



SUSTAINABLE BUSINESS REPORT

Mapping of the Sustainable Development Goals (SDGs) against value chains in furniture and automotive parts sectors in Bosnia and Herzegovina





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List of abbreviations

BiH	Bosnia and Herzegovina
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNC	Computer Numerical Control
CSR	Corporate social responsibility
EBRD	European Bank for Reconstruction and Development
EU	European Union
FBiH	Federation of Bosnia and Herzegovina
GEF	Global Environment Facility
HS	Harmonized System
IMM	Internationale Möbel Messe
ITC	International Trade Centre
KDBIH	National statistical classification of economic activities in BiH
LIND	Product safety testing lab
MDF	Medium Density Fiberboard
MOW	Messe Ostwestfalen
NERDA	Northeast Economic Region Development Agency
PREDa	Agency for Economic Development of the City of Prijedor
R&D	Research and development
REDAH	Regional Development Agency for Herzegovina
REZ	Regional Development Agency operating in Central BiH Region
RS	Republika Srpska
SDG	Sustainable Development Goals
SERDA	Sarajevo Economic Region Development Agency
SME	Small and medium enterprise
UNDP	United Nations Development Programme
USD	United States dollars
VC	Value chain
VPA	Voluntary Partnership Agreement
WMTA	Wood Metal Training Academy
ZEDA	Zenica Development Agency

The United Nations Agenda 2030 recognizes that business has a key role to play in addressing the Sustainable Development Goals (SDGs) while many businesses around the globe are aligning their strategies with the SDGs. SDGs are providing a globally agreed set of targets to address the world's most pressing social, environmental and economic challenges, hence setting a perfect framework for business reporting and identification of business impact and its contribution to society. However, it is evident that there is not yet a unified set of business indicators that measure these impacts and contributions in place, especially if we take into account local context in which companies operate. Once established, these indicators will allow companies to be transparent about their operations, enable investors to make informed decisions and give governments an insight into how business is contributing to the goals in their country.

The Assignment "Mapping of the Sustainable Development Goals (SDGs) against value chains in furniture and automotive parts sectors in Bosnia and Herzegovina" aimed at conducting SDG mapping of value chains in furniture and automotive parts manufacturing in BiH in order to identify SDG indicators to measure the impact of individual parts of the selected value chain. The Assignment provide grounds for embedding SDGs into these two growing industries in the country, thus setting a basic monitoring framework for monitoring their performance against SDG targets. It is evident that companies in BH have not been heavily involved in SDG reporting and are unlikely to be among the global leaders in this field. In general, many BiH companies are still lagging behind in terms of measuring and reporting on technology, environmental footprints, human capital, etc. However, it should be noted that even in this situation there are opportunities that could be used to integrate the SDG agenda into private sector strategies in BiH. Methodology used for this Assignment represents an innovative approach to the identification of SDG indicators that can help measure and track how these industries impact the SDGs (and depend on them). There are several important principles underpinning the methodology:

- Focus is placed on specific sectors rather than individual companies - the unit of analysis in this Assignment is the specific sector (furniture and automotive parts);
- Strong focus on combining the global and local contexts - focus on the global goals and frameworks developed by the Global Reporting Initiative (GRI)¹, the United Nations Global Compact (UNGC)² and the PwC global network experience as well as on some specifics of the local context and the selected sectors (furniture and automotive parts manufacturing);
- Use of Connectivity Tables for both automotive parts and furniture sectors - describing the industry value creation process from beginning to end and showing how different elements are interconnected, bringing together the external perspective of the stakeholders and the internal perspective of the company strategy and linking them to the industry impact and dependence on the SDGs. For the Connectivity Table/Matrix model please see Annex 1;
- Focus on the impact side to the extent possible and reasonable (output→outcomes→impact) - clearly and explicitly describing how the inputs are transformed into outputs/outcomes/impacts, providing a firm foundation for development of indicators that capture the aspects that are important to be measured (indicators with the greatest impacts);
- practical approach to a number of identified indicators and efforts on the SME side (in line with company size and the local environment).

1 Global Reporting Initiative (GRI) is an independent international organization that has pioneered sustainability reporting since 1997 (More on: <https://www.globalreporting.org/Pages/default.aspx>)

2 United Nations Global Compact (UNGC) is a voluntary initiative based on CEO's commitment to implement universal sustainability principles and take steps to support UN goals (More on: www.unglobalcompact.org)

The central point of the entire methodology is the Connectivity Table/Matrix while the Assignment comprised four tasks, as specified in the ToR:

1. Development of a work plan and methodology
2. SDG mapping against targeted value chains
3. Development of a set of business indicators
4. Development of a sustainable business report

The first task implied development of a methodology, as explained previously. The second task included a desk research to support mapping of SDGs targets against the Connectivity Table based on the existing value chains in furniture and automotive parts sectors, using all documents available in-country and UNDP strategic papers (UNDP Strategic Plan and Theory of Change 2018-2021). This analysis provided the background to industry experts to convert value chains into Impact Pathways for both sectors and identify key elements of Connectivity Tables.

Connectivity table – a tool for bringing information together

Current non-financial reporting in companies in BiH, if in place, is still mostly focused on input and output indicators rather than impact indicators (management information that tells you something about the value you create for your stakeholders). The Connectivity Table/Matrix broadens the reporting scope to include the entire value chain, focusing on stakeholder value/stakeholder objectives. The analysis of its key functional areas and components within the Connectivity Table covers stakeholders, key material aspects, strategic objectives, key success factors, risks and indicators. The analysis of key functional areas and identification of key elements of the Connectivity Table enables identification of all relevant SDGs that influence each integral part of the value chain. For model of the Connectivity Table/Matrix see Annex 1.

The third task started with the preparation and implementation of an online survey for SMEs in both target value chains, aimed at gathering data relevant for the identified SDGs. After a preliminary analysis of survey responses obtained from 24 selected SMEs from both industries, several on-site visits were conducted in order to supplement results from the survey. The survey and the on-site visits were conducted to:

- identify the level of business engagement in sustainable business practices (SDGs-related) and collect examples of good practice from SMEs in the targeted sectors. Specifically, the aim was to identify the best practices that clearly show the link between sustainability and strong financial performance;
- identify the current level of reporting and indicators used, including:
 - appetite/willingness of companies to collect data,
 - practical implications of data collection.
- identify capacity gaps/constraints of companies to report on their activities/business processes related to identified SDG priorities;
- formulate and suggest specific indicators based on the findings of this exercise, with a specific objective to improve business and create long term benefits. The indicators match the current state of maturity of the sectors under review. Also, recommendations/reflections on how to improve future performance (on these indicators) are provided.

The fourth task resulted in the development of a Sustainable Business Report, providing an insight into the best sustainability practices in two target sectors and allowing companies to generate long-term growth and prosperity while contributing to their communities and the environment. In general, the report focuses on:

- analysis of links between the industry and the broader social, economic and environmental setting in which it operates;
- prospects of the industry to evolve in a wider ecosystem within which it operates due to better alignment with the SDGs;
- summarizing the results of the mapping, development of business indicators and development of a roadmap for connecting companies with the implementation of SDGs.

Executive summary

The Sustainable Business Report represents an innovative approach to the identification of SDG indicators in value chains in furniture and automotive sector, that can help measure and track how they impact the SDGs and how SDGs affect individual parts of the selected value chain. The ultimate aim is to reduce the gap between current business practices in the target sectors and SDG principles and targets. The report presents the SDGs with the highest impact on value chain at the sector level, as well as indicators ((baselines and targets) to set general and specific goals to reduce the gap between current business practices within target value chains and the SDGs and corresponding targets. Moreover, the report provides an insight into the best sustainability practices in two target sectors, thus allowing the companies to generate long-term growth and prosperity while contributing to their communities and the environment. It needs to be emphasized that the report was developed through a consultative process, using surveys and working directly with relevant companies' representatives from both sectors and relying on advisory support provided by the SDG Private Sector Working Group established by UNDP.

BiH companies from two targeted sectors should use information presented in this report as a starting point in addressing and aligning their business strategies with the SDGs. In general, the analyses have confirmed that BiH companies still largely lag behind in terms of measuring and reporting on many indicators relevant for the concept of sustainability *per se*, for example technology, environmental footprints, human capital, etc., which should be regarded as priority, in particular for companies that are primarily export-oriented. However, although companies in BiH have not been heavily involved in SDGs reporting and are unlikely to be among the global leaders in this field, the findings in specific segments (number of employees, female employees, education and trainings, R&D etc.) suggest that there is a solid basis for promotion of good practices and individual contributions of companies to the SDGs on daily basis. Nevertheless, the survey and interviews with companies representatives from both sectors have shown that the level of their involvement in SDGs practices depends, primarily, on the size and strength of a company, but also on a unique corporate culture influenced by many internal and external factors such as competition, product segment, international standards, locality, and a specific stage of company's development.

The business indicators presented in this report were identified using the Connectivity Table and Impact Pathway, linking sustainability with financial performance. The identified baseline indicators have been developed based on the survey findings for both sectors, while proposed target indicators represent the expected outcomes based on the identified trends within targeted sectors. As BiH struggles with a lack of credible and disaggregated data as well as indicators along the development pathway, this report tried to fill this gap by defining a set of business indicators that will be easy to monitor and capture the impact and contribution of companies to the achievement of SDGs in the next period.

The table below provides an overview of identified business indicators within the relevant SDGs and baseline/target values for both targeted industries:

Business indicator		Baseline value (2018)	Target value (2030)	SDG
Wood and Furniture sector	Share of company employees participating in training and education activities	45%	55%	SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
	Share of company employees trained in the use of new technologies	21%	40%	SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
	Percentage of locally sourced raw material in final product	61%	75%	SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
	The raw material as percentage of sales	51%	40%	SDG 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
	Percentage of own design in portfolio	54%	67%	SDG 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
	Share of companies collaborating with science/ research institutions (institutes, universities) in the implementation of R&D or innovation projects or activities	4.35 collaborative projects/ activities per company on average	6 collaborative project/ activities per company on average	SDG 12 Ensure sustainable consumption and production patterns
	Percentage of companies that use slogans and ads featuring climate change issues	50%	75%	SDG 13 Take urgent action to combat climate change and its impacts
	Number of clusters or other forms of company associations in which companies participate	1.11 average per company	2 average per company	SDG 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development

	Business indicator	Baseline value (2018)	Target value (2030)	SDG
Automotive part sector	Share of company employees participating in training and education activities	30%	40%	SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
	Share of company employees trained in the use of new technologies	14%	20%	SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
	Share of companies collaborating with science/research institutions (institutes, universities) in implementation of R&D or innovation projects or activities	66,7%	80%	SDG 12 Ensure sustainable consumption and production patterns
	Number of clusters or other forms of company associations in which companies participate	1.33 average per company	2 clusters per company	SDG 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development

The furniture and wood value chain assessment, combined with the results of the consultative exercise with the SDG Private Sector Working Group, confirms that BiH furniture and wood companies have the highest influence on the achievement of the following SDGs:

- **Goal 4** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all;
- **Goal 8** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- **Goal 9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation;
- **Goal 12** Ensure sustainable consumption and production patterns;
- **Goal 15** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss;
- **Goal 17** Strengthen the means of implementation and revitalize the global partnership for sustainable development.

The most important indicators identified in this sector are related to education and training, decent working conditions, energy efficiency and improvement of production basis through purchase of new equipment, attainment of quality standards or implementation of business improvements, and new product development with emphasis on very important promotion of BiH furniture and wood sector.

The situation in the automotive sector is similar; during the assessment it was found that the automotive companies in BiH have the highest impact on the achievement of the following SDGs:

- **Goal 4** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all;
- **Goal 8** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- **Goal 9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation;
- **Goal 12** Ensure sustainable consumption and production patterns;
- **Goal 17** Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Developed indicators in the automotive sector are related to education and work conditions, use of new technology, level of innovation and research and development (R&D), and level of partnerships in the country and abroad.

The findings for both sectors suggest that key gaps and constraints to efficiently align business processes with identified SDG priorities mainly relate to workforce development, need for constant renewal of technology and business processes and support to innovative activities, weak infrastructure and inefficiency of supporting institution/authorities and limited inter-company collaboration. The identified gaps are at the same time a source for recommendations that can be used for the rollout of SDGs into business operations of these companies and identification of new business opportunities in these sectors in BiH.

In the furniture and wood sector, recommendations to advance this value chain include various actions, such as, among others, advancing cooperation with educational institutions to improve formal and informal education of youth and adults and address the lack of qualified staff, defining the needs for new knowledge and skills relevant for further development, further compliance with new regulation and policies related to forestry management in BiH, primarily through the use of natural resources, the lower level of pollution and the higher energy efficiency or improving inter-company cooperation, trust and capacities to cooperate for increased levels of the use of competitiveness and sustainability of business operations, etc.

In the automotive sector, recommendations look at the actions needed to improve workforce and strengthen cooperation and partnerships, similarly to the furniture and wood sector, but are also related to strengthening of the production basis in terms of the follow-up technology, market changes and timely introduction of new equipment, tools machinery and technologies or introduction of relevant quality standards and certifications.

Finally, it is recommended that the BiH national authorities render a decision to institutionalise the monitoring of the defined indicators, since most of them can be “captured” only through a regular annual survey and specialized business statistics collected from companies. It is unclear, however, who will be responsible for collecting this information, as business statistics is currently collected mainly by the Entity statistics agencies.

Furniture and Wood value chain in Bosnia and Herzegovina

The Assignment “Mapping of the Sustainable Development Goals (SDGs) against value chains in furniture and automotive parts sectors in Bosnia and Herzegovina” aimed at conducting SDG mapping of value chain in furniture and wood manufacturing in BiH to identify SDG indicators that impact individual parts of the value chain. The SDG mapping is based on the existing value chain identified in the 2016 UNDP analysis. Selected indicators (baseline and targets) will be used to set general and specific goals to reduce the gap between current business practices within furniture and wood value chain and the SDGs and corresponding targets. The Assignment provided grounds for embedding SDGs into furniture and wood sector, thus setting a basic framework for monitoring its performance against SDG targets.

Over the past 15 years, the furniture and wood sector in BiH has improved significantly from being a low value-added and mainly resource-depleting sector to one of the most contributing sectors with over 1,331 progressive and vibrant companies (mainly SMEs)³. However, this is still not sufficient in terms of global competitiveness and overall positioning. Significant potential lies in the barely tapped segment of upholstered and combined materials (wood, metal, glass, stone, leather, textile) furniture. The following ITC table⁴ summarizes and compares overall national exports of wood and furniture in ‘000 USD (#44 and #94 under the Harmonized System – HS).

ITC table

15-YEAR SUMMARY OF EXPORTS OF THE FURNITURE AND WOOD SECTOR IN BiH (IN ‘000 USD)			
IMPORTERS	WORLD 44 (WOOD AND WOOD PRODUCTS)	WORLD 94 (FURNITURE)	DIFFERENCE
Exported value in 2003	126,816	90,465	-36,351
Exported value in 2004	218,506	94,486	-124,020
Exported value in 2005	235,782	141,885	-93,897
Exported value in 2006	304,581	259,526	-45,055
Exported value in 2007	366,515	312,717	-53,798
Exported value in 2008	368,351	385,857	17,506
Exported value in 2009	270,208	375,765	105,557
Exported value in 2010	274,958	451,095	176,137
Exported value in 2011	347,154	532,301	185,147
Exported value in 2012	321,706	521,997	200,291
Exported value in 2013	382,128	587,361	205,233
Exported value in 2014	429,727	619,891	190,164
Exported value in 2015	372,795	548,121	175,326
Exported value in 2016	403,317	601,434	198,117
Exported value in 2017	442,477	661,197	218,720
Exported value in 2018	480,544	677,280	196,736

ITC Table

Overall revenue in both sub-sectors have grown in the last three years, with total revenue in 2017 reaching nearly 1,1 billion USD. On the positive side, it is evident that furniture manufacturers experienced a relatively

³ Taking into account 2017 data, the sector encompasses 1,331 companies with approximately 23,880 employees; 1,088 companies are registered under classification code #16 (KDBIH2010 – primary processing except furniture) employing 14,895 workers, while 243 companies are listed under classification code #31 (KDBIH 2010 – Furniture Production), employing 8,985 workers. These numbers should be taken with reservations due to the fact that a significant number of companies has not updated their registration code: more companies actually produce furniture, because they evolved from primary processing and perhaps production of furniture parts to become furniture manufacturers. This can be verified by looking at the revenue structure of 5 companies (from the list of top 20 companies) that are listed under code #16 of KDBIH 2010

⁴ ITC Trademap / <http://www.trademap.org/Index.aspx>

higher revenue growth in the last three years compared to primary processing companies: 32.6% vs. 22% respectively. The 1,088 companies registered for primary processing had a total revenue of 1201 million, while total revenue of 234 companies registered as furniture manufacturers amounted to 636 million. It is important to emphasize that in the period from 2015 to 2017 employment in furniture manufacturing companies increased from 19% (2015) to 25% (2017). In BiH there are 331 FSC certified⁵ companies, while some of the state-owned forestry departments lack this sustainability and promotional tool.

To fully understand the current dynamics in this sector, it is also necessary to investigate wood and wood-based product imports that amounted to 175 million USD in 2018. The main countries of origin were Croatia, Slovenia and Austria. On closer inspection of import structure, it can be noted that BiH imports mainly sawn oak and walnut, particle board, MDF, and veneer. The reason for increased imports of wood and wood-based products lies in the low quality of oak and lack of particle board factories in BiH.

Another very important factor influencing the bottom line of the furniture and wood sector in BiH is the workforce. Increase in value added production and a shift from primary processing to finalization is increasing the demand for skilled labor. On the other hand, a large number of skilled employees are leaving the country in search of better working conditions available in more developed EU industries consequently inducing the growth of salaries and continuous improvements in working conditions in the companies with a clear vision and strategy.

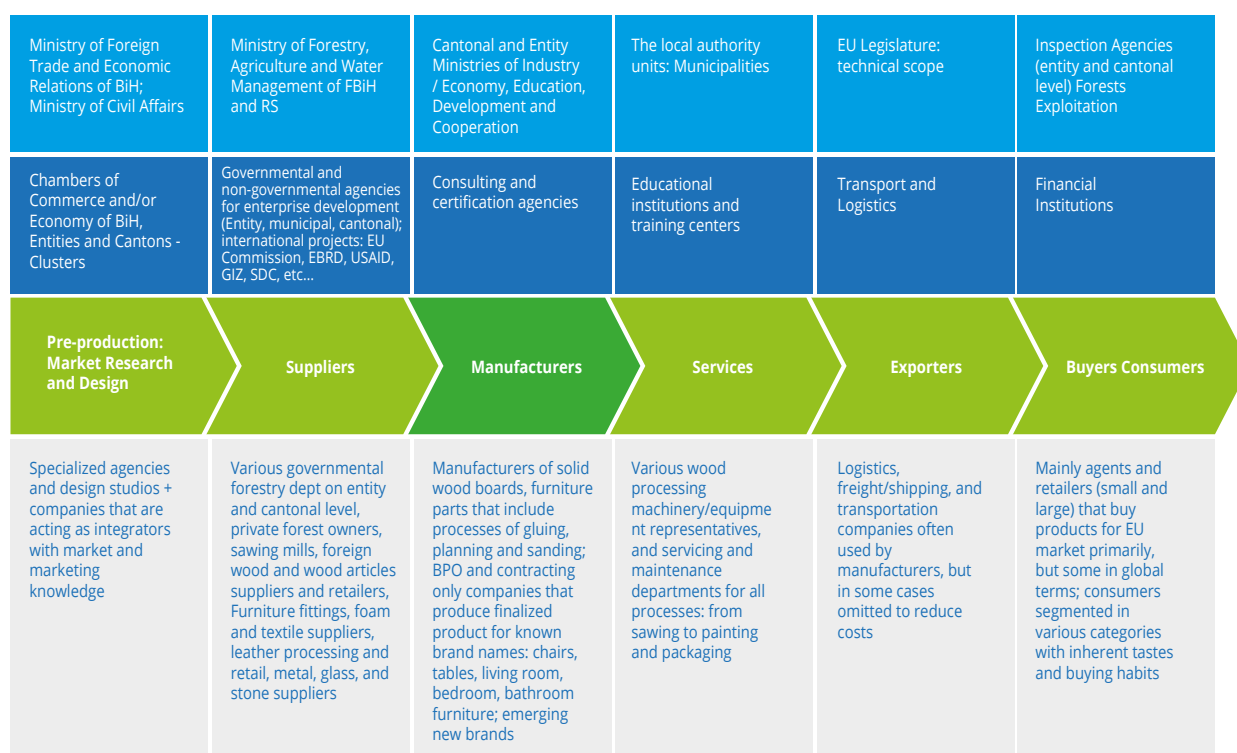
Although the trends are positive, further efforts are needed to facilitate them. Comparing to primary wood processing, the furniture manufacturing is a considerably higher value-added industry and its processes are more labor intensive, with more profound vertical and horizontal integrations and potential for cross-sector collaboration. The furniture manufacturing is characterized by a much longer value chain, with a significant potential in product development and cross-sector integration.

