce in developed countries and their services for the economy.

Generally, there is no cooperation between the sectors and educational institutions (secondary schools or faculties). Even though production generates constant growth and increase of employment, secondary schools and faculties do not educate enough people for the needs of our wood processing companies. The reason for this is the lack of public policies that would connect the educational system with the economy.

Financing of investments

One of the big problems that companies are currently facing are unfavorable lending conditions. Banks are “very expensive”. Commercial lending rates are much higher in comparison to the EU . Thus, for example, for loan in Slovenia and the same amount and the same purpose, the interest rate is 3.9 % and 6.62 % of BiH. The positive thing mentioned by businessmen themselves in financing investments are subsidies given by certain ministries. As for the wood processing industry , the most common form of subsidy is the one for increasing competitiveness . The aim of subsidy is supporting the implementation of development projects of economic entities , in order to improve their development , improving competitiveness , establishing quality systems as well as increasing employment . The maximum amount is 200.000 KM. In addition to the grants that are awarded , it is certainly important to mention the assistance to the sector through credit lines of Investment-Development Bank of the Republic of Serbska .

The amounts range from KM 30.000 to KM 5,000,000, depending on the purpose and form of organization of users, the payback period is 1-15 years, grace period ranges from 12 to 24 months , with interest rates ranging from 4 % to 4.9 %. However, some business respondents complain that these loans can be obtained only by political affiliation and that they are not equally available to all .

Business environment and framework conditions

Companies from wood industry are in a disadvantage in terms of the environment in which they operate, in relation to European competition. Unlike us, cities, regions and countries in EU are fighting to attract firms, in order to employ people and pay taxes on their territories. Therefore, the conditions in which firms operate in the EU are much more favorable.

We have a completely opposite situation. Existing tax legislation indicates that the real economy is burdened with many tangible and intangible liabilities. For example, in the RS tax rates are formally low (profit tax 10% and VAT 17%), but the legislative is very complicated, so the company is obliged to adhere to over 20 laws related to fiscal and parafiscal charges, and about 30 laws that talk about the penalty provisions. The firms submit more than 100 different applications and forms in the course of the year. In the Federation, the situation similar for many things, except for one, significant, positive exception. Export-oriented firms in Federation are supported by fiscal stimulus measures. Namely, all companies that export more than 30% of total sales, do not pay profit tax. This is a significant incentive and positive move of decision-makers in the area of fiscal policy.

This is an exception, but generally most of procedures are harder and more complicated for firms, because these procedures are a source of “institutional rent.” For example, process of issuing building permits and other permits is very complicated and laborious task, and requires a significant financial effort and a large number of administrative procedures. There are also some incongruities that make life difficult for firms. State or entity may be delayed in payment to firms (public procurement, VAT, etc.), but the reverse is not possible. It often happens that the state has debt to particular company, but the company still has to pay its debts to state. Also, BiH as a state has not adopted the regulations and directives of the EU in terms of technical requirements and characteristics that products must meet, so it is necessary to meet the criteria and procedures specifically designed in Bosnia and Herzegovina. These are just examples, there are more of them and we are not going to state all of them here but it can be concluded that the legal and institutional framework in which the economy operates is very complicated, there are intricate and lengthy procedures that require a lot of costs, formal and informal, and that those who make decision on this framework often do not understand the conditions under which the economy functions.

Culture and values

Modern approach to economic growth and development means that the productivity and competitiveness of a country are not conditioned by its material assets - natural resources , physical and financial capital, but by “intangible” characteristics of the population - the quality and quantity of knowledge, entrepreneurship, creativity, innovation, work ethic. Only societies that value highest civilizational characteristics such as creativity , knowledge and work can, in modern conditions, count on greater prosperity . In such societies , these values play a major role not only in the economy but also in the building of social structures , in general change in education, culture, mentality and quality of life.