⁵ FSC Public Search Home: Bosnia and Herzegovina; Valid; <https://info.fsc.org/certificate.php#result>

Value chain

It is evident that there is a vast number of actors in the broader furniture and wood value chain in BiH (see diagram below), which has grown over the last two-three years. This value chain now begins with emerging companies acting as integrators and market research and placement agents with knowledge in design and trends in the furniture industry. As the furniture and wood value chain becomes more complex, a multitude of suppliers within the value chain can be identified, but suppliers of solid wood still represent its foundation and the most important part of the supply chain. As many as 90% of these suppliers are government-owned forestry departments that represent a huge liability and hindrance for further development of businesses, depending on their outputs. This is mainly due to their inability to provide transparent and equitable distribution of wood to manufacturers. Next in the value chain are manufacturers who are in different segments and stages of development, predominantly contract manufacturing. There is still a small but growing number of companies that have embarked on a path towards building their own brand. Companies that provide servicing, engineering and maintenance services to the furniture and wood value chain are getting better as their role becomes more crucial in nowadays higher value-added manufacturing. After everything is manufactured and packaged, it is essential to provide timely and appropriate transport and general logistics. Once mostly done in-house, this role is now outsourced due to required specialization. Finally, at the end of this value chain are buyers and consumers (recycling and furniture rental companies are not yet available in BiH) from small showrooms and individuals to large buying groups and retail chains - and they have the biggest influence on the dynamics and production in general. The BiH market is small, so the companies mainly focus on exports, mostly to EU countries.

The following chart provides a detailed explanation of summary value chain diagrams.



There is a number of organizations that affect the furniture and wood value chain, from policy makers such as the BiH Ministry of Foreign Trade and Economic Relations and other Entity and cantonal ministries that regulate, support and promote the industry in general to local authorities and various other bodies implementing these policies. The EU legislators and institutions are also very important due to previously mentioned size of the BiH export to EU countries. Also, the important segment of the furniture and wood value chain is represented by numerous supporting institutions such as chambers of commerce, various

local and regional development agencies and projects, consulting companies, educational institutions and training centers, as well as transport, logistics and financial institutions.

Connectivity Table for Furniture Sector

The Connectivity Table is a tool that helps bring together information from different source systems in order to map relevant SDGs that affect every segment of the value chain. It is based on desk research of all available documents from the country, coupled with an assessment of opinions of main stakeholders. This tool also helped to transform the furniture value chain into impact pathway in order to identify impact indicators. In addition to above-mentioned stakeholders, the other main elements of the Connectivity Table analyzed included:

- Key material aspects
- Strategic objectives
- Key Success Factors and
- Risks

Identified Business Opportunities (Key Material Aspects)

As explained, the furniture and wood sector is growing and becoming more complex and developed. Manufacturers excel in processing solid wood into components (furniture parts and boards) and finished products, using upholstered and mixed materials (metal, glass, stone, leather, textile), thus making the furniture industry an interesting opportunity for growth. The market is mainly EU, with good prospects on a global scale. Major importers of finished (high value-added) goods and drivers of this growth are Germany, Croatia, Czech Republic, and the Netherlands. However, BiH is still exporting significant amounts of unprocessed and low value-added products, mainly to Italy, Slovenia, and Germany. Over the past 15 years the sector has reached an overall growth of 430%⁶, which in the furniture segment alone was as high as 649%⁷. One could argue that this growth started from a very low baseline but the main growth indicators, overall trends and developmental dynamics – such as increases in skilled workforce, number of sophisticated machines, number of engineers, consumer product exports and the evolution of companies towards high value-added manufacturing, emerging brands, and high-end manufacturing – confirm the positive trends in the sector.

However, this is still far from reaching the sector's full potential as there are still some serious developmental obstacles that hinder its growth. Some of these obstacles are part of an inherent structure, and a broader approach involving multiple active stakeholders is needed to try to reduce its influence. Therefore, to ensure a continued growth and preserve and build resources for the future the following is required:

1. Providing equitable, timely, and transparent access to high-quality and affordable production inputs (mainly forests, but further increases in complexity of other raw materials will also become of interest);
2. Improving quality of the workforce, focusing on CNC, 3D modelling, product finalization, marketing, market intelligence, and the like;
3. Securing advanced production resources (technology, machines, tools, knowledge);
4. Owning adequate machinery for modern and profitable processing;
5. Enabling access and securing the resources for introduction of relevant Qs and certifications (FSC, EU FSC CoC, EUTR, CE, ISO-9000, 14000, 18000, 26000; BSCI);

6 ITC Table 1

7 ITC Table 1

6. Making sure that forestry departments are aware of and are implementing precautions to preserve forests, thus providing all necessary conditions for preservation of clean water; companies care about waste (liquid and solid);
7. Putting in place a transparent and sustainable carbon emissions monitoring system;
8. Supporting the establishment of operational clusters and associations based on mutual interests;
9. Insisting on proactive marketing and sales approach to buyers; insisting on systemic branding of Bosnian beech, the most prevalent wood species in Bosnia and Herzegovina.

Many of the above listed interests and opportunities can be clearly aligned with the SDGs.

Relevance of SDGs for the Furniture and Wood Value Chain

During the consultation process with the members of the SDG Private Sector Working Group which took place in Sarajevo on February 7th, 2019, the participants were asked to mark SDGs which, in their opinion, the enterprises (can) influence the most. The answers were ranked by frequency and presented in the last column of the table (the most frequent answer is marked with 1, thus indicating the highest relevance). These findings were discussed in the validation workshop held on March 7th, 2019 in Sarajevo with representatives of companies and then combined with the general findings of the Furniture and Wood Value Chain Assessment presented in the main document in order to determine which SDGs are the most relevant for the value chain. For detailed overview please see Annex 3.

The furniture and wood value chain assessment, combined with the results of the *SDG Private Sector Working Group* questionnaire, confirmed that BiH furniture and wood companies can make the highest impact on the achievement of the following SDGs:

- **Goal 4** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- **Goal 8** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **Goal 9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- **Goal 12** Ensure sustainable consumption and production patterns
- **Goal 15** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- **Goal 17** Strengthen the means of implementation and revitalize the global partnership for sustainable development

In addition to the above, the contribution to the following SDGs should be also taken into consideration:

- **Goal 6** Ensure availability and sustainable management of water and sanitation for all
- **Goal 7** Ensure access to affordable, reliable, sustainable and modern energy for all
- **Goal 13** Take urgent action to combat climate change and its impacts

Concerning the above choice of the SDGs, it is important to note that there is a very high congruence between the expert findings and opinions of WG participants. The picture of relevance of SDGs for the BiH Furniture and Wood Value Chain is presented in a scheme provided in Annex 3.

Strategic objectives

In connection with their contribution to implementation of SDGs, key business opportunities identified for the furniture and wood value chain have been translated to strategic objectives. The following table provides more details on these connections.

SDGs	Furniture and wood value chain priorities
Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	<ul style="list-style-type: none"> ▷ To enable steady supply of well-educated and skilled workforce, companies in the furniture and wood value chain are interested in supporting both formal and informal education processes for youth and adults; ▷ The furniture and wood sector should make work in this industry more appealing for the average student; ▷ Introduce and promote a merit based system within the industry to recognize workers that are learning throughout their carrier (versatile employees).
Goal 6 Clean water and sanitation	<ul style="list-style-type: none"> ▷ Companies and suppliers in the furniture and wood value chain implement the EU directives on drinking water and waste water treatment.
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	<ul style="list-style-type: none"> ▷ Improved production resources (equipment, tools, machinery, knowledge); ▷ Increase higher value-added production; ▷ Provide on-the-job incentives to preserve the core workforce; ▷ Create a common set of minimum business management standards that will be recognized and promoted throughout the value chain, by all stakeholders, and that will be communicated to customers.
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	<ul style="list-style-type: none"> ▷ Introduce relevant quality management systems (QMS) and certifications demanded by buyers in target markets; ▷ Invest in brands that tell a story about reliable and qualified locations; ▷ Work on building a globally recognized country where “you can buy good furniture”; ▷ Use less raw materials while creating higher added value; ▷ Become a reliable quality manufacturer; ▷ Become a real nearshoring oasis for the EU market.
Goal 12 Ensure sustainable consumption and production patterns	<ul style="list-style-type: none"> ▷ Secure access to appropriate and affordable production inputs; ▷ Make forestry departments work for manufacturers; ▷ Prioritize development of auxiliary raw material suppliers; ▷ Work on branding the Bosnian beech; ▷ Increase the number of globally recognized brands.
Goal 13 Take urgent action to combat climate change and its impacts	<ul style="list-style-type: none"> ▷ Promote and recognize, on a national and international level, environmental actions and energy efficiency measures that may contribute to the combat against climate change; ▷ Reduce carbon emissions through use of lower-impact materials (use environmentally friendly materials).
Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	<ul style="list-style-type: none"> ▷ Promote certification and adherence to all effective sustainability tools, such as FSC, EUTR, COC, etc.; ▷ Invest in high value-added production and brand-building where key competitive advantages are not cheap raw materials and labor; ▷ Preserve forests and ecosystems while strengthening the furniture and wood value chain.
Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development	<ul style="list-style-type: none"> ▷ Improve inter-company cooperation, mutual trust and capacity to cooperate among BiH companies; ▷ Connect with foreign companies and customers through a proactive marketing & sales approach.

Key Success Factors

Available raw materials, cheap labor, some tradition, and the resourcefulness and originality of the people in BiH are main key success factor for constant development of the wood and furniture sector into a strong industrial branch. The authorities should therefore recognize the current momentum in this sector and pay no lip service but real support to the sector by promoting and enforcing a favorable business environment, supporting improvements in the education system by upgrading the existing curricula and paying attention to practical skills, providing subsidies for companies that are investing in new machinery, R&D, employee training, modernization of quality control systems and processes related to new product development and market intelligence, and helping the companies to cooperate and form clusters.

However, it is not only the government who needs to step up, the companies too must become more active and vocal in the pursuit of a better business environment. This means that they need to act as a group and in this way influence the decisions and dynamics at the state level. Clearly communicated needs and plans could provide a great base for planning and flexible adaptation to business circumstances: influencing education curricula in schools, demanding more transparent wood distribution, advocating for lower taxes and fees for investments and imports of materials and machines, etc. Hence, the companies must be able to communicate their short-term and long-term strategies and plans as the grounds for action.

There are many examples of cooperation potential, but such cooperative endeavors have rarely been successful so far. It is necessary to build trust between companies, and thus increase their competitive power and capacities. Examples of emerging integrator companies (Gazzda, Bosnian Beech Line) prove that interest-based cooperation is possible.

Risks

Regardless of its internal organization and cooperation between its stakeholders, the furniture and wood sector must face some of the less controllable factors that influence their bottom line. Being present in the market and following the trends via visits to fairs and research provides companies with some degree of security and helps them with their planning. However, the major disruptions and risks come from foreign markets and their instability, since export is usually the only option for BiH manufactures. Companies with more control over their final products (those that have their own brand and products) are less sensitive to these changes because they are more aware of the market and its trends. Companies that wait to receive orders and rely on generic products often fail to adjust in time. Changing standards and increasing protectionism could also create issues for this export-oriented sector.

The furniture market is very competitive. In a sector as complex as this one, all internal stakeholders must recognize the risks in order to act accordingly and create the best possible environment to sustain growth.

Liberalization of European labour market is another serious risk. During the recent years, the increasing number of skilled employees seek job opportunities abroad, leaving the BiH companies in trouble of securing the required workforce. General and less controllable risks involve political and economic stability in BiH and the region. This is also relevant for the supply of quality workforce to domestic companies. Finally, it should be noted that the availability of quality workforce represents a serious, but controllable risk. Serious efforts need to be undertaken concerning improvement of education system.

Stability of business-related regulations in the country is a risk relevant for all industrial branches, including the furniture and wood value chain. Frequent and unpredictable changes in the legislation with limited possibility for companies to predict their future costs restrain them from entering into new investments and additional contractual arrangements with buyers. Hence, one of the key tasks of domestic authorities is to secure stable and predictable business environment.

Connectivity Table: Furniture and Wood Value Chain vs. SDG's

Link with SDGs	Stakeholders	Key material aspects	Strategic objectives	Success factors	Risks	Indicators (input/output)	SDGs targets
Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (also SDG 5)	<ul style="list-style-type: none"> ▷ Furniture and wood VC companies ▷ Ministries and educational institutions ▷ Training centers 	Employee engagement and development – access to quality workforce (particularly in CNC, 3D modelling, product finalization, marketing, market intelligence)	Improved formal and informal education for youth and adults	Public support to improvement of the education system, upgrade of the existing curricula (practical skills in accordance with the industry needs)	<ul style="list-style-type: none"> ▷ Political and economic stability in BiH and the region ▷ Continued drain on skilled workforce to foreign countries ▷ Prevalence of low value-added manufacturing which cannot increase profit margins, thus reducing demand for qualified personnel 	<ul style="list-style-type: none"> ▷ Number of activities related to education and training in which companies participate on an annual basis ▷ Percentage of existing employees involved in education and training activities on an annual basis ▷ Number of instances where companies cooperate with schools, faculties and/or other companies to provide training and education ▷ Number of curricula instigated and/or developed by companies ▷ Skill level of new employees 	4.4. Significantly increase the number of young people and adults equipped with appropriate skills, including technical and professional skills, for employment, decent jobs and entrepreneurship4.c. Significantly increase the availability of qualified teachers/trainers, including through international cooperation for teacher training
Goal 6 Ensure availability and sustainable management of water and sanitation for all (also SDG 7)	<ul style="list-style-type: none"> ▷ Furniture and wood VC companies ▷ Suppliers of wood and other production inputs ▷ Consulting and certification institutions ▷ Authorities & donors ▷ Inspection authorities 	Forestry departments are aware of and are implementing precautions to preserve forests, thus ensuring all necessary requirements for clean water; Companies care about waste (liquid and solid)	Companies and suppliers implement EU directives on drinking water and waste water treatment;	<ul style="list-style-type: none"> ▷ Public support to introduction of EU directives concerning drinking water and waste; 	<ul style="list-style-type: none"> ▷ Local communities not strong enough to fight against corporate interests ▷ Lack of incentives and regulations concerning water and sanitation management ▷ Corruption in inspection authorities and authorities in general 	<ul style="list-style-type: none"> ▷ Prepare and publish a database of all water resources that have a direct and/or indirect impact on the furniture industry or are impacted by it ▷ Number of controls and corrective actions against water polluting companies ▷ The number of companies that measure the business' footprint on water and understand the impact of water use on the local community and the value chain ▷ Volume of recycled and reused waste water ▷ Number of activities in forestry departments aimed at preservation of water quality through protection of forest ecosystems 	6.6. Protect and restore aquatic ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes 6.b. Support and strengthen the participation of local communities in improving water management and sewerage

<p>Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (also SDG 9)</p>	<ul style="list-style-type: none"> ▷ Buyers and consumers of furniture ▷ Furniture and wood VC companies ▷ Authorities and donors 	<p>Secure advanced production resources (technology, knowledge). Ensure that educated professionals are kept in the country through higher salaries and benefits</p>	<p>Improved production resources (equipment, tools, machinery,); Increase higher value-added production</p>	<ul style="list-style-type: none"> ▷ Public support to improvement of the business environment ▷ Change of mentality towards final product development and promotion of own products ▷ Access to affordable finance 	<ul style="list-style-type: none"> ▷ Inefficient forest management ▷ Fiscal stability and stability of business-related regulations ▷ Continued drain of skilled workforce to foreign countries 	<ul style="list-style-type: none"> ▷ Capital investments in new equipment (machines, tools) on an annual basis ▷ Percentage of employees trained to use new equipment (machines, tools) on an annual basis ▷ Material footprint, material footprint per capita, and material footprint per GDP ▷ Consumption of domestic materials, domestic material ▷ Per capita consumption and domestic material ▷ consumption per GDP ▷ Number of companies with partial or complete foreign ownership ▷ Productivity compared to benchmarks ▷ Percentage of employees hired through employment bureau support ▷ Employee turnover rate, annual percentage 	<p>8.2. Achieving higher levels of productivity of economies through diversification, technological upgrading and innovation, including focusing on high value-added sectors and labor</p> <p>8.3. Promoting development-oriented policies that support production activities, creating decent work, entrepreneurship, creativity and innovation, and fostering the formalization and growth of micro, small and medium-sized enterprises, including access to financial services</p> <p>8.8. Protect labor rights and promote the safety and safe working environment for all workers, strengthen the capacity of domestic financial institutions to encourage and extend access to banking, insurance and financial services for all</p>
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Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	<ul style="list-style-type: none"> ▷ Buyers and consumers of furniture ▷ Furniture and wood VC companies ▷ Consulting and certification institutions ▷ Authorities & donors 	Own adequate machinery for modern and profitable processing; Enable access and secure the resources for introduction of relevant QS and certifications (FSC, EU FSC CoC, CE, ISO-9000, 14000, 18000, 26000; BSCI)	<p>Use less raw materials while creating higher added value;</p> <p>Introduce relevant QS and certifications demanded by buyers in target markets; Become a reliable quality manufacturer;</p> <p>Become a real nearshoring oasis for the EU market</p>	<ul style="list-style-type: none"> ▷ Public support to introduction of QS ▷ Innovation and investments in new technologies ▷ Access to affordable finance ▷ Better communications, transport and logistics in general 	<ul style="list-style-type: none"> ▷ Inadequate public and donor financial and technical support ▷ Inability to improve roads and transportation network 	<ul style="list-style-type: none"> ▷ Number of own high value-added products ▷ Number of domestic brands ▷ Number of showrooms and various buyers and markets ▷ Number of new/improved (technical and other) QSs per enterprise ▷ Share of external (public, donor) financial/technical support in the introduction/improvement of QS ▷ Number of companies presenting their products at fairs ▷ Employment in production in relation to total employment ▷ Research and development costs as a percentage of GDP or operating costs per enterprise ▷ Average time spent in a company in years, for top management 	<p>9.3. Increase small industrial and other enterprises' access to financial services, including affordable loans and their integration into value chain and markets</p> <p>9.4. Improve the infrastructure and retrofit industry to make them sustainable, with increased resource efficiency and greater adoption of clean and environmentally friendly technologies and industrial processes</p> <p>9.b. Support to the development of domestic technologies, research and innovation</p> <p>9.5. Improve scientific research, improve technological capabilities of industrial sectors in all countries, especially in developing countries, including by 2030, encourage innovation and significantly increase the number of researchers and development workers to 1 million people and public and private research and development costs</p>
Goal 12 Ensure sustainable consumption and production patterns	<ul style="list-style-type: none"> ▷ Furniture and wood VC companies ▷ Suppliers of wood and other production inputs 	<p>Access to quality and affordable production inputs;</p> <p>Adopted and enforced public inventory of forests with geo-positioning</p>	Secured access to quality and affordable production inputs	<ul style="list-style-type: none"> ▷ Willingness of furniture and wood VC companies to cooperate and associate 	<ul style="list-style-type: none"> ▷ Domestic and foreign market instabilities ▷ Inefficient forest management ▷ Local communities not strong enough to fight against corporate interests 	<ul style="list-style-type: none"> ▷ Domestic material consumption per capita and domestic consumption of materials per GDP ▷ Material footprint per capita and material footprint per GDP ▷ Percentage of domestic raw materials in final product ▷ Availability of domestic wood 	12.2. To achieve sustainable management and efficient use of natural resources

<p>Goal 13 Take urgent action to combat climate change and its impacts</p>	<ul style="list-style-type: none"> ▷ Furniture and wood VC companies ▷ Suppliers of wood and other production inputs ▷ Authorities & donors ▷ Inspection authorities ▷ Ministries and educational institutions 	<p>Transparent and sustainable carbon emissions monitoring system in place</p>	<p>Reduced carbon emissions through use of lower impact materials (use of environmentally friendly materials);</p>	<p>Public and authorities' support to adopt climate change policies</p>	<ul style="list-style-type: none"> ▷ Weak or negligent sector that is forced to neglect environment to boost profits ▷ Generally frail economy ▷ Lack of real jurisdiction and/or accountability for resources ▷ Local communities not strong enough to fight against corporate interests ▷ Lack of incentives and regulations concerning water and sanitation management ▷ Corruption in inspection authorities and authorities in general 	<ul style="list-style-type: none"> ▷ Number of companies that include combatting climate change in their strategic decision-making process ▷ Number of slogans or ads that include climate protection 	<p>13.3. Improve education, awareness-raising and human and institutional capacities to mitigate climate change, adaptation, impact reduction and early warning</p>
<p>Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.</p>	<ul style="list-style-type: none"> ▷ Companies in the furniture and wood value chain ▷ Suppliers of wood and other raw materials ▷ Authorities and donors ▷ Inspection bodies ▷ Ministries and educational institutions 	<p>Access to quality and affordable production inputs;</p> <p>Adopted and implemented public inventory of forests with geo-positioning</p>	<p>Secured access to quality and affordable production inputs;</p> <p>Preserve the environment for future generations</p>	<ul style="list-style-type: none"> ▷ Forestry departments and ministries co-operate to influence the sustainable use of land ecosystems, sustainable forest management 	<ul style="list-style-type: none"> ▷ Negligence and corruption ▷ Inability to apply positive regulatory practices and create a sustainable system for planning and resource allocation 	<ul style="list-style-type: none"> ▷ % progress towards sustainable forest management ▷ Number of certified forestry departments and COC companies ▷ The EUTR is accepted and the national authority (agency) in charge of its oversight is established and operates by 2021 ▷ The percentage of high value-added products has increased significantly 	<p>15.2. To promote the implementation of sustainable management of all types of forests, to stop deforestation, to restore degraded forests and to significantly increase global afforestation</p> <p>15.b. Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide appropriate incentives to developing countries and improve such management, including conservation and afforestation</p>

Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development	<ul style="list-style-type: none"> ▷ Furniture and wood VC companies ▷ Suppliers of wood and other production inputs ▷ Clusters and associations ▷ Buyers and consumers ▷ Authorities and donors 	<ul style="list-style-type: none"> ▷ Establishment of operational clusters and associations ▷ Proactive marketing and sales approach towards buyers ▷ Understanding buyers' habits and adjusting products accordingly 	Improved inter-company cooperation, mutual trust and capacity to cooperate among BiH companies, and relationships with foreign companies	<ul style="list-style-type: none"> ▷ Willingness of furniture and wood VC companies to cooperate ▷ Public support to organized presentation in target markets 	<ul style="list-style-type: none"> ▷ Preparedness for target markets (business culture & rules, QS & certificates, business practices, language barriers, etc.) 	<ul style="list-style-type: none"> ▷ Percentage of exported high-quality and/or high value-added products ▷ Number of empowered/ well-organized clusters of companies that efficiently operate on the global market ▷ Number of regional cooperation events - planning and transporting resources 	<p>17.11. A significant increase in exports in developing countries, especially with the aim of at least doubling the share of developed countries in global exports</p> <p>17.16. Development, complemented by multiple partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of SDGs in all countries, especially in developing countries.</p>
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Development of business indicators

Methodological approach

Development of the business indicators started with the preparation and implementation of an online survey for SMEs in furniture and wood value chain aimed at gathering data relevant for the identified SDGs. Responses were obtained from 16 SMEs in total. Also, in order to validate and discuss obtained results on site visits and interviews were conducted.

The survey included 22 companies that were initially selected by the industry expert. The set of criteria used for the selection of companies were as follows:

- The size of revenue and its annual growth;
- The level of export and its diversity;
- The level of importance in the furniture sector in BiH.

These companies could also be described as “well organized exporters with steady growth”. However, it was necessary to include some local technology and machine retail service providers and one publicly owned forestry department, which are not exporting due to the nature of their businesses (Lignopro and ŠGD Hercegbosanske šume). If excluding the extremes (two companies with lowest and highest number of employees - Lignopro and ŠGD Hercegbosanske šume), the survey included the companies whose staff ranged from 6 to 400 employees, featuring integrators, some very well-organized suppliers of known brands, established brand manufacturers, and emerging brands. The 2018 revenue ranged from BAM 2,6 million to 33,5 million. The survey questions were answered thoroughly and with care by owners and top management staff. The industry expert visited 6 companies in order to validate the answers obtained through the survey. The survey yielded 73% response rate or 16 responses out of 22 companies.

The survey (Annex 3) and interviews were based on pre-defined and uniform scenarios in order to gather comparable data taking into account all the specificities from participating SMEs. In general, the survey was used to:

- identify the level of business engagement in sustainable business practices and collect examples of good practice from SMEs in the furniture sector;
- identify the current level of reporting and indicators used;
- identify the capacity gaps/constraints of companies in reporting on their activities/ business processes related to identified SDG priorities and related sustainability activities;
- formulate and suggest specific indicators based on the findings of this exercise, with a specific objective to improve business and create long-term benefits.

The indicators match the current state of maturity of the wood and furniture sector. They are based on the results of the survey and underpin the recommendations/reflections on how to improve future performance.

In the implementation of surveys, business indicators were identified using the Connectivity Table and Impact Pathway, linking sustainability with financial performance. Focus was placed on the selection of indicators already present in the existing reporting frameworks – to decrease the burden on the companies and ensure comparability.

The proposed set of business indicators was analysed in relation to specific SDG indicators to set individual measurement of sustainable business practices within companies. Where possible, the business indicators were compared with the indicators regularly used in the country, thus contributing to the measurement of the overall SDG alignment of the sector. The final activity under this task will be to identify business relevance and opportunities that arise from targeted mainstreaming and embracing SDG principles and direction in the business practice and production cycle. In line with this, best sustainability practices in the two target sectors are detected.

Business indicators

In line with the agreed strategy to administer survey and gather needed data, the set of indicators was developed by the industry expert, while the further fine-tuning was performed in cooperation with the companies participating at the workshop. The main idea behind the survey was to gauge the level of contribution of sustainable business practices of the furniture and wood sector companies relative to the pertinent SDGs implementation. These (baseline) indicators are designed to individually measure impact of sustainable business practices using the generally available business data. The indicators cover each SDG that is relevant for the BiH furniture and wood value chain's sustainable business practices. The indicators were collected from companies through a combination of workshop, survey and interviews.

A set of relevant indicators contributing to individual measurement of sustainable business practices and financial performance of specific business is outlined in the following table.

Item	Business indicators	Baseline values 2018 ⁸	Description of indicators	Target 2030
General business indicators	<ul style="list-style-type: none"> Ownership (foreign percentage) Number of workers – gender disaggregated Main markets (location) 	<ul style="list-style-type: none"> Only one company is 100% foreign owned 155 on average – 14.5% female workers EU (Germany, Switzerland, Austria, the Netherlands, Belgium) 	General business indicators related to, number of employees, ownership and main markets.	<ul style="list-style-type: none"> At least 25 % of companies with 100% foreign ownership 200 on average – 20% female workers EU and OECD countries
SDG 4	Share of employees (in %) who took part in training / education sessions (%)	45% ⁹	These indicators are relevant for companies' involvement into education and lifelong learning activities. It tracks percentage of employees involved into education and training activities (from total number of employees) as well as time spent on training	55%
	Hours of training/ education per employee	Baseline n/a (additional survey required)		TBD based on baseline
SDG 6	Quantity of recycled water that company use in production (in %)	Companies are not recycling water (0%)	Companies' use of water and due care	25%
SDG 8	Share of employees (in %) trained in the use of newly purchased technologies (%)	21%	These indicators genuinely speak about economic growth and the environment where the growth happens through investment in workforce via employee retention, reliability on locally sourced raw materials and productivity rate.	40%
	Employee annual retention (in %)	Employee annual retention is on average 90%		95%
	Percentage of locally sourced raw material in final product	61% of locally sourced raw material (from 10-95%)		75%

⁸ Companies involved in the survey: ARTISAN d.o.o. Tešanj; MOJ SAN (DELIBAŠIĆ-POLIURTANI d.o.o. Kakanj); GAZZDA d.o.o. (YIELD doo) Sarajevo; INGRAT doo, Gracanica; MALAK JANJ, Donji Vakuf; MS&WOOD dd, Fojnica; SECOM doo, Visoko; SINKRO doo Sarajevo; TAMEX doo, Busovaca; QUANTUM d.o.o. WOODLAB, Sarajevo; BOSNIAN BEECH LINE, Sarajevo; BOSNIAN BEECH BOARD D.O.O., VISOKO; NAMJEŠTAJ dd- SOLID WOOD, Gradacac; PROMO Donji Vakuf, LIGNOPRO d.o.o. Sarajevo; PREVENT INTERIOR d.o.o. Visoko; ŠGD HERCEGBOSANSKE ŠUME d.o.o. Kupres

⁹ Range: 2% – 95%

Item	Business indicators	Baseline values 2018 ⁸	Description of indicators	Target 2030
SDG 9	▷ No. of new quality standards / certificates introduced / upgraded	▷ 2.2 upgraded or introduced on average	Preserving and upgrading the existing infrastructure is visible through parameters of new quality standards, ability to get additional funding, independent and prolific R&D, and percentage of employees that are directly in production or indirectly.	▷ 3
	▷ External support related to QS/ certificates received from donor (%)	▷ 18.7 % companies received some support (3/16 companies)		▷ 50%
	▷ Percentage of own design in portfolio	▷ 54% own product in portfolio	These indicators provide more insight in levels of added value in manufacturing. Additionally, companies that have high percentage of raw material as percentage of sales add smaller value onto the final product.	▷ 67%
	▷ The raw material as percentage of sales	▷ 51%		▷ 40%
SDG 12	▷ Share of production inputs (in % of total value) purchased from domestic suppliers or supplied through own production of production inputs	▷ 66% of inputs are from domestic suppliers	The level of use of domestic products and/or suppliers as well as the extent of newly developed products depict activities on harnessing higher value-added strategies.	▷ 75%
	▷ Collaboration with scientific / research institutions (such as institutes, universities) in implementation of R&D or innovation projects or activities ▷ Number of institutions (no.) ▷ Number of projects / activities (no.)	▷ Companies participated in average on 4.35 collaborative projects		Companies participate in average on 6 collaborative projects
SDG 13	▷ Percentage of companies that use of slogans and ads featuring climate change issues	▷ 50% companies use slogans and ads featuring climate change issues	Awareness of climate change issues is very sensitive question in Furniture and wood sector, where buyers control the dynamics: those companies that have final product are mainly including these slogans in their narrative.	▷ 75%
SDG 15	▷ Percentage of FCS/PEFC wood or similar in final products	▷ 57% is FCS/PEFC wood or similar in final products		▷ 70%
SDG 17	▷ Percentage of companies collaborating through cluster or other forms of associations	▷ 50% of companies are members of some cluster or association	Communication and collaboration help in market presence and market penetration in general. These indicators provide some measure of collaborative effort and capabilities for surveyed companies.	▷ 75%
	▷ Number of clusters or other forms of company associations in which companies participate	▷ 1,11		▷ 2

Year 2018 represents a baseline year for monitoring of companies' sustainable practices. The companies should be asked to provide the relevant data once a year to enable tracking of their SDGs progress in time.

The following indicators were selected to track contribution of furniture and wood companies to the achievement of the SDGs:

- Share of employees participating in training and education activities (SDG 4);
- Share of employees trained in the use of new technologies (SDG 8);
- Percentage of locally sourced raw material in final product (SDG 8);
- Number of R&D or innovation projects/activities of companies collaborating with scientific / research institutions (SDG 12);
- Percentage of own design in portfolio (SDG 9)
- The raw material as percentage of sales (SDG 9)
- Percentage of companies that use of slogans and ads featuring climate change issues (SDG 13)
- Number of clusters or other forms of company associations in which companies participate (SDG17).

Priority business indicators are further elaborated in Annex 4.

Level of business engagement into SDG implementation

It is evident that the BiH furniture and wood value chain companies are largely involved in implementation of SDG practices. The survey and interviews have shown that the level of their involvement is related to the size and strength of a company – bigger and stronger companies are involved more - but also to a unique corporate culture influenced by many internal and external factors such as competition, product segment, international standards, locality, and a specific stage of company development. Instead, the initially perceived theme of “well organized exporters with steady growth” was assessed against the selected set of SDGs. The primary and the most prevalent motive to get involved with SDG-compatible practices i.e., activities appears to be the improvement of one’s own competitive position. However, some practices and activities, which perhaps provide longer-term ROI such as advocating against climate change, appear to be less popular and consequently not implemented. Having that in mind, bigger and more internationally exposed companies, as well as companies that are recently emerging as integrators through the unique design and processes, are leading with their SDG-relevant engagement. These sector leaders mainly invest in SDG-compatible initiatives related to: education and training, decent working conditions, energy efficiency and improvement of production basis through purchase of new equipment, attainment of quality standards or implementation of business improvements, and new product development with emphasis on very important promotion of BiH furniture through foreign fairs. Although limited, support from public institutions and associations in a sustained and systemic way proved to be crucial for emerging exporters.

The level of engagement in SDG-related practices was initially assessed through a workshop and a questionnaire and it was subsequently widened through further visits and interviews with the six selected companies¹⁰. The key findings about the level of business engagement in SDG-related sustainable business practices is presented in the table below.

SDGs	Level of business engagement
General notes	Companies with more exposure to foreign markets and/or various mandatory business standards are aware of the need to implement SDG-related sustainable business practices. There are notable changes in workforce structure although this change is caused by eroding workforce that was predominantly male, it is evident that the number of female workers has significantly increased in 2018 (30%). Overall insight into multiple indicators shows that there is positive trend in growth of surveyed companies: : exports - 10% increase for the sample, where 14 out of 16 companies increased exports and overall revenue. Companies mainly export to EU, but some, such as Artisan, export to Asian market (high-end furniture). Only one company is 100% owned by a foreign investor.
SDG 4	All companies are implementing training and education activities to secure the required skills for their own production and almost all companies are active in this field, providing internal education opportunities and collaborating with educational institutions such as high schools and universities. However, the need for trained workers is evident from companies’ skills assessment of newly employed, where they stated that new employees usually have between 20-50% of skills required for the job they are hired for. The positive effects of the cooperation with schools must be further enhanced and companies should receive better trained and skilled workforce out of the educational system. This should be initiated through a dialogue with the educational institutions and advocacy towards more practical and useful curricula.

¹⁰ The selected companies are:

- Yield (Gazzda) Sarajevo – emerging integrator and brand with nine to eleven local suppliers that all have accelerated their growth through cooperation with Gazzda.
- Secom Visoko – important supplier of large EU brands, with interest to develop its own brand
- Artisan Tešanj – most prominent high-end furniture producer in BiH
- Ingrat Gračanica – producer of office and school furniture
- Senex Čelić – emerging high-quality bathroom furniture manufacturer
- Bosnian Beech Line – very important integrator with multiple cooperative endeavors and brands

SDG 6	It is evident that companies care about water consumption, but none of the surveyed companies recycle the wastewater. During the interview, company Secom claim to have invested in a very expensive water filtering device to meet the requirement, but they feel that this was not a systemic but rather arbitrary measure imposed by the authorities. Gazzda is not yet forcing its suppliers to provide any water purification measures but this could change in the future depending on the regulations.
SDG 8	Furniture manufacturers are increasing in numbers and their business models, although they differ in their strategical positioning, and require an important level of technological sophistication. Fierce competition and global economic trends just add to the pressure, thus providing enough incentive for constant investment in training and education in parallel to the new machinery and technology acquisition. All exporting companies from the sample invested in new technologies during 2018, and only 2 have received some support. On average, 15% of their staff was trained in using the new technologies. Regardless of this, on average 9% of workers have left their companies during 2018. The companies have hard time acquiring raw materials local due to underdeveloped and mainly fragmented supplies network (on average, there are only 65% of locally sourced materials in the final product). The companies are aware that their productivity now is not on the highest level, but this indicator should be revisited and thoroughly explained and defined with correct benchmarking.
SDG 9	The companies invest in quality standards and certificates: 3 out of 15 companies received some subsidies for this purpose. It is a significant shift in the common practice to have the companies claiming to have, on average, 50% of products of their own design. The surveyed companies on average are presenting their products on fairs and this is significant and important (only 3 companies did not present their products on fairs). Companies in the furniture sector have a very limited number of administrative staff, but as the integrators and brands are emerging, the number of such staff is increasing. Top management positions are rarely changed mainly due to scarcity of quality managers. The companies with developed sales and branding identity have more buyers and thus have better market position; a few still rely on one or two large customers – lessons learned while growing up.
SDG 12	The companies are forced to use raw materials that are not of BiH origin because the sector is still too weak to sustain local producers, however, changes are expected due to accelerated development of the furniture sector. In 2018 a large number of new products emerged on the market, providing good perspective for the companies; production series vary from 80 to 2000 pieces. It is clear that the companies are willing and prepared to participate in innovation and development projects. The raw materials expense in COGS is approx. 57% on average which is still too high, but it includes some companies who are mere service providers, the forestry and the integrators who pay the suppliers. Residual materials of manufacturing process are used for energy production (heating for kilns or facilities) or production of pellets and briquettes. The companies invest in centralized system for production monitoring and consumption on every level. The companies have introduced LED lights, and they use natural gas and electricity for forklifts. Even though, energy efficiency measures normally pay off, there is no system of support to companies in their innovative activities and collaboration with external counterparts is rather weak.
SDG 13	41% of surveyed companies use slogans or some form of recommendation for climate protection.
SDG 15	The majority of exporting companies are required to provide some certificates and standards, especially those that have larger number of buyers (AVG 54%); it is interesting that high-end furniture buyers are not demanding FSC or PEFC from the interviewed companies. The companies have hard time cooperating with forestry departments due to their inefficiency and lack of accountability; oak and walnut are sourced mostly by private suppliers or from abroad. The interesting notion about publicly owned forestry was expressed: “any forestry should work in the public interest and their success should not be measured by profit but rather by success of companies belonging to the value chain”.
SDG 17	Furniture and wood sector companies are members of the BiH chamber system. Approximately 30% of companies are involved in international value chain, but only one company is formally a member. The companies mostly participate in some form of a cluster, but according to their account, this participation rarely yields fruit. However, organized presentation of newcomers at fairs provides significant boost for many companies.
Other	Employment without discrimination on any grounds is applied, but no official documentation or control is enforced. The companies are involved in various community-based activities. Marketing efforts are mainly directed towards foreign markets, so the companies have no incentive to promote their SDG practices locally, unless these efforts help them in finding workforce, which appears to be the biggest challenge at present.

Examples of good practices

Although BiH wood and furniture value chain companies in most cases are not aware of their contribution to SDGs implementation, there is still a number of relevant good practices in this regard. The good practices were initially identified through a workshop, and more details about them were collected through a questionnaire. The most interesting and relevant examples (presented in the table below) were additionally assessed during the company visits and through telephone conversation with responsible persons in the companies.