However, characteristics valued in BiH, unfortunately, are not these. Neither RS , nor FBiH are a society that creates fertile ground for highest civilizational characteristics such as creativity , knowledge and work. In our society , instead of knowledge and ideas there is more focus on party and family ties, instead of hard work, ability to accomplish things without work is valued more. In our system of values least valued are those that create most of new, added value , which is not possible without creativity , knowledge and work . It is well known that the business people from the real sector are often on the margins of society by reputation. Even the common name for the business people - “privatnik” has negative connotations and bad reputation.

This is supported by scientific research in this field . Lack of confidence among the people of Bosnia and Herzegovina recorded in these studies , is a direct result of poor system of values . According to these studies (eg, Salaj 2008 , the European Values Studies) , measured general level of confidence shows that only 16 % of inhabitants believe that most people can be trusted. Let us remind that in countries where the creativity , knowledge and work are highly valued, such as the Scandinavian countries, according to the same research, 60-65 % of people trust other people.

Having this in mind , it becomes clear why are institution uninterested in economic development , why “privatniks” have a bad reputation, why business associations are weak , why there is no real dialogue between business and government , and why , at the end , there is no compelling vision and development strategy. Because of this value system we have fallen into the trap from which it is difficult to get out. Our society does not value creativity, knowledge and work sufficiently, and the result is current situation - low creation of new, added value, low productivity and slow development. It is therefore important to support the producers in the wood processing sector, because they are the exception to the rule and a positive example of how creativity , knowledge and work can create good results .

2. Where do we want to get to?

FINAL RESULT	Significant increase of production and value added of semifinshed and finished wood products for the EU market		
MARKET	The companies act in a proactive manner on the EU market and adjust their products to the needs of the European buyers		
PRODUCTION	Created good quality capacities for development of wood products – design technology, technical development, production preparation and, partly, esthetic design	Improved technical and technological capacities and increased production capacity in most enterprises	Increased production that progresses from the simple semiproducts to high level of processing and greater value added
RESOURCES	Significantly increased number of qualified employees, as well as engineers and technicians needed for projections, technical development and preparation, plus availability of staff with esthetic design knowledge	Reliable and sufficient raw wood delivery	Companies financing investments under favourable financing terms
INSTITUTIONS	Secondary schools and institutions for additional qualification and change of qualification provide more qualified staff, whereas faculties provide more engineering and other highly qualified staff	Technological institutiosn provide support to companies in the usage of new technologies and standards fulfilling	Financial development institutions provide sources of financing under favourable terms, equal to all

3. Which are the most significant gaps to be overcome?

From the analysis of the existing situation and projections of a desired future state, it can be seen that the most significant gaps to be overcome between these two positions are as follows:

- Passive approach to foreign buyers
- Lack of people – qualified workers, technicians and engineers
- Technology and business processes

Passive approach to foreign buyers

The focus of wood processing industry is becoming more and more exports. The aim here is to increase contracting for European and world markets. The domestic market is too small and it cannot be counted on if we want to continue the dynamic growth of production and employment in the industry.

As we have seen in the analysis, the most important market for the companies is the EU, especially Germany. The biggest problem here is that our manufacturers generally wait for buyers to finds them, rather than actively seeking buyers. Finding foreign buyers is often the result of random contacts and acquaintances (usually through our people in the Diaspora), than the result of a systematic approach to the market. German and other EU buyers currently do not have enough information about our companies, about their capacities for serving the EU market. On the other hand, our companies do not have sufficient knowledge of these markets and of sources of information that are important for specific markets. This represents a huge gap that needs to be bridged.