SDGs	Good practices
SDG 4	<p>Delibašićpoliuretanid.o.o., Kakanj</p> <ul style="list-style-type: none"> ▷ established scholarships for students ▷ employment for best students ▷ incentives for skills development and learning <p>Lignopro, Sarajevo</p> <ul style="list-style-type: none"> ▷ lectures for all interested companies in solid wood processing ▷ promotion of advanced techniques and processes of manufacturing <p>Prevent Interior, Visoko</p> <ul style="list-style-type: none"> ▷ training of employees on a quarterly basis <p>Secom, Visoko</p> <ul style="list-style-type: none"> ▷ internal education for all employees ▷ life-long-learning policy implemented and enforced <p>Senex, Čelić</p> <ul style="list-style-type: none"> ▷ experiences transformed into practical activities and delivered to all employees continually <p>Standard, Sarajevo</p> <ul style="list-style-type: none"> ▷ LSDT (Leadership Skills Development Training) for middle and top management <p>Tamex, Busovača</p> <ul style="list-style-type: none"> ▷ Continuous education of workers in the company ▷ Merit-based system provides equal opportunity for advancement of employees <p>Yield (Gazzda), Sarajevo</p> <ul style="list-style-type: none"> ▷ Training for key staff on their suppliers' sites in product adoption ▷ Implementation of new processes and technologies through field work
SDG 6	<p>Prevent Interior, Visoko</p> <ul style="list-style-type: none"> ▷ Equipment for efficient water use is installed <p>Secom, Visoko</p> <ul style="list-style-type: none"> ▷ Installed filters in accordance to EN 881 <p>ŠDG HercegbosanskeŠume, Kupres (Forestry)</p> <ul style="list-style-type: none"> ▷ Systemic protection of springs in forests <p>Standard, Sarajevo</p> <ul style="list-style-type: none"> ▷ Wastewater filters installed

SDGs	Good practices
SDG 8	<p>Delibašićpoliuretanid.o.o., Kakanj</p> <ul style="list-style-type: none"> ▷ Corporate values enforced to promote sustainable growth <p>Secom, Visoko</p> <ul style="list-style-type: none"> ▷ Quality system enforced as a goal of the company <p>Senex, Čelić</p> <ul style="list-style-type: none"> ▷ Continuous product development and market research as an effort to sustain momentum ▷ Above average salaries <p>Artisan, Tešanj</p> <ul style="list-style-type: none"> ▷ Regular annual merit-based increase of salaries to sustain growth and preserve core workforce <p>Standard, Sarajevo</p> <ul style="list-style-type: none"> ▷ LEAN management and IWAY implemented <p>Tamex, Busovača</p> <ul style="list-style-type: none"> ▷ Overall strategy directed towards sustainable development with emphasis on women employment – 79 female employees at present <p>Yield (Gazzda), Sarajevo and Bosnian Beech Line, Sarajevo</p> <ul style="list-style-type: none"> ▷ Building capacities and competencies of suppliers to respond to the needs of buyers ▷ Providing higher value-added products for manufacturing
SDG 9	<p>Delibašićpoliuretanid.o.o., Kakanj</p> <ul style="list-style-type: none"> ▷ Investment in new factory and new machinery <p>Secom, Visoko; Artisan, Tešanj; Tamex, Busovača</p> <ul style="list-style-type: none"> ▷ Continuous investments in manufacturing process and efficiency ▷ Influencing authorities to provide better communications, roads, etc.
SDG 12	<p>Artisan, Tešanj</p> <ul style="list-style-type: none"> ▷ Completely controlled production process with minimal residue materials is a policy of the company <p>Prevent Interior, Visoko</p> <ul style="list-style-type: none"> ▷ Installation of machinery for scrap foam mincing, which is used as stuffing for pillows and cushions <p>Standard, Sarajevo</p> <ul style="list-style-type: none"> ▷ Use of energy efficient lights and use of electric and natural gas-based forklifts <p>Tamex, Busovača</p> <ul style="list-style-type: none"> ▷ All waste is used for heating and briquettes production <p>Yield (Gazzda), Sarajevo and Bosnian Beech Line, Sarajevo</p> <ul style="list-style-type: none"> ▷ Promotion of efficient production on all locations of suppliers
SDG 13	<p>All companies</p> <ul style="list-style-type: none"> ▷ Efficient production reduces emissions <p>Standard, Sarajevo</p> <ul style="list-style-type: none"> ▷ Recycling of packaging materials

SDGs	Good practices
SDG 15	<p>Yield (Gazzda), Sarajevo and Bosnian Beech Line, Sarajevo</p> <ul style="list-style-type: none"> ▷ Demanding FSC from suppliers <p>Secom, Visoko</p> <ul style="list-style-type: none"> ▷ Participation in reforestation initiatives with local community <p>ŠDG HercegbosanskeŠume, Kupres (Forestry)</p> <ul style="list-style-type: none"> ▷ Reforestation is a policy that is enforced ▷ FSC principles adhered to <p>Standard, Sarajevo</p> <ul style="list-style-type: none"> ▷ Only 100% FSC or FCS Mix Credit <p>Tamex, Busovača</p> <ul style="list-style-type: none"> ▷ Among the first companies to implement FSC and constantly advocating for value chain preservation
SDG 17	<p>Yield (Gazzda), Sarajevo and Bosnian Beech Line, Sarajevo</p> <ul style="list-style-type: none"> ▷ Building profit-based clusters with unique competencies, capacities and capabilities
Relevance to other SDGs	<ul style="list-style-type: none"> ▷ Participation in community actions supporting sports and culture ▷ Rebuilding and conserving sacral and cultural objects ▷ Increasing the share of female employees ▷ Prioritizing environmental standards

CASE STUDY - YIELD D.O.O. (GAZZDA BRAND)

Brief info about the company

Yield d.o.o. from Sarajevo employs 34 people, with EUR 2.9 million of exports, representing one of the emerging integrators of the furniture and wood sector in Bosnia and Herzegovina. It is a relatively young company featuring one brand name called Gazzda. Yield d.o.o. through its brand Gazzda designs and develops products, mostly outsourcing its serial production and distributing it on the global market. Since its establishment eleven years ago, Yield d.o.o. has positioned itself differently in accessing the furniture market. The company's core business is developing products, putting these products on the global market and keeping them successful by providing the right services. Today, Yield d.o.o. has a product portfolio of about 75 unique products. Their knowledge of the market and trends in furniture manufacturing resulted in the Red Dot design award, IF design award, and Interior innovation design award. The main markets for Yield d.o.o. are Germany, Switzerland, and the Netherlands.

The company outsources its serial production to several external production partners in BiH. Currently, Yield d.o.o. collaborates with 9 external partners from Bosnia and Herzegovina employing over 550 workers, thus creating a remarkable cluster-like organization.

SDGs contribution

Below are some of the key areas of SDG-relevant interventions:

- SDG 4: In the area of education, Yield d.o.o. needed to create its own workforce from poorly skilled and inexperienced people, so they established an onboarding process that mirrored all their specific requirements to build a unique corporate culture, unknown in the furniture and wood sector at the moment; outsourcing partners were capable of producing some furniture, but it was necessary to train these workers and their managers to apply certain standards and processes to ensure the best results. New products were introduced to new productions in a specific and highly structured way that corresponded with the training and tutoring of almost all employees involved.
- SDG 8 and SDG 9: To promote continuous and sustainable growth and adequate and resilient infrastructure, Yield d.o.o. invested in new technologies e.g. CNC machines, ERP (Enterprise Resource Planning) and AR (Augmented Reality) applications. The recently deployed ERP and AR are the state-of-the-art applications and are providing a foundation for the sustainability of their idea and strategy. In addition, partnering companies use their ERP system to provide timely feedback and even control the level of available raw materials for the production. On the other hand, AR application is probably among first applications globally, introduced just after the IKEA Place application; An example that could be relative to SDG 8 would be the practice of awarding those partnering companies' employees that are involved in Gazzda furniture manufacturing a significantly higher wages. In this way, Yield d.o.o. provides a better and more productive working environment within their supply chain.
- SDG 13: To fight climate change Yield d.o.o. is using natural and low emission materials, thus promoting the need for environmentally safe products and manufacturing processes.
- SDG 15: to promote sustainable use of terrestrial systems and forests, Yield d.o.o. is FSC certified and all partnering companies are FSC certified too. Now about 80% of all wood is FSC certified, and the strategic goal is to reach 100% by the end of 2019.
- SDG 17: The entire Yield d.o.o. business model is based on partnering with other companies and cooperating with local furniture manufacturers. It is important to emphasize that significant funding is and will be invested in the functioning of these partnerships.

Issues and opportunities

The BiH furniture and wood sector development since the last war is characterized by reliance on the resources - mainly readily available wood - and relatively cheap labor. Large pre-war conglomerates, such as Krivaja and Šipad collapsed and many small companies emerged. However, these small companies were not able to invest in research and development and market research. The companies were manufacturing largely lower value-added products and usually for a known brand, relinquishing control over pricing and hoping their product will be the most affordable for local and foreign agents and buyers. This situation evolved due to some brave, opportunistic, and innovative owners and groups of people. At present, the predominant issue for companies is the lack of employable workforce and lack of transparency in the distribution of locally sourced wood. Some companies invest in new equipment and training of people, while some are specialized in production of furniture parts and became very efficient suppliers. However, pressured by diminishing resources, the companies started inventing i.e., adapting to the new business models and started investing in design and marketing. One such company is Yield d.o.o. which managed to implement a cluster-like organizational model that gathered companies that have had capacities and some know-how in manufacturing but were traditionally just suppliers for well-known brands. Development process was phased, from understanding and penetrating the market through many years of agent work for some companies to merge their forces with one of the best-known designers in BiH. Throughout this process, the company evolved into a technologically advanced entity with an excellent grasp of market trends and needs.

Description of the intervention

To bridge the gap between the market and producers, Yield d.o.o. built its own R&D department with rapid prototyping ability and introduced some modern product industrialization principles. Companies that were included as their partners received training and know-how needed for manufacturing, but were also allocated one of the Yield d.o.o. employees as a controller. Knowing one's own capabilities and capacities is crucial in the modern furniture sector, but for Yield d.o.o. this means knowing the capacities and capabilities of manufacturing partners and planning its production and delivery accordingly. This was possible only with the implementation of a comprehensive ERP system that provides insight into the operations of manufacturing partners, covering their raw materials on hand to finished goods processes. During one year, Yield d.o.o. invested in the development of a custom-made software solution that was successfully implemented.

Effects and sustainability of the intervention

After only one year of use, the developed ERP system helped significantly to streamline operations and reduce communication issues within the organization. Automatic production orders with corresponding packaging labels reduced waste and need for additional quality controls, which resulted in serious improvements, both in profits and the efficiency. The entire setup provides a relaxed processing environment and allows sales personnel to focus on future customers rather than on the tracking and timing the orders. The result was a significant increase in revenue by 33% relative to the year without the ERP system (2017 vs. 2018). By comparison, a year earlier the increase in revenue was 13,4%. It is evident that this system provides a better internal communication and overall efficiency. Based on this new technology and the observed one-year results, it is safe to argue that investment into resilient and modern infrastructure, which is SDG-related activity, proves to be profitable. Furthermore, this Yield's cluster-like organization is proving its sustainability and growth in the long run.

Replication possibilities to other enterprises

There is still potential to gather companies with similar capacities and competencies within the furniture and wood sector in BiH. Integrators and leaders are emerging through marketing research and technologies and this model is highly replicable. However, it is necessary to keep in mind the specific integration model that must be based on mutual benefits.

Link between companies' sustainability practices and financial performance

When asked to provide accounts of financial gains through sustainability practices, the surveyed companies almost unanimously confirmed that they could backtrack SDG-related practices and perform analysis, but this analysis is something they have no incentive to do at the moment. On the other hand, the interviewed companies admit that it would be great if this initiative (SDG mapping) could yield practice of recording indicators that will provide them with reliable analysis of linkages between SDG-related practices and the consequent financial effects. Finally, based on the workshop conclusions and interviews it is safe to confirm that companies perceive contributions to SDGs implementation as financially justified.¹¹ Following are some examples:

Company Yield (Gazzda brand) from Sarajevo provides very innovative concept for their suppliers (9 to 11 companies included). Performing as the “front-end” of the operation, they offer brand to the market, while building “back-end” competencies and capacities. Newly designed products often demand workforce that will be able to understand new techniques and technologies; customers often demand short lead times and advanced quality control. All of this and more is provided from Yield to suppliers in order to preserve their little cluster's production on time and with demanded quality. In the last three years while securing demand, Yield is also exerting influence on certificates and salaries within their cluster. The Yield's intention is to provide higher salaries for workers that work on their collections. Yield invested approx. 170.000 EUR in new technologies and training, which resulted in a significant increase in revenue amounting to 51% for the period 2016-2018.

Secom from Visoko is one of the leaders in the field of wood industry in Bosnia and Herzegovina. By investing in the state-of-the-art technology, they have been able to round off the production process from logging to production of furniture. The firm is located on approximately 50,000 m², on two locations and it employs 157 workers. Their growth is steady and manufacturing processes are well defined. Constant communication with leading brands in the industry provided them with immeasurable experience that is mainly based on SDG's. Certificates and standards implemented within the company proved in numerous occasions as the best possible argument for potential buyers. The company operates according to ISO 14001, ISO 9001 and FSC™ CoC. Efficient production processes and investment in technologies provide enough material for the next stage of development. Finally, they are now confident to start with their own brand. Based on their preparations, they will provide another sustainable development practice that will result in a significant profit. Secom invested 1,2 million BAM in 2018 in a new facility and additional technologies to prepare for the upcoming strategic shift towards building a new brand. With this huge investment, the profit margin has increased to 7,8% which is a considerable higher margin compared to that in 2016 and 2017 (4,8% and 5,2% respectively). During the interview, the management and the owner explained that they are also planning to increase their investment into training and marketing in the next two years.

Tamex from Busovača is another very dedicated supplier of quality products without their own brand. In addition to constant investment in technology and workforce, they are also very active in preservation of forests as they perceive it is their duty to promote sustainable growth. The Tamex business model relies on locally sourced beech wood and relatively cheap workforce, which they managed to train in-house. Their entire processes are certified since 2013 under ISO 14001-2002+Cor 1, ISO 9001, and BS OHSAS 18001. These certificates are used by Tamex in attempt to manage its environmental responsibilities and enhance product quality management and improve the workers' safety. As the result of these certifications, they managed to conduct some restructuring (from 431 in 2017 to 361 during 2018), keeping the relatively similar level of revenue (26,2 and 26,5 million BAM respectively) and having increase in profit margin. The profit was by 79% higher in 2018 relative to 2107 amounting to 1.61 million BAM.

¹¹ It is evident that the effect of sustainability practices is hard to measure in the short run if we take into account all factors that may have effect on financial performance of companies. Hence, it is necessary to have longer data series with possibility to use some econometric modelling in order to „capture“ the real link between companies' sustainability practices and financial performance.

Delibašićpoliuretanid.o.o., Kakanj is a company that supplies upholstered furniture manufacturers with foam, and it is evident that they are investing in capacities and providing best possible services to companies in the sector. Reducing waste from production and focusing more on waste water preservation, with constant investment in new facilities and machines had reflections on their financial results (revenue and profit). The growth is constant since 2014, since they invested in “Moj San” mattresses factory, thus laying the foundation for sustainability due to standards in accordance to which the factory operates. Ever since, they have a revenue growth between 11.5% and 19.1%, with constant profits (15,4% in 2018).

Capacity gaps/constraints

Key gaps to efficiently align business processes with identified SDG priorities mainly relate to workforce development, need for constant renewal of technology and business processes and support to innovative activities, weak infrastructure and inefficiency of supporting institution/authorities and limited inter-company collaboration.

The wood and furniture 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, which is manifested in quality and expertise of labor force, could easily be lost due to lack of continuity and systematic approach in providing new staff. Under these circumstances, the whole range of wood processing staff is missing: from the workers to production operators and, especially, engineers and marketing experts. It is evident that the current output of the education system in Bosnia and Herzegovina is insufficient.

Concerning the equipment, most of wood and furniture sector companies have machines that are 5 to 10 years old. 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 the requirements of foreign buyers in terms of a constant, high-quality products, are taken into account. In addition to new equipment, this means improvements concerning the organization of production, the flow of raw materials, and improvement of certain operations.

In addition, changes are also required in terms of key business processes. In most of the companies that have strong growth, but this growth is not accompanied by appropriate management and organizational transformation. Many owners/managers have limited (professional) knowledge, and because they themselves often have technical background, they lack marketing and management knowledge. Some of them are aware of being a bottleneck for the development of their companies and that they need to transform as managers. Also, some intend to seriously engage their heirs to run companies, and some heirs are neither available nor interested.

Majority of the companies are members of the Chambers of Commerce. Some of the companies are members of the local associations and forestry associations and wood processing. Some companies believe that membership in the Chambers of Commerce is not beneficial and that the Chamber should offer more, particularly, when compared to the Chambers of Commerce in developed countries and the services they provide to the economy. Generally, there is sporadic cooperation between the sector and educational institutions (secondary schools or faculties).

Companies from furniture and wood sector are in a disadvantaged position in terms of the business environment in which they operate, in relation to European competition. In general, the conditions in which firms operate in the EU are much more favorable. Existing tax legislation in Bosnia and Herzegovina 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 legislation is very complicated, so the company is required to comply with over 20 laws regulating various fiscal and parafiscal charges, and about 30 laws governing penalty provisions. The companies are required to submit more than 100 different applications

and forms in the course of the year. The situation in the Federation is very similar in many respects, except in one, very important thing. Export-oriented companies in the Federation are supported by fiscal incentives.

Cooperation among majority companies in the furniture and wood sector is at a low level. With the exception of large companies, majority are small companies that still 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 a greater negotiation power in relation to the state forestry sector. The same is true for access to the market for their products, where, in a great number of cases, our companies act individually.

Recommendations and specific actions

It is evident that companies in furniture sector are still at the beginning of their SDG journey and that it will take some time to integrate this approach in their regular operations. The analysis has shown that some companies are doing their best in aligning their business operations with best sustainability practices but their approach is still very unsystematic and ad hoc, without having proper information and data on real effects in terms of business results.

Based on previous analysis, it is possible to single out several recommendations for more productive engagement of BiH furniture and wood value chain companies' in implementation of sustainable business practices. Recommendations for advancement of this value chain in BiH include various developments/issues:

- **Improvement of workforce**

- Advance cooperation with educational institutions (secondary schools and faculties) in improving formal and informal education of youth and adults. The goal of this cooperation would be for the secondary schools to do additional qualifications and change the qualifications to provide more qualified employees and for the faculties to provide more engineering and other highly qualified staff that the businesses are currently missing.
- Defining needs for new knowledge and skills that are relevant for further development (combining information on new technologies and business models with information on new requirements from customers);
- Improvement of in-house training to increase the workforce quality and retain workforce in the companies.

- **Adherence to sustainable management of water and forestry**

- Further transposing of EU directives with considerable focus and investments related to sustainable management of water and forestry;
- Improvement in the care about water, including water recycling, will become a major issue in due time;
- Further compliance with new regulation and policies related to forestry management in BiH, primarily through rational use of natural resources, lower level of pollution and higher energy efficiency;
- Customers and suppliers will become increasingly sensitive towards sustainable development.

- **Strengthening of production basis and QMS**

- Ensuring long-term competitiveness based on quality of products, competitive lead time, and by offering competitive working conditions to employees thus preventing their drain;
- Keeping up with technology and market changes and timely introduction of new equipment, machinery, business models, and technologies;
- More investment in R&D, increasing the value added of final products as well as the use of domestic resources
- Development of internal processes and capacities relevant for introduction of quality standards and improving basis to retain relevance at the EU and other demanding markets;

- **Cooperation and partnerships**

- Cooperation with faculties and research institutions in improving the existing and developing new products and introducing new technologies;
- Improving inter-company cooperation, trust and capacity to cooperate, enabling the exchange of knowledge, experiences and technological capacities, thus increasing the level of use of competitiveness and sustainability of business operations;

- Promoting cooperation between companies in the value chain as an approach to strengthening long-term competitiveness and negotiation position of BiH companies, supporting cluster and similar cooperation-focused initiatives;
- Further improvement in relationship between business community and government, particularly in promotion of SDGs
- Further involvement of companies in various community-based activities
- **Gender actions**
 - Promoting gender equality as an approach to strengthening and developing human resources in BiH companies.
 - Ensuring equal participation of all in business operations of companies

Some of these actions will require external (donor, public or combined) support in an effort to provide stimulus to enterprises to become more SDG engaged.

In addition, it is necessary to adjust presently available data gathering tools and practices to accommodate SDG requirements. The dialogue with companies must be continued in order to adjust indicators if necessary, and to retain interest in SDG that was evident throughout the process. However, all stakeholders should be brought to the table and free communication channels should be established. Once this is in place, proper data relative to more uniformed samples should be analysed, which through understanding of best practices of well-developed industrial nations could offer several recommendations for more productive engagement of BiH furniture and wood sector companies in the implementation of sustainable business practices.

Technology parks and knowledge hubs should be established with an aim to promote SDG-related practices and activities; it is important to emphasize that existing associations are not competent nor experienced to implement these very complex organizations.

The SDG advocacy should be funded and implemented on the state and entity levels to promote the initiative, where some of the initially interviewed and surveyed companies could serve as promoters of good SDG-related practices and activities.

Conferences and forums should be organized where all stakeholders from the furniture and wood sector would exchange their experiences and promote SDG-related practices and activities.

Automotive parts value chain in Bosnia and Herzegovina

The Assignment “Mapping of the Sustainable Development Goals (SDGs) against value chains in furniture and automotive parts sectors in Bosnia and Herzegovina” aimed at conducting SDG mapping of value chains in automotive parts manufacturing in BiH, in order to identify SDG indicators which impact individual parts of the value chain. The SDG mapping is based on the existing value chain, identified by analysis conducted by the UNDP in 2016. Selected indicators (baseline and targets) will be used to set general and specific goals to reduce the gap between current business practices within automotive part value chain and the SDGs and corresponding targets. The Assignment provides grounds for embedding SDGs into automotive parts sector, as growing industry in BiH, while at the same time setting in place a basic monitoring framework for monitoring its performance against SDG targets..

The automotive suppliers' value chain consists of producers of metal parts and other components for the automotive industry. The production mainly involves:

1. metal precision parts: rings, clamps, pistons, shaft drives, brake discs,
2. various small parts: springs, screws, pipes, couplings,
3. components of: ICE engines, gears, transmission and braking systems,
4. exhaust pipes and control systems, pumps, filters,
5. housings, cabins, aluminium wheels,
6. electric car parts and cables,
7. accumulators and electric car drives,
8. metal, rubber or plastic components,
9. textile and leather products,
10. plastic deformation tools, etc.

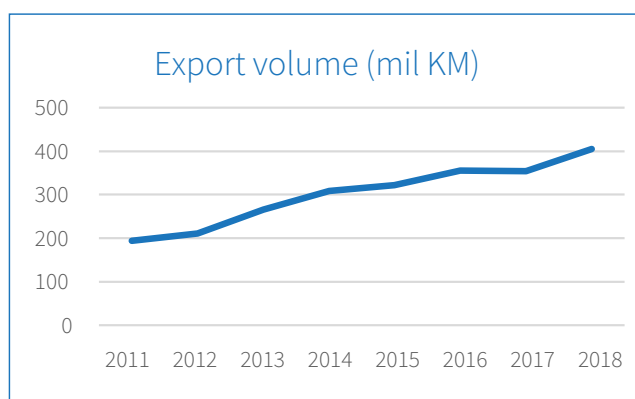
Depending on the type of products, the production inputs most commonly involve: steel, grey cast, modular cast, aluminium, zinc and copper. The automotive suppliers' can be classified as follows:

- the companies dealing with primary processing (casting, forging, extrusion, stamping, etc.);
- the companies involved in final processing (scraping, milling, drilling, grinding, bending, penetration, cutting, welding, etc.) and
- the companies dealing with surface treatment (chemical treatment, thermal treatment, surface protection and marking of parts).

This automotive suppliers' value chain is not represented with a large number of companies (some 50 in whole Bosnia-Herzegovina), but these companies are certainly some of the fastest growing and most developed ones in regard to technology, management and organization. The economic power of automotive industry companies is significant and as such it is one of the driving force of BiH's economy. A number of BiH automotive companies show the sustainable business practices, among which the most prominent ones involve good organization and management practices (Lean, 5s, energy efficiency, quality standards), education and training of workforce (CNC, 3D modelling, welding), etc.

The value chain is almost entirely export oriented, meaning that only a small share of the metal parts for automotive industry is placed at local market. The export volume of the automotive suppliers value chain in the recent years is given in the following table and presented in the graph.

Year	Export volume (mil KM)	Increase (in %)
2011	194	-
2012	211	8.8%
2013	266	26.1%
2014	308	15.8%
2015	322	4.5%
2016	355	10.2%
2017	354	-0.3%
2018	405	14.4%



Source: [BiH Foreign Trade Chamber](#)

Suppliers: Nominally, there are both, domestic and international suppliers. However, more than 90% of production inputs (raw materials consisting of high quality steel) are imported. Production inputs are imported, either by BiH wholesalers or directly by companies, since the high quality materials used in the production are not produced locally.

Buyers: Companies in the automotive value chain are almost exclusively export oriented with an export share of over 80% of their income. Important export markets involve: Germany, Austria, Croatia, the Netherlands and Czech Republic, Luxemburg, Hungary, Slovenia, Italy, Spain, and Slovakia, as EU members, with Turkey being the most important trade partner outside the EU. Buyers are mostly large systems who are highly positioned in the automotive supply chain. Becoming a supplier is a long-term process, which takes at least 2 years of continual cooperation in all aspects.

The German market is the largest single export market for automotive parts, with exports accounting for 1/4 of the total BiH automotive industry. The automotive industry is one of the brightest examples of this fast expansion and good innovation supported by cooperation with large European producers where some segments of their outsourcing are given to BiH producers, such as the successful stories of Prevent CEE and CIMOS.

Competition and supporting processes: There is no particular local competition in this value chain. Companies produce different automotive parts and components for different international buyers. The companies are interested in management training in sales, exports and marketing as well as training in 3D modelling. In addition to TS 16949 (defect prevention and the reduction of variation and waste in the automotive industry supply chain), there is a need for introduction of welding standards ISO EN 3834 and ISO EN 1090.

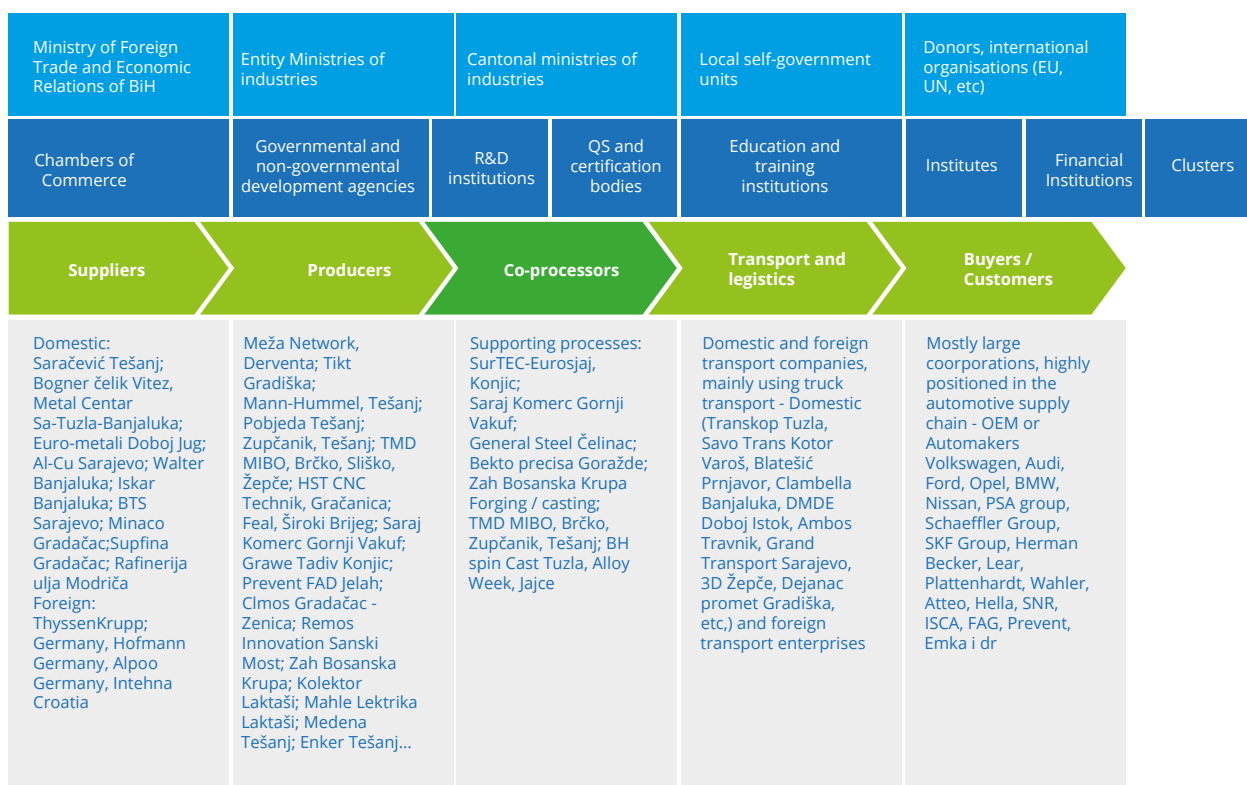
Opportunities and potentials: Although producers from automotive value chain have long-term contracts, they are still trying to widen their product range to become less dependent on one or a few of large customers. At the same time, majority of enterprises belonging to this value chain have equipped their production facilities with modern technologies, e.g. CNC machines for different types of metal processing, plasma cutters, presses, etc. and intend to further invest in equipment and production facilities.

Challenges: There is a room to improve cooperation with customers. In some cases, there are issues with payments of receivables and customers' pressure on prices. There is space for improvements in terms of education/training, mostly in the fields of welding, operating on CNC equipment, 3D modelling and marketing/sales. In addition, there is a need to support SMEs in obtaining quality standards. Most of the companies plan to invest in production facilities and additional production equipment. This provides solid basis for assisting these SMEs to increase their competitiveness. Probably the biggest challenge relates to improvement of inter-company connections and collaboration, in order to achieve higher purchase & sales power and improve sector competitiveness.

Value chain

A typical process in the automotive suppliers' value chain companies involves the following:

- importing production inputs from abroad or purchasing it from local traders;
- carrying out technical preparations based on specifications provided mainly by foreign buyers;
- performing internal processing of supplied materials (cutting, bending, milling, grinding, welding, surface protection, quality control...) sometimes outsourcing production segments (e.g. surface treatment) to other local companies, but with key production/processing functions still being kept within the company;
- performing quality control, storage and packaging operations,
- delivering goods to buyers directly, with rare engagement of sales agents or with the use of other sales channels.



The automotive suppliers' value chain normally starts with iron and bauxite mines and foundries. Although such mines exist in the country (as well as the Foundry in Zenica, along with several other smaller foundries), the quality of locally produced metal raw materials hardly satisfies the high quality needs of automotive industry. This is why the producers order raw materials from abroad, directly or through local wholesalers. In case of special orders, raw materials come directly from the foreign purchasers, who in this case represent buyers as well.

The orders of raw materials are based on contracts and strict instructions and specifications provided from buyers of automotive parts. In the next step, the ordered materials are being prepared for production and internally processed in production plants. Some of the processing procedures, such as surface treatment, are outsourced to partner companies in BiH.

In the next phase, the products are tested for quality requirements, stored, packed and delivered to destination markets. The buyers mainly involve suppliers of automotive parts and / or important suppliers of European car producers.

Besides the participating companies and other direct actors, there is a number of other contributors in the automotive parts suppliers' value chain: ministries, local authorities, chambers, development agencies, associations, clusters, institutes, certification and QS institutions, financial institutions, training and education institutions, etc. The BiH automotive suppliers' value chain is presented in the following scheme.

Connectivity table for automotive parts sector

As reflected in the furniture sector, the connectivity table is the tool that assists in bringing together information from different source systems in order to map relevant SDGs that affect every segment of the value chain. It is based on desk research of all available documents. Main analyzed elements of the connectivity table, beside already mentioned stakeholders, were:

- Key material aspects
- Strategic objectives
- Key Success Factors and
- Risks

Identified Business Opportunities (Key Material Aspects)

The BiH automotive suppliers' value chain is growing, with several trends contributing to its development. Firstly, BiH is neighbouring EU, so that delivery times are shorter and transportation cost lower (e.g. compared to those from China, whose workforce becomes more expensive as well). Secondly, European and particularly German automotive market is experiencing growth and it is always seeking for high quality suppliers of automotive parts and components. Last, but not the least, many BiH automotive companies have already proven themselves as quality suppliers, with BiH slowly regaining its previous reputation in metal processing and the automotive industry, as its significant component.

However, in order to maintain the good momentum, actions that will address the current deficiencies and take advantage of the existing market opportunities should be considered. Accordingly, based on the overview of the available and relevant analysis, the key opportunities and needs for the development of automotive suppliers' value chain in BiH involve:

1. improvement of workforce, through specialized trainings in the areas of CNC, 3D modelling and welding;
2. improvement of equipment, tools, machinery and the knowledge on the new technologies;
3. improvement of marketing approach / knowledge, with preparation and implementation of pro-active marketing / sales plans, to improve contacts with target markets, find new customers, and reduce the dependence on limited number of buyers,
4. introduction of relevant QS and certifications demanded at target markets;
5. improvement of inter-company cooperation, trust and capacity to cooperate;
6. support to quality domestic suppliers, to overcome issues of long delivery and unfavourable payment terms.

The other stakeholders that influence the operation of the value chain also have interests compatible to the achievement of SDGs. Buyers of automotive industry components and spare parts are interested in getting quality, timely, and less expensive supplies. Domestic authorities and institutions have interest in increasing public incomes coming from taxes, as they should be concerned in employment of more persons in BiH enterprise sector thus improving the living standards and stopping the drain of quality workforce.

Many of the above listed interests and opportunities can be clearly aligned with the Sustainable Development Goals.

Relevance of SDGs for the Automotive Suppliers' Value Chain

During the consultative phase with the members of the SDG Private Sector Working Group, which took place in Sarajevo on February 7th, 2019, the participants were asked to mark SDGs which, in their opinion, the enterprises (can) influence the most. The answers are classified by frequency and presented in the last column of the table (the most frequent answer is marked with 1., etc.). These findings were combined with the general findings of the Automotive Suppliers' Value Chain Assessment presented in the main document in order to determine which SDGs are the most relevant for the VC.

The automotive suppliers' value chain assessment, combined with the results of the *SDG Private Sector Working Group* questionnaire, confirms that the BiH automotive companies can have the highest impact on the achievement of the following SDGs:

- **Goal 4** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- **Goal 8** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **Goal 9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- **Goal 12** Ensure sustainable consumption and production patterns
- **Goal 17** Strengthen the means of implementation and revitalize the global partnership for sustainable development

In addition, the contribution to the following SDGs should be also taken into consideration:

- **Goal 5** Achieve gender equality and empower all women and girls
- **Goal 7** Ensure access to affordable, reliable, sustainable and modern energy for all
- **Goal 13** Take urgent action to combat climate change and its impacts

Concerning the above choice of the SDGs, it is important to note that there is a very high congruence between the expert findings and opinions of the working group participants. The picture of relevance of SDGs for the BiH Automotive Suppliers' Value Chain is presented in the scheme provided in Annex 2.

Strategic objectives

In connection with their contribution to the implementation of SDGs, the key business opportunities identified for the Automotive Suppliers' Value Chain have been translated into the strategic objectives. The following table provides more details on these connections.

SDGs	Automotive suppliers value chain priorities
Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	VC companies are interested to support both formal and informal education processes of youth and adults, due to deficiencies in the current education system and issues with finding the skilled workforce
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	VC companies need to improve their production basis (equipment, tools, machinery, knowledge) contributing to the achievement of SDG 9.
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Introduction of relevant QS and certifications demanded at target markets is seen as an important element to promote sustainable industrialization.
Goal 12 Ensure sustainable consumption and production patterns	With the support to quality domestic suppliers, VC companies may overcome the issues of long delivery and unfavorable payment terms ensuring sustainable production basis.
Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development	There is a need for the improvement of inter-company cooperation, trust and capacity to cooperate among BiH companies, as well as the connections with foreign companies and customers through pro-active marketing & sales approach.
Goal 5 Achieve gender equality and empower all women and girls	More women in BiH run and manage successful companies and this can be promoted as a good practice.
Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all	VC companies are interested in energy efficiency measures whose implementation leads to the achievement of SDG 7.
Goal 13 Take urgent action to combat climate change and its impacts	Company environmental actions and energy efficiency measures may contribute to the achievement of the goal in the area of climate change

Key success factors

The competitiveness of the BiH automotive suppliers is still primarily based on inherent industrial tradition and closeness to the European automotive markets, but also on the availability of skilled and relatively cheap workforce. In order to effect their full potentials and to cope with changing market trends and growing buyers' requirements, the BiH automotive component producers need to address several deficiencies, such as dependence on small number of buyers and taking advantage of technological changes in the industry.

In order to secure long-term competitiveness, the BiH automotive producers need to develop their internal skills and capacities, improve organization and streamline the production processes. Securing of skilled workforce will become a more significant success factor where companies' efforts alone can hardly be sufficient for success. Additional efforts need to be undertaken in sales and promotion in the target markets, as well as in the introduction of new and advanced production technologies, and follow-up quality standards and requirements of foreign buyers.

Market and technological changes will bring new opportunities to the BiH automotive companies should

they embrace them and adjust their production potentials quickly. These chances relate primarily to the acceptance of production of components for electrically powered vehicles and new materials, such as carbon fiber. Some of the BiH automotive companies, which are currently producing components for internal combustion engines, filters, pumps and exhaust systems, etc., will probably need to change their production bases rapidly to secure buyers and to be able to cope with new market trends in the long run.

The trust between the companies associated with their capacity to cooperate productively also represents a critical success factor for many reasons. With improved collaboration within the value chain, the companies would be able to undertake more serious orders and projects from purchasers and to execute them more effectively. In addition, through some joint efforts, such as supplies of raw materials and common approach in target markets, the automotive suppliers' could significantly improve competitiveness of the sector and become an example for industrial cooperation to other companies and sectors as well.

Risks

The key risks for the BiH automotive companies involve several enterprise-related and more controllable aspects, as well as those of general and less controllable nature. Internal risks involve dependence of the BiH automotive suppliers' value chain companies to limited number of foreign buyers, companies' capability to quickly adjust to technological changes, availability of skilled workforce, and risks in relation to competitiveness.

Automotive suppliers' value chain in BiH is fully export oriented. It depends heavily on orders from foreign buyers. Due to dependence on the European buyers, any significant market change immediately influences BiH automotive suppliers. In addition, some of the BiH automotive companies are dependent on a limited number of foreign buyers. This represents a serious treat in case of a decrease in orders from foreign buyers or in case of a change in prices, delivery time and other conditions. Diversification of buyers and product portfolios could be the way for BiH automotive suppliers to overcome this risk.

There are several technological and market trends in the automotive industry that will significantly affect the global automotive industry in the years to come. The main technological changes relate to electrical, autonomous and connected vehicles, while new market (business model) development involves sharing economy, whereby multiple users share vehicles. Because of these trends, the automotive suppliers' value chain will also undergo significant changes, which represents a chance, but also a serious risk for automotive producers that fail to adjust in time. Owing to these changes, it may be expected that more room for development of new products and solutions will be given to smaller, knowledge based and highly responsive companies which will be able to quickly provide viable solutions to automakers. However, many of the existing automotive suppliers (e.g. those producing parts for internal combustion engines) will need to reconsider their market position prospects and change their production and service portfolios accordingly.

Liberalization of the European labor market represents another serious risk to BiH automotive suppliers. In recent years, an increasing number of skilled employees has sought work opportunities abroad, and the BiH companies have difficulties in securing the necessary workforce. While so far skilled and relatively cheap workforce was a key element of competitiveness for domestic automotive producers, this will not be the case any longer. Companies will need to make serious efforts to secure the required employees and to develop other competitiveness factors, such as new technologies and streamlining of production processes.

Automotive components and products become more complex and big automotive component buyers tend to increase their requirements in terms of product quality and complexity. To this end, the capacity of BiH automotive suppliers in the development of new products represents another serious risk. It is becoming more challenging to secure skilled workforce, while the price of capital for investments into new and advanced technologies for domestic companies is rather high compared to their EU counterparts. All these factors, combined with the previously mentioned technological changes in the automotive industry, press domestic automotive companies to secure their long-term competitiveness through factors other than cheap workforce and energy inputs.

General and less controllable risks involve political and economic stability in BiH and in the region. This is also relevant for the supply of quality workforce to domestic companies. The reasons why young and well-educated people leave the country are twofold. They primarily relate to insecurity and instability in the country and to the lack of decent employment and living means. Should domestic authorities fail to address the issues timely and properly, the business sector itself can do very little to secure the required workforce.

The country's stability of business-related regulations is a risk relevant for all industrial branches, as well as for the automotive suppliers' value chain. Frequent and unpredictable changes in legislation with limited possibility for companies to predict their future costs restrain them from entering into new investments and additional contractual arrangements with buyers. Therefore, one of the key tasks of domestic authorities is to secure a stable and predictable business environment.

Promotion in the target (foreign) markets is an important element to secure additional and more lucrative customers, reducing the dependence on a limited number of buyers. However, the limited extent of preparedness of enterprises for this (business culture, rules in foreign markets, quality standard certificates, business practices, language barriers, etc.) represents another risk. All this has to be taken into the account before any effective presentation to new customers takes place.

As previously elaborated, availability of quality workforce represents a serious, but controllable risk. Serious efforts need to be made concerning improvement of the education system. Many automotive companies already take part in the area of vocational training and they expect support from the education authorities in an effort to upgrade the existing curricula improving practical skills according to the industry's needs.

The risks above should be taken into consideration and properly addressed as a precondition for stable and safe development of the automotive suppliers' value chain.