The aspect	Why is it important?	Found weaknesses	Main actors	Area of activity and potential interventions
THE GAP - MARKET				
• Access to and participation in the market (bigger and better export arrangements)	• the key to further improvement of competitiveness, increase of sales volume and employment	• Germans and other EU buyers do not get enough information about our companies, of their capacities for EU market • In most businesses owners / managers perform the majority of work in the sales and do not use sales people who know the demands and requirements of the market, • There is not enough knowledge about markets and sources of information	• German Chamber of Commerce (AHK) and similar associations • GIZ (CIM experts and support of exports) • Economic missions • Firms with positive experiences	• Training -How to export to EU, especially to German market (how to establish and strengthen ties with German companies) • Organizing events where local companies and potential foreign partners could meet • Support for direct connection and the promotion of companies through GIZ program and trough German Chamber of Commerce • Organize events for the exchange of experience and knowledge for the directors
• The introduction of standards and product certification	• Each company must have FSC standard • The CE mark is a prerequisite for the export of some products (baby beds, etc.) • For each market there are specific standards (for Germany GS, DIPT, etc.)	• A large number of small companies have the ability to export but some standards are obstacles (FSC, CE, GS, DIPT, etc.) • Lack of domestic testing laboratories and certification (using foreign is expensive, and domestic would be much cheaper, according to estimates)	• Companies and experts from the region with good experience in this field • Faculty of Mechanical Engineering • Laboratory for testing and certification, Zenica (emerging)	• Support to companies in the introduction of standards and product certification (this measure will be specifically elaborated in accordance with the specific requirements of companies)

Lack of people – qualified workers, technicians and engineers

The wood processing sector has been growing in a strong and continuous manner and the need for qualified employees has been getting increasingly bigger. The biggest problem here is the lack of qualified workers, who could respond to the need of production increase. This presents a significant problem for further growth of this sector.

The advantage we are known of, which is the quality and expertise of labor force, can easily get lost, as there is no continuity and systematic approach in providing new staff. Under these circumstances, the whole specter of wood processing staff is missing: from the workers to production operators and, especially, engineers and marketing experts.

What the education system produces is insufficient. What would be here of a great value is establishing of close cooperation between the business companies and educational institutions. The goal of this cooperation would be for the secondary schools and institutions to do additional qualifications and change of qualifications to provide more qualified employees and for the faculties to provide more engineering and other highly qualified staff that the businesses are missing.

The aspect	Why is it important?	Found weaknesses	Main actors	Area of activity and potential interventions
THE GAP – PEOPLE AND KNOWLEDGE				
• Key skills - • engineers	• They are important for the development of new products and the use of better and newer technology	• Faculties do not produce enough of engineers for industry • SMEs do not employ enough of engineers -	• Mechanical Engineering Faculties in Banja Luka and Bihac • The owners / managers of SMEs	• Initiating cooperation and support of joint activities of Mechanical Engineering faculty (Banja Luka and Bihac) and enterprises • Promoting the importance of employment of technical personnel to be competitive company • Promoting employment of youth in the wood industry

The aspect	Why is it important?	Found weaknesses	Main actors	Area of activity and potential interventions
THE GAP – PEOPLE AND KNOWLEDGE				
• Key Skills - CNC programmers and technicians	• Technicians are often those who "bear" production	• Vocational education does not produce technicians with practical skills (including CNC programming) • No well-organized and continous (practical) training of technicians	• Secondary Technical School in Banja Luka • WMTA Academy Srbac • Interested firms	• Initiating cooperation and support joint activities adult education centers (WMTA Academy Srbac et al.) And enterprises • Initiating cooperation and support joint activities of secondary vocational schools and enterprises
• Key Skills - • Carpenters and CNC operators	• The growth of the sector is conditioned by the availability of skilled labor	• Secondary vocational education does not produce workers with practical skills • No well-organized and continous (practical) training of workers	• Secondary technical schools (Banja Luka and Bihac) • WMTA Academy Srbac • Companies interested in training	• Initiate cooperation and support joint activities of centers for retraining adults (WMTA Academy Srbac et al.) and enterprises • Initiating cooperation and support joint activities of secondary vocational schools and enterprises
• Human Resource Management	• A significant portion of competitiveness is based on the key experts (engineers and craftsmen)	• treatment "egalitarianism" (allocated by key experts) • key experts go to other firms or abroad or to public sector	• Consultants in this field • Businesses (which are the key people left and those that keep them satisfied)	• Organizing events to share experiences and knowledge for the directors • Creation of possibility of consulting in human resource management

Technology and business processes

As we noted in the analysis, approximately two thirds of our wood processing companies work with the equipment that is old 5-10 years. With this type of equipment it is possible to achieve the desired quality of the production. However, renewal of technology will be necessary for further development, especially if we take into account the requirements of foreign buyers in terms of a constant, high-quality products. In addition to new equipment, this means improvements concerning the organization of production, the flow of raw materials, improvement of certain operations.