Connectivity Table: Automotive Suppliers' Value Chain Vs. SDG's

Link with SDGs	Stakeholders	Key material aspects	Strategic objectives	Success factors	Risks	Indicators (input / output)	SDGs targets
Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (also SDG 5)	<ul style="list-style-type: none"> ▶ Automotive VC companies ▶ Line ministries and educational institutions ▶ Training centers 	Employee engagement and development – access to quality workforce (particularly in CNC, 3D modelling, welding)	Improved formal and informal education for youth and adults	Public support in improvement of education system upgrading the existing curricula (practical skills in accordance with the needs of the industry)	<ul style="list-style-type: none"> ▶ Political and economic stability in BiH and in the region ▶ Further quality workforce drain to foreign countries 	<ul style="list-style-type: none"> ▶ Number of activities related to education and training in which companies take part ▶ Percentage of existing employees involved into education and training activities 	<p>4.4 Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship</p> <p>4.c Substantially increase the supply of qualified teachers / trainers, including through international cooperation for teacher training</p>
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (also SDG 9)	<ul style="list-style-type: none"> ▶ Buyers of automotive components ▶ Automotive VC companies ▶ Authorities and donors 	Secure advanced production basis (technology, machines, tools, knowledge)	Improved production basis (equipment, tools, machinery, knowledge)	<ul style="list-style-type: none"> ▶ Public support to improvement of business environment ▶ Access to affordable finance 	<ul style="list-style-type: none"> ▶ Fiscal stability and stability of business-related regulations 	<ul style="list-style-type: none"> ▶ Capital investments of domestic companies into new equipment (machines, tools) ▶ Share of foreign investments (joint ventures) into domestic companies ▶ Percentage of existing employees trained in use of new equipment (machines, tools) 	<p>8.2 Achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors</p> <p>8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage formalization and growth of micro-, small- and medium-sized enterprises including through access to financial services</p> <p>8.6 Substantially reduce the proportion of youth not in employment, education or training</p> <p>8.8 Protect labor rights and promote safe and secure working environments of all workers</p>
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation (also SDG 7 and 13)	<ul style="list-style-type: none"> ▶ Buyers of automotive components ▶ Automotive VC companies ▶ QS & certification institutions ▶ Authorities & donors 	Enable access and secure resources for introduction of relevant QS and certifications (TS 16949, ISO EN 3834 ISO EN 1090, ISO 50001)	Introduced relevant QS and certifications demanded by buyers at target markets	Public support to introduction of QS, innovation and investments in new technologies	<ul style="list-style-type: none"> ▶ Inadequate public and donor financial and technical support 	<ul style="list-style-type: none"> ▶ Number of newly introduced / upgraded (technical and other) QS per company ▶ Share of external (public, donor) financial / technical support to introduction / upgrading of QS 	<p>9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes</p> <p>9.b Support domestic technology development, research and innovation</p>

Link with SDGs	Stakeholders	Key material aspects	Strategic objectives	Success factors	Risks	Indicators (input / output)	SDGs targets
Goal 12 Ensure sustainable consumption and production patterns (also SDG 17)	<ul style="list-style-type: none"> ▶ Automotive VC companies ▶ Suppliers of production inputs 	Access to quality and affordable production inputs	Secured access to quality and affordable production inputs	Willingness of automotive VC companies to cooperate and associate	<ul style="list-style-type: none"> ▶ Domestic and foreign market instabilities 	<ul style="list-style-type: none"> ▶ Percentage of production inputs purchased from domestic suppliers or through own production ▶ Number of scientific and tech activities / projects of domestic universities and institutes involving companies 	<p>12.2 Achieve sustainable management and efficient use of natural resources</p> <p>12.5 Substantially reduce waste generation through prevention, reduction, recycling, and reuse</p> <p>12.a Support developing countries to strengthen their scientific and technological capacities to move towards more sustainable patterns of consumption and production</p>
Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development	<ul style="list-style-type: none"> ▶ Automotive VC companies ▶ Clusters and associations ▶ Buyers of automotive components ▶ Authorities 	<ul style="list-style-type: none"> ▶ Establishment of operational clusters and associations ▶ Proactive marketing and sales approach towards buyers 	Improved inter-company cooperation, trust and capacity to cooperate among BiH companies, and connections with foreign companies	<ul style="list-style-type: none"> ▶ Willingness of automotive VC companies to cooperate ▶ Public support to organized presentation at target markets 	<ul style="list-style-type: none"> ▶ Preparedness for target markets (business culture & rules, QS & certificates, business practices, language barriers, etc.) 	<ul style="list-style-type: none"> ▶ Share of companies collaborating through clusters / associations ▶ Share of companies involved (as suppliers) into international value chains 	<p>17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources</p> <p>17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships</p>

Development of business indicators

Methodological approach

Development of SDG business indicators for the BiH Automotive Sector started with the preparation and implementation of an online survey, which intended to gather data relevant for the identified SDGs. Survey responses were obtained from 9 sector enterprises. In order to validate and discuss the obtained results, three additional meetings were held with representatives of selected companies.

The survey included 16 companies initially selected by the industry expert. The set of criteria used for the selection of companies involved primarily export oriented companies with steady growth, participating in the EU automotive suppliers value chain and employing a minimum of 30 employees. The companies were selected to get an oversight of different BiH automotive sector production and service potentials. The products range from car wheels, seats and interiors, machined auto parts and components for vehicles to development of complete solutions for electrical vehicles.

The survey questions were answered thoroughly and with care by owners and mainly top managerial staff. The industry expert visited 3 companies in order to confirm the answers from the survey. The survey yielded 56% response rate or 9 responses out of 16 companies.

The survey and interviews were based on pre-defined uniform scenarios in order to gather comparable data, taking into account all the specificities from participating SMEs. In general, the survey was used to:

- Identify the level of business engagement in sustainable business practices and collect examples of good practice from the sector. Specifically, to identify best practices which clearly show the link between sustainability and strong financial performance;
- Identify the current level of reporting and which indicators are used, as well as:
- companies' level of ambition / how much data they are willing/able to collect,
- practical implications of data collection.
- Identify companies' capacity gaps/constraints in reporting on their activities/ business processes related to identified SDG priorities and related sustainability activities;
- Formulate and suggest specific indicators based on the findings of this exercise, with a specific objective to improve business and create long term benefits.

In the implementation of survey, the business indicators were identified using the Connectivity Table and Impact Pathway, linking sustainability with financial performance. To decrease the burden on the companies and ensure comparability, the focus was placed on the selection of indicators already present in the existing reporting frameworks.

The selected indicators are aligned with the current sustainability practices of the enterprises of the BiH automotive sector. The results of the survey set the baseline values which enable to track the progress of the selected indicators in the future. They also point out the recommendations covering the necessary actions to improve future performance of the automotive sector companies, simultaneously contributing to the achievement of SDGs.

The proposed set of business indicators is aligned with relevant UN SDG indicators and set to track contribution to sustainable business practices of specific businesses in the BiH automotive sector. Wherever possible, the selected indicators are based on the available business data regularly gathered in the country, thus enabling measurement of the overall SDG alignment of the sector.

The business relevance arising from embracing SDG principles in the BiH automotive sector was presented through already established sustainability practices. Out of several identified cases, one was established to

be the most relevant for its simultaneous contribution to SDGs and improvement of enterprise performance and elaborated in more detail as the best practice case relevant for all the sector enterprises.

Business indicators

A set of business indicators was developed to enable a follow-up of the BiH automotive supplier's value chain companies' involvement into sustainable business practices that contribute to the implementation of SDGs. These (baseline) indicators are thought out so that they enable an individual measurement of sustainable business practices using generally available business data. The indicators cover each SDG of relevance for the BiH automotive companies' sustainable business practices, based on the findings of the desk research and workshop with companies. The indicators were collected from companies through a questionnaire and analyzed.

A set of relevant indicators contributing to an individual measurement of sustainable business practices and financial performance of specific business is outlined in the following table:

Item	Business indicators	(Baseline) values 2018 ¹²	Description of indicators	Target 2030
General business indicators	<ul style="list-style-type: none"> ▷ sales ▷ exports ▷ number of employees 	<ul style="list-style-type: none"> ▷ 20,84 mil KM avg. per company ▷ 19.53 mil KM avg. (94% of sales) ▷ 227 employees avg. per company (28% women) 	General business indicators relate to yearly volume of sales and exports and to number of employees.	<ul style="list-style-type: none"> ▷ 30 mil KM per company ▷ 95% of sales ▷ 250 employees per company (35% women)
SDG 4	<ul style="list-style-type: none"> ▷ Basic indicator: number of trainings / educations of employees in 2018 (no.) ▷ Advanced indicator: number of training days / hours per employee ▷ share of employees (in %) who took part in training / education sessions in 2018 (%) 	<ul style="list-style-type: none"> ▷ avg. 9 per company (2-40) ▷ baseline n/a (additional survey required) ▷ 30% (10-100%) 	This group of indicators is relevant for companies' involvement into education and lifelong learning activities. They track number of activities related to education and training in which companies take part, and percentage of employees involved in education and training activities.	<ul style="list-style-type: none"> ▷ Basic: avg. 15 per company ▷ Advanced: TBD based on baseline ▷ 40% employees take part in training / education
SDG 8	<ul style="list-style-type: none"> ▷ investment in new equipment / technologies supported by foreign capital (joint venture, parent company, or similar) (5) ▷ share of employees (in %) trained in the use of newly purchased technologies in 2018 (%) 	<ul style="list-style-type: none"> ▷ 44% ▷ 14% (3-30%) 	These indicators measure contribution to promotion of sustained, inclusive and sustainable economic growth, full and productive employment and decent work. They measure capital investments in new equipment / technologies and the share of foreign investments (joint ventures), as well as the percentage of employees trained in the use of new equipment (machines, tools).	<ul style="list-style-type: none"> ▷ 50% of investments supported by foreign capital ▷ 20% of employees trained in the use of new equipment

12 Companies involved in the survey: Saraj-komerc, Donji Vakuf – Uskoplje; Eastcode, Banja Luka; Allow Wheels, Jajce; Mahle, Laktasi; Sim-Technik, Kotor Varos; Pobjeda, Tesanj; Mreza-Network, Derventa; Zupcanik, Tesanj; Prevent CEE, Sarajevo

Item	Business indicators	(Baseline) values 2018 ¹²	Description of indicators	Target 2030
SDG 9	▷ number of new quality standards / certificates introduced / upgraded in 2018 (no.)	▷ 6 introduced (0,66 per company) ▷ 25 upgraded (2,78 per company)	Indicators in this group are relevant to companies' contribution to building resilient infrastructure, promotion of inclusive and sustainable industrialization and fostering of innovation. Through introduction of QS/ certifications, companies agree to follow-up certain business practices. Indicators are set to follow the number of newly introduced / upgraded (technical and other) QS with the share of external (public, donor) financial and technical support.	▷ 1 quality standard introduced per company yearly ▷ 3 quality standards upgraded per company yearly
	▷ share of external support (financial or technical) received from donors or authorities for QS / certificates in the volume of total cost in 2018 (%)	▷ 11,11% (1 company)		▷ 25%
SDG 12	▷ share of production inputs (in % of total value) purchased from domestic suppliers of supplied through your own production of production inputs in 2018 (%)	▷ 38% (0-90%)	The indicators track companies' contribution to ensuring sustainable consumption and production patterns. Bigger involvement of domestic suppliers and greater companies' participation in R&D activities ensure more sustainable resource management. These indicators are set to follow percentage of production inputs purchased from domestic suppliers or through own production, as well as the companies' involvement into scientific and tech activities and projects.	▷ 45% of production inputs purchased domestically or supplied through own production
	▷ share of companies collaborating with scientific / research institutions (such as institutes, universities) in implementation of R&D or innovation projects or activities 2018 (%) ▷ number of institutions (no.) ▷ number of projects / activities (no.)	▷ 66,7% collaborates with R&D institutions ▷ 9 (1-3) ▷ 8 (1-3)		▷ 80% collaborates with R&D institutions

Item	Business indicators	(Baseline) values 2018 ¹²	Description of indicators	Target 2030
SDG 17	▷ % of companies collaborating through cluster or other forms of associations	▷ 55%	The indicators are set to follow companies' contribution to strengthening the means of implementation and revitalization of the global partnership for sustainable development. Herewith, we track companies' collaboration through clusters / associations, as well their involvement in international value chains.	▷ 80% collaborate through clusters and other associations
	▷ number of clusters or other forms of company associations in which company participates (no)	▷ 1,33 avg. per company		▷ Companies participate in 2 clusters/ associations on average
	▷ Involvement into international automotive industry suppliers' value chain (%)	▷ 67%		▷ 80% involved in international automotive industry suppliers' value chain

The year 2018 represents a baseline year to start with the follow-up of companies' sustainable business practices. Relevant data should be gathered and processed once a year to enable tracking of their SDGs progress in time.

The above listed indicators were prioritized on the basis of their:

1. expected impact to companies' business performance;
2. contribution to the achievement of selected SDGs;
3. availability and ease of collection of data needed for their measurement.

The following indicators were selected to track automotive companies' contribution to the achievement of the SDGs:

- Share of employees participating in training and education activities (relevant for SDG 4);
- Share of employees trained in the use of new technologies (relevance for SDG 8);
- Share of companies collaborating with scientific / research institutions in implementation of R&D or innovation projects or activities (relevance for SDG 12);
- Number of clusters or other forms of company associations in which a company participates (relevance to SDG 17).

Priority indicators are further elaborated in Annex 7.

Level of business engagement into SDG implementation

The BiH automotive suppliers' value chain companies implement SDG practices. The level of their engagement mostly correlates with the size and strength of a company, whereby bigger companies are more intensively involved into SDGs-compatible corporate socially responsible (CSR) practices / activities. The SDGs-relevant engagement mainly includes actions related to: education and training, energy efficiency and improvement of production basis through purchase of new equipment, obtainment of quality standards or implementation of business improvements, which in a wider sense may be considered innovative activities. However, in the implementation of SDGs-related activities, there is a limited collaboration with outside actors (public, private, institutions, associations, other business, etc.). The primary motive is the improvement of companies' own competitive position, while wider benefits are not primarily considered.

The level of engagement into SDG-related practices was initially assessed through a workshop and a questionnaire and widened through interviews with the four selected companies¹³. The key findings about the level of business engagement in SDG-related sustainable business practices is presented in the following table.

SDGs	Level of business engagement
General notes	<p>BiH automotive companies conduct and use CSR activities mainly as promotional tools. There is a clear connection between automotive companies' CSR -related activities and their contribution to implementation of SDGs.</p> <p>Some foreign buyers oblige BiH automotive suppliers to follow certain SDG-compatible sustainability practices, while companies such as Prevent CEE, follow practices arising from the UN Global Compact initiative, in the areas of anticorruption, environmental actions, and human rights and freedoms.</p>
SDG 4	Companies are interested in training and education to secure required employees for the skills relevant for their production, and almost all the companies are active in this area, providing internal education opportunities and collaborating with educational institutions such as high schools and universities. The positive effect of this engagement has a wider, direct and indirect, effect on the society.
SDG 8	Automotive suppliers' value chain companies represent the most technologically advanced group of BiH companies. They regularly invest into purchase of new technologies and education of employees in the use of these technologies.
SDG 9	Companies invest into quality standards and certificates which, besides the production efficiency, is in most of the cases a requirement to reach the buyers in the target markets.
SDG 12	There is some extent of involvement in the activities related to energy efficiency and innovative activities. While energy efficiency measures normally pay off, there is no system support to companies in their innovative activities, and collaboration with external counterparts is rather weak.
SDG 17	Formally, all the automotive suppliers' values chain companies are members of the BiH chamber system. The majority of the companies consider themselves a part of the global automotive value chain. However, involvement in any other forms of collaboration, such as clusters and associations, rarely pays off. Only one company has reported collaboration with smaller companies to whom it outsources work when its capacities are fully occupied.
Other	In regard to contribution to implementation of other SDGs, some companies apply employment without discrimination on any basis and are also involved in various community development actions, such as support and equipping of local kindergartens and schools.

¹³ The selected companies are:

- Prevent CEE, Sarajevo – the biggest automotive producer in BiH with potential to become a system integrator,
- Alloy Wheels, Jajce – a company using advanced technologies in production of aluminum wheels,
- EastCode, Banjaluka – an ICT company becoming involved in development of electric power systems for vehicles as a new player in the automotive market.
- Sim-Technik, Kotor Varos – a company providing a wide portfolio of metal and plastics processing technologies

Examples of good practices

Although the BiH automotive suppliers value chain companies in most cases are not directly aware of their contribution to the SDGs implementation, there is still a number of relevant good practices in this regard. The good practices were initially identified through a workshop and more details were sought through a questionnaire. The most interesting and relevant examples, presented in the table, were additionally assessed during the company visits and through telephone conversation with responsible persons in companies.

SDGs	Good practices
SDG 4	<p>Saraj-komerc, Gornji Vakuf – Uskoplje</p> <ul style="list-style-type: none"> ▷ contract with vocational education school on training of pupils ▷ education of existing employees for more complex occupations <p>Mahle, Laktasi</p> <ul style="list-style-type: none"> ▷ training of students in the enterprise in collaboration with faculty providing practical knowledge to students and best employees to enterprise <p>Sim-Technik, Kotor Varos</p> <ul style="list-style-type: none"> ▷ training of pupils in collaboration with vocational education school ▷ provision of scholarships to students of mechanical engineering <p>Pobjeda, Tesanj</p> <ul style="list-style-type: none"> ▷ internal education of all employees with a person in the company responsible for internal education ▷ middle management (sales and marketing personnel) attends relevant educations & trainings <p>Prevent CEE, Sarajevo</p> <ul style="list-style-type: none"> ▷ establishment of foundation “Hastor” providing scholarships for students as potential employees and start-up academy <p>Alloy Wheels, Jajce</p> <ul style="list-style-type: none"> ▷ external education for the most advanced employees
SDG 8	<p>Alloy Wheels, Jajce</p> <ul style="list-style-type: none"> ▷ Permanent internal education for all employees in the use of modern technologies ▷ Employment without discrimination
SDG 9	<p>Saraj-komerc, Gornji Vakuf – Uskoplje; Alloy Wheels, Jajce; Sim-Technik, Kotor Varos; Mreza-Network, Derventa</p> <ul style="list-style-type: none"> ▷ Permanent investments in new technologies and modernization of existing facilities
SDG 12	<p>Alloy Wheels, Jajce</p> <ul style="list-style-type: none"> ▷ provision of stimulus for employees for innovations and improvement of production processes ▷ reduction of emissions and energy consumption more environmentally acceptable technologies (such as gas instead of oil) and energy efficiency solutions (heating of premises) <p>Eastcode, Banjaluka</p> <ul style="list-style-type: none"> ▷ substitution of oil/petrol with LPG in service vehicles with reduction of energy expenditures and emissions
SDG 17	<p>Saraj-komerc, Gornji Vakuf – Uskoplje</p> <ul style="list-style-type: none"> ▷ long-term trust and collaboration with buyers in product development and introduction of new technologies <p>Sim-Technik, Kotor Varos</p> <ul style="list-style-type: none"> ▷ Outsourcing of work to several smaller processors when the capacities of company are fully occupied
Relevance to other SDGs	<ul style="list-style-type: none"> ▷ Work in local communities supporting and equipping kindergartens and schools ▷ Participation in community actions supporting sports and culture ▷ Increase of share of female employees ▷ Follow-up of environmental standards

The most advanced business sustainability practices identified in the automotive sector are those of Company Prevent CEE. These practices are elaborated as a case study.

CASE STUDY – PREVENT

Brief info about the company

With its 6,500 employees and 650 million KM (332 mil €) of exports in 2018, the Prevent CEE Sarajevo company is the biggest single automotive supplier from Bosnia and Herzegovina mainly exporting to EU (Germany, Spain) and Turkey. It supplies Ford, Nissan, Fiat, Aston Martin, Volvo, Land Rover, Jaguar, BMW, Opel, Peugeot with car seats and other auto parts. It deals with metal processing (CNC and casting), extrusion of plastics, CNC cutting and sawing of leather and fabrics, etc. Prevent CEE possesses ISO 9001, Automotive QMS – IATF 16949, ISO 14001 and OHSAS quality standards.

SDGs contribution

The Prevent company makes serious efforts in activities that are highly relevant for their contribution to the achievement of several SDGs. The key areas of SDG-relevant interventions are highlighted below.

In the area of education (SDG 4), the Prevent company supports practical (vocational) education in schools, provides scholarships to pupils and students through its “Hastor” Foundation and leads “Takt” Academy primarily dedicated to education of management personnel. The company also employs categories of persons of limited employability, providing prequalification schemes. For its own needs, Prevent measures satisfaction of its employees and follows management efficiency. These activities are relevant for the achievement of SDG 8 (sustained, inclusive and sustainable economic growth, full and productive employment and decent work). Prevent establishes new facilities for production of leather, textile (fabrics) and metal processing, enabling vertical integration of its functions. Thus, it contributes to substitution of exports with own production, which is highly relevant for SDG 9 (resilient infrastructure, and inclusive and sustainable industrialization). In the area of sustainable production and consumption (SDG 12), Prevent invests into recycling and energy efficiency measures, in an effort to establish zero waste strategy. Finally, with regard to SDG 17 (global partnerships and sustainable development), Prevent maintains a wide network of collaborators, representing a link for both new investors and suppliers.

The activities of “Hastor” Foundation, which operates under the umbrella of the Prevent company, illustrate companies’ contribution to the achievement of SDGs, particularly Goal 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Issues and opportunities

Due to deficiencies in the education system, lack of practical education skills and outflow of the existing skilled employees abroad, securing skilled workforce represents an issue for many technologically advanced companies in BiH. In many situations, companies are required to educate the workforce on their own, investing significant resources and taking risks that these employees might seek for better employment elsewhere. In recent years, this problem has become more significant, making companies compete for good employees in the local labor market. The lack of skilled workforce also hinders companies’ investment plans and discourages investments and investors in many cases. For these reasons, many companies decide to make significant investments to satisfy the growing need for skilled labor force. The Prevent CEE company from Sarajevo, as a leader in BiH automotive industry, has already undertaken steps in this area that represent a good practice, potentially replicable by other companies as well.

Description of intervention

The Hastor Foundation (est. 2006) is a charitable, non-profit organization that supports and empowers children and young people in an effort to create self-aware leaders in their communities. The mission of the Foundation is to gather available financial and human resources and make them more equitable and more effective for the development of education. The idea and the goal of the Foundation is to provide an opportunity for young people to participate in the development of their local communities and development of their own resources through education and volunteer work. The Foundation has successful collaboration with many schools, governmental and non-governmental organizations, as well as private companies, in more than 120 BiH municipalities. It trains young, educated and ambitious people to work with newest technologies, and improves the scholarship holders' specific knowledge and skills to be recognizable in the contemporary labor market.

Effects and sustainability of intervention

During its 13 years of operation, the Hastor Foundation has provided scholarships to 196 holders, supported 722 honor students and provided 300,000 volunteer hours in 120 local communities. Although Prevent CEE has not evaluated direct financial effectiveness of this intervention, representatives of the Company believe it has contributed significantly to promotion and good public image of the company, as well as to securing skilled workforce. Many of the students who enjoyed the scholarships have found employment with the Company after they finished their education. The key benefit for the Company was their better preparedness for future work, since they had proper education, volunteering experience and already knew the company for which they were about to start work.

There are multiple benefits for various counterparts. Besides being relevant as quality workforce for the companies, well-educated and trained young people are valuable for the communities they live in. Additionally, the local communities benefit from the volunteer work and performed community services. The sum of the above positive effects justifies the established "Hastor" Foundation.

Replication possibilities to other enterprises

The Prevent CEE company has shown the path for many other companies on how certain issues (particularly the issue of skilled workforce) can be solved for own benefit, but also for the benefit of the wider community. The "Hastor" Foundation has already justified its existence and become a place where other companies participate in an effort to solve workforce issues. This and similar collaboration platforms may be used as a tool by many other companies to secure the skilled workforce, but also to solve other common enterprise issues for the sector.

Link between companies' sustainability practices and financial performance

Automotive companies represent the most progressive part of the BiH enterprise sector in terms of application of new technologies and advanced production processes. The volume of their sales and exports is directly linked to their market competitiveness, whereby applied business sustainability practices play significant role. These practices involving workforce development, application of new technologies, purchase of advanced equipment, implementation of quality standards and collaboration with relevant institutions in the implementation of innovations and R&D projects help automotive companies to stay relevant and competitive in the market. In turn, this increases their sales and exports and boosts their financial performance.

Additional business sustainability practices, which improve financial performance of the automotive companies, involve vertical integration, whereby companies extend their production range to manufacturing of own production inputs, where they seek for domestic suppliers of production inputs or outsource certain activities to other local companies. Such practices contribute to financial performance through local supply of quality production inputs, enabling faster and less costly supplies and improved stock management. However, these practices are still relatively rare and only a limited number of the most advanced BiH companies have achieved results in this area.

The next significant sustainability practice relates to companies' mutual collaboration and to their involvement in international value chains. In the European context, the BiH automotive companies, with few exceptions, are small in size and strength. Therefore, their purchase and negotiating power is relatively weak; they are dependent on small numbers of suppliers and buyers, while their limited production and technological basis limit their competitive capacities. This shows the need for collaboration through clusters and associations even more. Although several BiH automotive companies state that there is a link between involvement in sustainable development practices and their financial performance, no company can clearly measure cost benefits of such actions. However, the interviewed companies, without much doubt, state that engagement towards contribution to SDGs implementation pays off.¹⁴ Some of the examples follow.

Through its sustainability practices related to education, the Prevent CEE company secures quality workforce, particularly the middle management. Although there is no clear measurement of the financial benefits of these actions, according to the opinion of a company representative, new employees who undergo start-up academy and education before they start to work for the company perform much better once they become employees. Prevent CEE also believes that their actions contribute to good relations with local communities and increase mutual trust. Prevent also considers that some of its sustainability practices and CSR actions are valued by financial institutions and banks (IBRD, WB, Austrian Development Bank) helping them to secure relevant funding. Last but not least, foreign buyers become increasingly interested in sustainable practices aligned with SDGs, and companies which conduct these practices have benefits when entering business arrangements with such buyers.

Representatives of the Allow Wheels company from Jajce also trust that there is a link between sustainable business practices and financial performance. Through their employee education schemes, they secure well-trained employees who perform better and faster, being more efficient and making less waste, which in turn brings financial benefits through savings. Introduction of new technologies also directly affects financial performance, enabling faster, better and more secure and environmentally-friendly production, with lower energy expenditures.

Responsible persons from the ICT company EastCode Banjaluka agree that well thought-out actions aligned with SDGs may produce savings and therefore financial benefits. In line with this, they have introduced TNG engines into their service vehicles, lowering fuel consumption costs by ca 30-40%. On the trail of this good practice, the next activity involves the development of an electrical vehicle combining the existing technologies

¹⁴ The same conclusion already mentioned for wood and furniture sector applies here. It is evident that the effect of sustainability practices is hard to measure in the short run if we take into account all factors that may have effect on financial performance of companies. Hence, it is necessary to have longer data series with possibility to use some econometric modelling in order to „capture“ the real link between companies' sustainability practices and financial performance.

available in the market. While the first vehicles will be developed and tested for own needs, the company does not hide its ambition to establish commercially viable solutions of electrical vehicles for the needs of other companies.

Capacity gaps/constraints

There is a number of constraints for business entities for engaging in activities that align business processes with identified SDG priorities. Neither BiH strategies nor local legal framework provide sufficient stimulus to companies for wider engagement in the area of sustainable development practices. The key gaps relate to workforce, support to innovative activities, inefficiency of local authorities, weak infrastructure, and limited inter-company collaboration.

Securing skilled workforce becomes an issue for many technologically advanced companies in BiH, due to deficiencies in the education system, lack of practical education skills and large outflow of the existing skilled employees abroad. In many situations, companies are forced to educate the workforce investing significant resources and still taking a risk that these employees might seek better employment elsewhere. In recent years, this problem has become more significant, causing companies to compete for good employees in the local labor markets. Furthermore, the lack of skilled workforce hinders companies' investment plans and discourages investments and investors in many cases. At the same time, there is a big burden to companies' budgets in terms of payment of tax and contributions to employee wages. Responsible governments, line ministries and educational authorities should be able to secure the adequate workforce to companies in turn for relatively high fees and contributions they are obliged to pay to public budgets.

The same applies to support to companies' innovative activities needed for production of higher value added products. While some limited public and donor financial support is provided for introduction of quality standards, as well as for purchase of production equipment, the support to innovative activities is almost non-existent. Universities and institutes established with a goal to provide skilled workforce and to improve production processes can hardly follow companies' needs in these areas.

A number of companies complain about slowness and inefficiency of local authorities, such as in the provision of construction permits, which significantly hinders new investment ambitions and undertakings. Also, there are significant infrastructural gaps, from basic roads network and transportation facilities to energy infrastructure, such as gas pipelines, and even instability in supply of electric power, which make the production more expensive and less competitive.

Probably the biggest challenge relates to improvement of inter-company connections and collaboration, in order to achieve higher purchase and sales power and improve sector competitiveness. The trust between the companies associated with their capacity to cooperate productively represents a critical factor. With better collaboration in the value chain, the companies would be able to undertake more serious jobs and projects and to execute them more effectively.

Finally, companies' CSR activities are hardly recognized by the authorities through certain schemes that may stimulate wider enterprise involvement in such actions. Consequently, companies apply such actions either as their marketing tools or in cases when their application can help them to overcome some gaps (such as in the area of education to secure skilled employees). In the area of environmental protection, companies are obliged to follow certain environmental standards, while authorities collect fees for environmental permits. Should they not follow these standards, companies are faced with penalties and not with incentives to do it.

Recommendations and specific actions

Based on previous analysis, it is possible to single out several recommendations for more productive engagement of the BiH automotive suppliers' value chain companies' into implementation of sustainable business practices. Some of these actions will require external (donor, public or combined) support in an effort to provide stimulus to enterprises to become more SDG engaged.

Recommendations for development of automotive suppliers' value chain in BiH include:

- **Improvement of workforce**
 - cooperation with educational institutions (secondary schools, faculties, universities) in improving formal and informal education of youth and adults;
 - defining needs for new knowledge and skills (combining information on new technologies with information on new requirements from customers);
 - cooperation in creating, improving and implementing education and training programs aligned with the identified needs (in accordance with customers' requirements and new market trends);
 - improvement of in-house training to increase the workforce quality attractiveness of the jobs in companies
- **Strengthening of production basis**
 - follow-up technology and market changes and timely introduction of new equipment, tools machinery and technologies;
 - ensuring long-term competitiveness based on quality of products, competitive lead time, and by offering competitive working conditions to employees and thus preventing their leaving;
 - rational use of resources, achieving lower levels of pollution and higher energy efficiency by the use of new and more environment-friendly technologies;
- **Introduction of relevant quality standards and certifications**
 - observance of quality standards (QS) required by buyers in the target markets;
 - development of internal processes and capacities relevant for introduction of QS and improving basis to remain relevant in the EU and other demanding markets;
- **Cooperation and partnerships**
 - cooperation with faculties and research institutions in the improvement of existing and development of new products and introduction of new technologies, by participation in models such as triple helix;
 - improvement of inter-company cooperation, trust and capacity to cooperate, to enable sharing of knowledge, experiences and technological capacities, thus increasing the level of use of competitiveness and sustainability of business operations;
 - promote cooperation between companies in the value chain as an approach to strengthening long-term competitiveness and negotiation position of BiH companies, supporting cluster and similar cooperation-focused initiatives;
 - active monitoring of market developments enabling automotive companies to react timely on changes in demand by modifying and improving existing and introducing new products/services;
 - improvement of promotion and sales approach, strengthening contacts with target markets, finding new customers, ensuring sustainability of business operations in the long-term and reducing dependence on limited number of buyers, thus reducing business risks;

- **Gender actions**

- promote gender equality as approach to strengthening and development of human resources in BiH companies.
- ensure equal participation of all in education and employment

In addition, the companies would benefit from exchange of best practices on how other (domestic and foreign) automotive industry companies are involved into SDGs implementation. These best practices could be exchanged in a form of study tours or through organization of relevant conferences. Education of companies' leadership in the use of sustainable development practices is an important step for a more productive contribution to the implementation of SDGs.

Authorities should follow companies' needs in the areas of education, infrastructural development and efficiency of public services. There are already good regional practices in the area of improvement of local business environment, such as the SEE Business Friendly Certificate. SEE BFC involves many elements relevant for removal of gaps standing in the way of wider company engagement in SDG implementation. This and similar initiatives should be recognized and implemented in the BiH local communities.

There is an interest in learning from other technologically advanced companies. Such learning platforms could help companies to increase mutual trust and become potentially involved into new forms of collaboration. Exchange of experiences could also involve implementation of sustainable business practices.

Conclusions

The Sustainability Business Report was prepared in order to offer insight into the best sustainability practices in BiH that allow companies to engage more proactively in the sustainable business in the long run. The report depicts all segments/tasks that were done in order to prepare first assessment of business compliance with the SDG concept. It is evident that that current non-financial reporting in companies in BiH is very poor and that this report represents a significant step towards changing this by identifying business indicators to help track progress of private sector actors in achieving SDGs.

Like all other businesses, enterprises in the furniture and wood and automotive suppliers' value chain are primarily concentrated to their business operations and not on the implementation of SDGs, which are not in their direct focus. Their SDG and CSR –related actions are primarily guided with the need to improve their market performance, operational capacities and general business operations in order to stay competitive, which in turn results with better financial performance, while contribution to SDGs is still of secondary importance.

In order to increase impact on the SDGs, it is evident that all stakeholders/actors have to align their policies in new direction. For example, government institutions such as the BiH Ministry of foreign trade and economic relations or entity and cantonal ministries in charge for industry and/or forestry should conduct policy analysis in order to see if there are things that need to be introduced compulsory through law and regulation or they can just stimulate some segments through subsidies in order to provide additional stimulus to companies from furniture and automotive parts sector to have bigger impact on SDGs through their value chains. For example, it is evident that greater focus of the government and its institutions should be on increasing number of companies that collaborate with science / research institutions (such as institutes or universities) in implementation of R&D or innovation projects/activities subsidising some specific programmes in this area. The role of government and related ministries is also inevitable when talking about measurement and tracking the impact of business operations on SDGs. The government need to bring decision whether these impact indicators should be compulsory measured by companies or government should do it autonomously.

It is also evident that the success of the institutionalisation of the concept and its further promotion will depend on level of effort of international organisations such as the UNDP who has over the last years worked on promoting and introducing this concept in BiH. The UNDP should continue with its role to get the all other actors, moving toward greater participation in order to increase impact on the SDGs, in particular to continue strongly promoting the role of the private sector in the implementation of SDGs. Their role is seen in organising a platform for further discussions as well as launching new programmes that can tackle some specific problems within areas that were identified as priorities for furniture and automotive parts sectors (such as support in creation of business clusters).

Also, relevant stakeholders for further promotion of the concept in furniture and automotive parts sectors are seen within the sectoral organisations such as chambers of commerce, clusters or development agencies who have role in terms of bringing actors together and setting targets plus sharing best practices and helping those who are ahead to share knowledge and expertise with those who are behind.

Finally, individual companies are the most important actors who have to (re)consider their business strategies and priorities when looking at their contribution and impact on the SDGs. The „Mapping of the Sustainable Development Goals (SDGs) against value chains in furniture and automotive parts sectors in Bosnia and Herzegovina“ has shown several best sustainability practices in BiH that allow companies to engage more proactively in the sustainable business in the long run.

Several actions have been identified that may be undertaken to improve SDGs understanding among enterprises and get them more involved in implementation of SDGs business policies, as described above:

- More active approach to markets, especially those in developed countries,
- Improvement of existing and development of new products,
- Technology improvements and investment in R&D,

- Improvement of quality of labor through education and training,
- Development of various types of cooperation and partnerships.

Above-mentioned initiatives will improve production from points of view of environment friendliness, attractiveness of companies for employees, capacities of companies and research and education institutions, thus creating basis for long-term competitiveness and development of companies, contributing at the same time to achievement of respective SDGs.

Finally, it should be noted that this Assignment was the first venture of this kind undertaken in BiH or even wider in the Western Balkans region. From the beginning of the work, it was evident that BiH struggles with a lack of credible and disaggregated data, as well as indicators along the development pathway. In line with that, the report has tried to define a set of business indicators that will be easy to follow in the next period in order to capture companies influence and contribution to achieving SDGs.

Annex 1 – Connectivity table (model)

[illegible]

Annex 2 - Relevance of SDGs for the Furniture and Wood Value Chain

Sustainable Development Goals	Relevance for Furniture and Wood Value Chain	WG opinion
Goal 1 End poverty in all its forms everywhere	No direct relevance	7.
Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture	No direct relevance	8.
Goal 3 Ensure healthy lives and promote well-being for all at all ages	No direct relevance	6.
Goal 4 Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	Highly relevant, since participants in the furniture and wood value chain are interested in high quality workforce and can contribute to its development	1.
Goal 5 Achieve gender equality and empower all women and girls	Partially relevant, through employment of women and their participation in managing structures of enterprises	5.
Goal 6 Ensure availability and sustainable management of water and sanitation for all	Partially relevant, because healthy and preserved forests provide sustainable and clean drinking water supplies	4.
Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all	Partially relevant through good enterprise energy management practices	4.
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Fully relevant, since enterprises significantly contribute to economic growth, employment and decent work	2.
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Highly relevant since enterprises can influence the pace of infrastructure and industrialization and are a driver of innovation. Old and outdated equipment influences stagnation in the overall sector development which reduces global competitiveness of the sector, which correlates with depletion of resources	1.
Goal 10 Reduce inequality within and among countries	Partially relevant - through development of the furniture sector and propagation of brand development this value chain will provide better positioning on a global furniture market, thus evading the slave and raw material supplier status.	5.
Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable	No significant relevance	6.
Goal 12 Ensure sustainable consumption and production patterns	Fully relevant since majority of raw materials come from forests that need proper management and protection to provide sustainable production and consequent consumption	2.

Goal 13 Take urgent action to combat climate change and its impacts	<p>Fully relevant: The furniture industry, like many other manufacturing industries, generates carbon emissions. Carbon embedded in the materials and technological processes used for manufacturing furniture products are the major contributors to the carbon footprint.</p> <p>Therefore, reducing the quantity of materials used in a product or selecting lower impact (environmentally friendly) materials can considerably reduce the carbon footprint of furniture products.</p>	3.
Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development	No direct relevance	6.
Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Highly relevant due to the value chain's need to maintain a steady supply of wood, where forest management is the main task. Only certified forests provide proper sustainability patterns if enforced in a timely and proper manner.	1.
Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	No direct relevance	6.
Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development	Highly relevant since furniture and wood sector enterprises need to participate in local and international networks (value chains) to unlock their potentials and must adjust their processes to conform to EU and other globally recognized standards.	2.

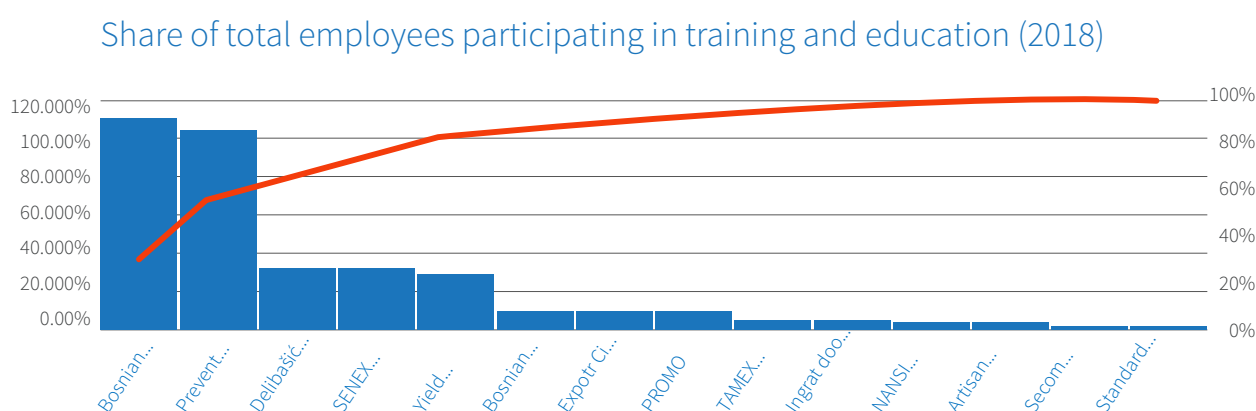
Annex 3– Summary of the collected results (Furniture and Wood sector)

Item	Business indicators
General business indicators	→ Employees no. - Total number of employees among surveyed companies in 2018 has increased by 10% in comparison to previous year. 76.47% (13) of companies had an average increase by 11.09%, while 11.76% (2) companies had an average decrease by 10.53%. Employment increase in 2018 has increased number of female employees by 31% in comparison to 2017.
SDG 4	<p>→ Number of trainings / educations of employees in 2018 (no.) - 94% of surveyed companies organizes and/or participates in training / educations of employees. In average, one employee participates at 1 education on yearly basis.</p> <p>→ Share of employees (in %) who took part in training / education sessions in 2018 (%) - In average 37% of employees, participate in training / education sessions.</p>
SDG 8	<p>→ investment in new equipment / technologies supported by foreign capital (joint venture, parent company, or similar) - 76% of surveyed companies had invested in new equipment / technologies but only 11.76% of companies were supported by foreign capital (EBRD and GIZ)</p> <p>→ share of employees (in %) trained in the use of newly purchased technologies in 2018 (%) - On average 16% of employees are trained in the use of newly purchased technologies</p>
SDG 6	<p>→ How much in average is water spent in production in one year (in m3) – 70.6% of surveyed companies have information about water spending in production, and they spend in average 1822 m3.</p> <p>→ Is wastewater recycled and if yes in what percentage? - None of the surveyed companies recycles wastewaters.</p>
SDG 9	<p>→ No. of new quality standards / certificates introduced / upgraded in 2018 (no.) – total number of certificates that was new / renewed in 2018 was 32 where each company that introduced / renewed in average 2 to 3 certificates. Largest share among certificates takes FSC which is owned by 76.47% (13) of surveyed companies followed by ISO 9001 owned by 58.82% (10) of companies.</p> <p>→ Share of external support (financial or technical) received from donors or authorities for QS / certificates in the volume of total cost in 2018 (%) – External support from donors was received by 17.64% (3) of surveyed companies. Support for certification provided from Federal Ministry and ZeDo Canton Ministry.</p>
SDG 12	<p>→ Share of production inputs (in % of total value) purchased from domestic suppliers or supplied through your own production of production inputs in 2018 (%) – In average percent of production inputs from domestic suppliers in total production is 71%.</p> <p>→ collaboration with scientific / research institutions (such as institutes, universities) in implementation of R&D or innovation projects or activities throughout 2018</p> <ul style="list-style-type: none"> ▷ no. of institutions (no.) ▷ no of projects / activities (no.) <p>Total number of activities related to R&D or innovation projects in realized in 2018 was 61. Companies in average participated at 4 activities in year, while only 11.67% (2) companies did not participate at any activities.</p>
SDG 13	→ Use of slogans or recommendations for climate protection in ads or promotional materials – 41.18% of surveyed companies use slogans or some form of recommendation for climate protection.