In addition, changes are also required in terms of key business processes. In our companies that have strong growth, this growth is not accompanied by appropriate management and organizational transformation. Many owners / managers have limited (professional) knowledge, and because they are often technical profile, in particular they lack marketing and management knowledge. Some of them are aware that they have become a bottleneck for the development of the company and that they need a transformation in management. Also, some intend to seriously engage their heirs to run companies, and some heirs are either not available or not interested.

The aspect	Why is it important?	Found weaknesses	Main actors	Area of activity and potential interventions
THE GAP – TECHNOLOGY AND KEY PROCESSES				
• Investment capital for the purchase of new equipment	• About two thirds of • companies have a need to invest in better equipment and technology	• Expensive loans • Unwillingness of owners for new ways of raising capital (equity ...) • Still no venture capital funds	• CREDO Development Fund • Banks • Credit Guarantee Fund • Companies with a positive experience • Stock exchange	• Support to procurement of key equipment • Training and consulting on the subject of obtaining investment capital

The aspect	Why is it important?	Found weaknesses	Main actors	Area of activity and potential interventions
THE GAP – TECHNOLOGY AND KEY PROCESSES				
• Key processes - development, technical preparation and Industrial Design	• iImproving existing and developing new products is crucial for performance in foreign markets • Reducing the time required for preparation and execution of production, • Simulation and correction of any problems / errors • Flexibility to changes in customer requirements (different product characteristics)	• Outdated methods of design and production preparation dominate • Some companies are aware of the need for support in this area (both professional-engineering, and financial).	• Customers foreign partners • Successful companies • Faculty of Mechanical Engineering • Individuals / companies that offer this service	• Support to use of available market information (current customer demands, trends in important fairs, internet, etc.) for the improvement of existing and development of new products • Support to procurement of equipment for the development and technical preparation of production • Support to the training of engineers and technicians (CAD / CAPP / CAM SolidWorks and other technologies) • Support to the strengthening of cooperation between universities and companies
• Key processes - organization of production	• There are opportunities to increase efficiency and reduce production costs (lower cost and / or higher profits) • Important primarily for the (few) company engaged in the manufacture in large series	• There is an interest of companies for this area (lean production) • Few experts in our proximity, in this field	• Companies and experts from the region with good experience in this field • Faculty of Mechanical Engineering	• Training and consulting in organization of production (Lean, Kaizen) • Training and consulting in specific selected areas (egg. laquering)

The aspect	Why is it important?	Found weaknesses	Main actors	Area of activity and potential interventions
THE GAP – TECHNOLOGY AND KEY PROCESSES				
• Key processes - management and organization	• Directors are decision makers, all operational activities, as well as organizational culture depend on them, especially given the fact that they do not delegate enough • Entrepreneurial way of running the company by founders, becomes a constraint for growth of companies	• Owners / managers are often technical profile and lack market and management knowledge • Directors are looking for practical solutions, experiences and their exchange • Some owners are aware that they have become a bottleneck for the development of the company and the need for transformation • Some are not • Some intended to be to seriously engage their heirs in the management of the company	• Companies that have successfully solved some problems • Organizations that have experience with training of directors (eg. Adizes) • Organizations that have experience in the transfer of “tacit” knowledge (Eda) • Sectoral experts	• Events for the exchange of experience and knowledge for managers / owners • Training and consulting in selected areas

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