Item	Business indicators
SDG 15	<ul style="list-style-type: none"> → Number of cases when customer requested relevant standards or certificates – Number of cases among surveyed companies varies between 4 times in average up to each customer requesting. Companies exporting to EU markets are required to have FSC certificate (SGS-COC-010738, SGS-COC-008049 and FSC-C101893). Among most common certificate requests is also ISO 9001. For markets like Switzerland customers request for documentation defined by REACH (EC) No. 10907/2006 while UK requests for CH4560-P156 and CRIB 5 standard (for sponge and chair covers). → Percent of wood in total final production with FSC or PEFC or similar certificates in 2018 – Surveyed companies in 2018 have in average used 52% of certified wood in final production. 23.52% (4) of surveyed companies uses 100% of certified wood. → Number of cases when denied the required quantity of wood from public forestry departments – 23.52% (4) of surveyed companies does not procure at all wood from forestry departments, and only one company never got denied the required quantity. It was noted in survey answers that wood is obtained from forestry departments through bidding and it is location based (procurement from Cantonal departments).
SDG 17	<ul style="list-style-type: none"> → Number of clusters or other forms of company associations in which company participates (no.) - 58.82% (10) of surveyed companies is participating in average at 1 to 2 form of association (wood cluster, wood industry associations or internal cooperation inside group). → Involvement into international wood industry suppliers' value chain (yes / no) – 29.41% (5) of surveyed companies is involved with international value chain, where only one company is formally involved through association.

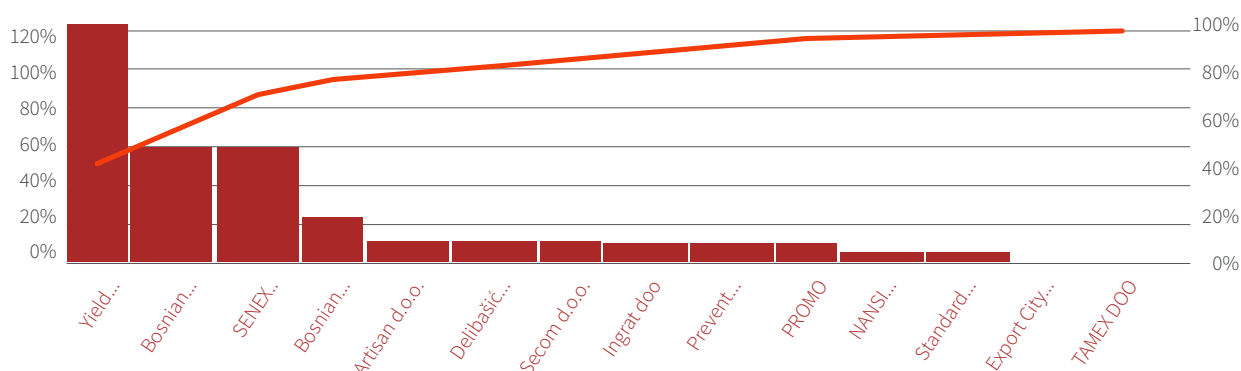
Annex 4– Description of selected priority indicators (Furniture and Wood sector)

Indicator	Share of company employees participating in training and education activities (relevant for SDG 4)
Unit	% (of total number of employees), yearly basis
Short description	This indicator is relevant for companies' involvement into education and lifelong learning activities. It tracks percentage of employees involved into education and training activities.
Purpose	This business indicator is derived from the SDG 4 (4.4 Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship). It is important since technical and vocational skills need to constantly improved.
Baseline value	45% (2018)
Limitations / Challenges	The indicator does not follow the content of relevant training and education activities in which companies participate. A more detailed survey would help to obtain relevant information on the training areas and detailed characteristics. Proper HR management practices with mandatory employee profile/record that is updated on an annual basis would solve the issue – employees should be responsible for updates.
Data sources	Annual company survey / training and education institutions reports



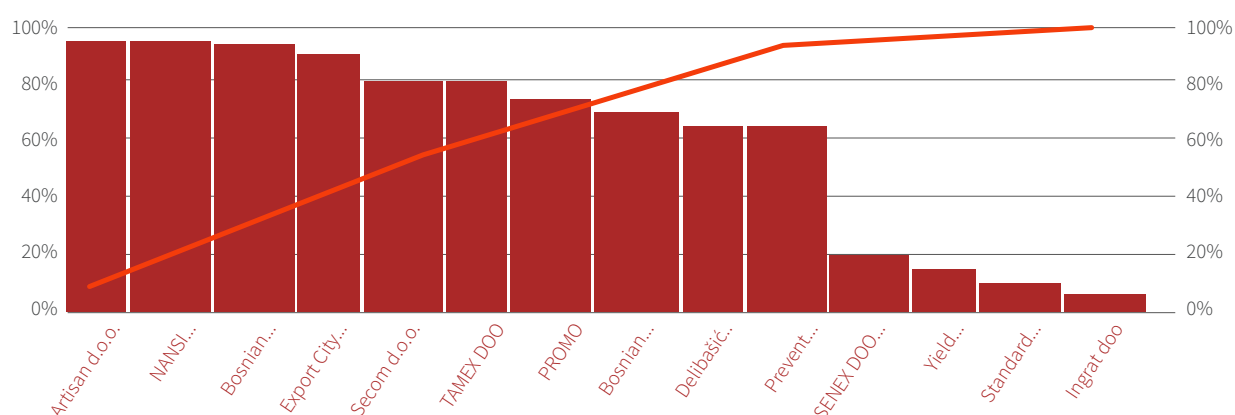
Indicator	Share of company employees trained in the use of new technologies (relevant for SDG 8)
Unit	% (of total number of employees), yearly basis
Short description	This indicator measures contribution to promotion of sustained, inclusive and sustainable economic growth, full and productive employment and decent work. It measures the percentage of employees trained in the use of new technologies and equipment (machines, tools).
Purpose	This business indicator is derived from the SDG 8 (8.2 Achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors). It is important, since the full potential of introduction of new equipment / technologies, which lead to higher productivity and profitability, is achieved through well-trained high-quality workforce.
Baseline value	21% (2018)
Limitations / Challenges	The indicator follows the share of employees trained in the use of new technologies but does not contain detailed qualitative information on the training areas and content. In addition, benchmarking for a particular technological advancement needs to be defined for the comparison purposes.
Data source	Annual company survey / business reporting / expert on sight survey / self-reporting

Share of total employees trained in new technologies (2018)



Indicator	Percentage of locally sourced raw material in final product; (relevant for SDG 8)
Unit	% of all materials in the final product, yearly basis
Short description	This indicator is relevant for companies' use of domestic material resources and provides insight into vertical integration of players within the sector.
Purpose	This business indicator is derived from the SDG 8 (8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP)
Baseline value	61% (2018)
Limitations / Challenges	Annual financial reports should contain costs of goods sold desegregated by origin. Sourcing of materials for manufacturing shows reliance on domestic materials but annual financial reporting is not covering this properly.
Data sources	Annual company survey;

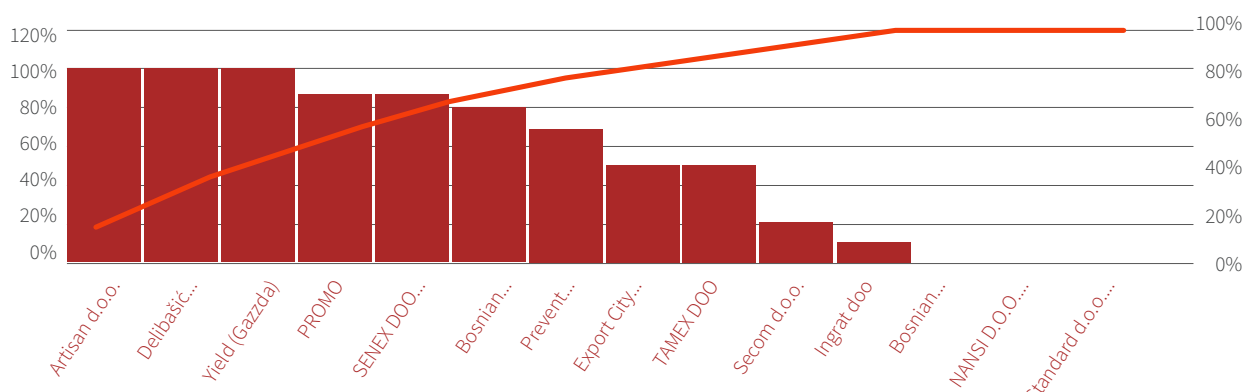
Percentage of locally sourced raw material in final product (2018)



Indicator	The raw material as percentage of sales (relevant for SDG 9)
Unit	% (average for sample), yearly basis
Short description	Expenses of raw materials in overall sales
Purpose	This indicator provides more insight in levels of added value in manufacturing, where companies that have high percentage of raw material as percentage of sales add smaller value onto the final product. In other words, high level of raw materials in sales often equals depletion of wood resources in Furniture and Wood sector. Companies/sectors and countries that add more value to raw materials before sales are more sustainable and resilient. This business indicator is derived from the SDG 9 (9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes and 9.b. Support domestic technology development, research and innovation.
Baseline value	51% (2018)
Limitations / Challenges	Understanding of this concept is critical for proper reporting, so this needs to be explained to respondents in order to get worthwhile answers.
Data sources	Annual financial reports / Annual company survey

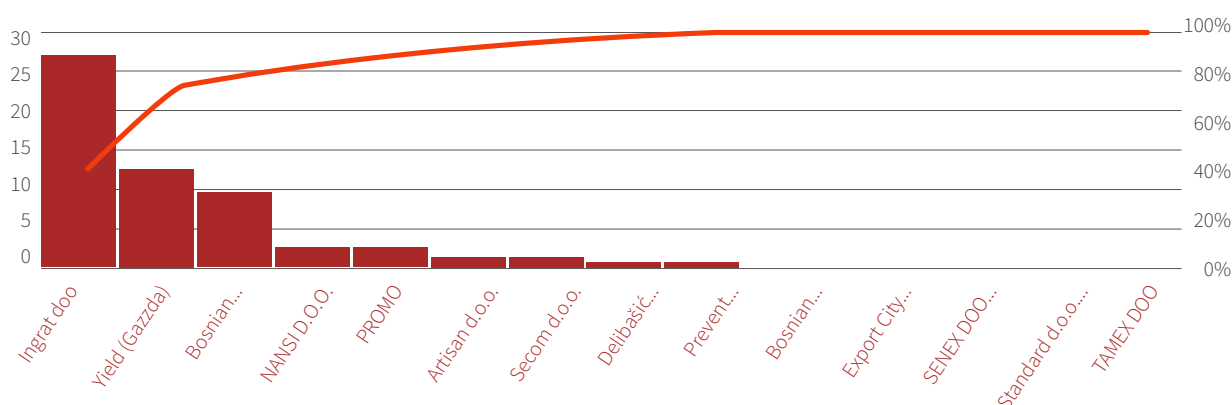
Indicator	Percentage of own design in portfolio (relevance for SDG 9)
Unit	% of all products, yearly basis
Short description	The indicator shows ratio between own products and contracted products manufacturing (other brands)
Purpose	The indicator provides an account of companies' strategic orientation to produce own products. Companies with own products exert more pricing control and can benefit through higher profit margins. Suppliers or contract manufacturing companies are seldomly actively engaged in marketing their products, thus being forced to produce for meager margins in a highly competitive market. This business indicators are derived from the SDG 9 (9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes and 9.b. Support domestic technology development, research and innovation
Baseline value	54% (2018)
Limitations / Challenges	Additional quantitative data per product sold (own design vs contract manufacturing) data would help to determine the benefits of own product manufacturing.
Data source	Annual company survey

Percentage of own design in portfolio (2018)



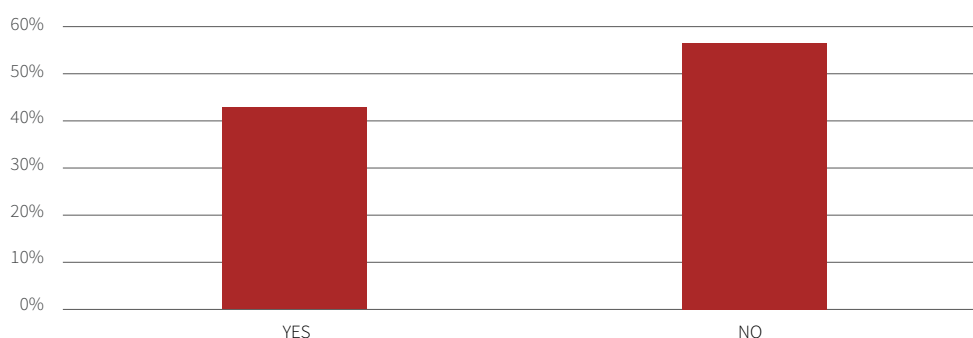
Indicator	Share of companies collaborating with science / research institutions (such as institutes, universities) in implementation of R&D or innovation projects or activities (relevance for SDG 12)
Unit	Number of projects/activities, yearly basis
Short description	The indicator is set to follow the companies' involvement into scientific and research activities and projects. It tracks companies' contribution to ensuring sustainable consumption and production patterns. Greater companies' participation in R&D activities ensures more sustainable resource management.
Purpose	This business indicator is derived from the SDG 12 (12.a Support developing countries to strengthen their scientific and technological capacities to move towards more sustainable patterns of consumption and production). Participation in R&D projects and activities contributes to company efficiency, competitiveness and profitability. At the same time, improved enterprise resource management improves national consumption and production patterns, making them more sustainable. Companies with developed R&D departments and those that sustain this practice are more resilient and better understand market forces and in particular market trends.
Baseline value	4.35 collaborative projects/activities per company on average (2018)
Limitations / Challenges	Additional qualitative data would help to determine the benefits of enterprise participation in R&D or innovation projects or activities.
Data source	Annual company survey / R&D institutions reporting

Number of participated projects / activities related to R&D and innovations (2018)



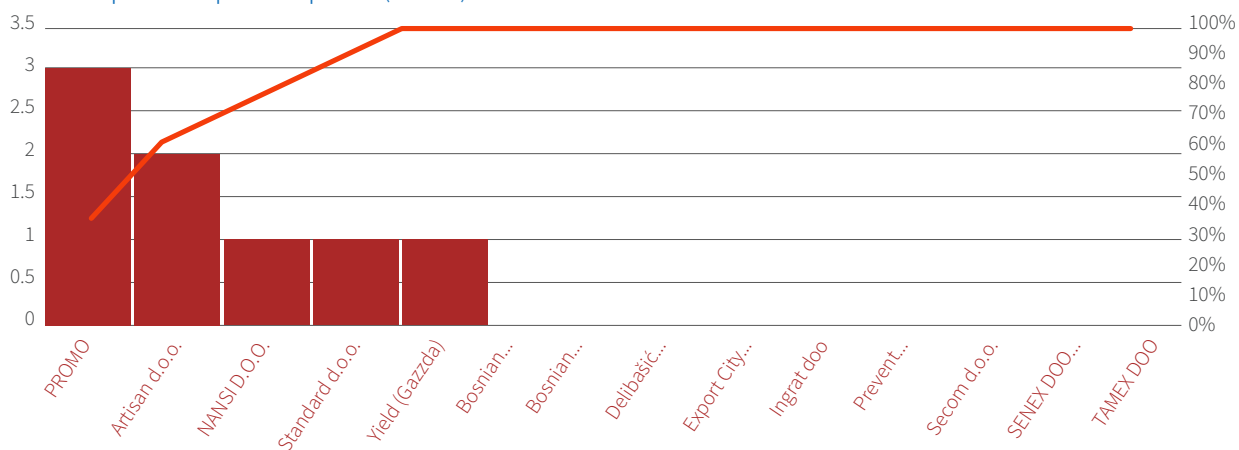
Indicator	Percentage of companies that use of slogans and ads featuring climate change issues (relevant for SDG 13)
Unit	% (of the sample), yearly basis
Short description	This indicator is relevant for companies' involvement in active promotion of fight against the climate change
Purpose	This business indicator is derived from the SDG 13 (13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.)
Baseline value	50% (2018)
Limitations / Challenges	Companies are not locally incentivized to fight climate change or to advertise their own activities/investments that are featuring this goal. Majority of genuine brands that export to EU could have benefits from expressing their awareness regarding the climate change issues. However, it is hard to quantify the effects of these ads.
Data sources	Annual company survey

Percentage of companies that use slogans and ads featuring climate change issues (2018)



Indicator	Number of clusters or other forms of company associations in which companies participate (relevance to SDG 17)
Unit	Number (of clusters or other forms of associations per company), yearly basis
Short description	This indicator follows companies' contribution to strengthening the means of implementation and revitalization of the global partnership for sustainable development. Herewith, we track companies' collaboration through clusters / associations.
Purpose	This business indicator is derived from the SDG 17 (SDG 17.7. Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships). Enterprise collaboration is a key to achieve greater purchase and supply power in approaching international suppliers and buyers, along with many other potential benefits from collaboration.
Baseline value	1,11 avg. per company (2018)
Limitations / Challenges	Although the indicator does follow the number of clusters and other association forms in which the companies participate, it does not follow the intensity and quality of this collaboration. Additional qualitative survey would help to track the actual collaboration benefits for companies.
Data source	Annual company survey / Clusters and associations reporting

Number of clusters or other forms of company associations in which companies participate (2018)



Annex 5- Relevance of SDGs for the Automotive Parts Value Chain

Sustainable Development Goals	Relevance for Furniture and Wood Value Chain	WG opinion
Goal 1 End poverty in all its forms everywhere	No direct relevance	7.
Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture	No direct relevance	8.
Goal 3 Ensure healthy lives and promote well-being for all at all ages	No direct relevance	6.
Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Highly relevant, since the participants in automotive suppliers' value chain are interested in high quality workforce and can contribute to its development	1.
Goal 5 Achieve gender equality and empower all women and girls	Partially relevant, through employment of women and their participation in managing structures of enterprises	5.
Goal 6 Ensure availability and sustainable management of water and sanitation for all	No direct relevance	7.
Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all	Partially relevant through good enterprise energy management practices	4
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Fully relevant, since enterprises significantly contribute to economic growth, employment and decent work	2
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Fully relevant since enterprises can influence the pace of infrastructure and industrialization and are a driver of innovation	2
Goal 10 Reduce inequality within and among countries	No direct relevance	7
Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable	No significant relevance	6
Goal 12 Ensure sustainable consumption and production patterns	Relevant since enterprises influence the sustainability of production and consumption	3
Goal 13 Take urgent action to combat climate change and its impacts	Somewhat relevant through company environmental actions and energy efficiency measures	5
Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development	No direct relevance	6
Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Relevant for furniture, but no direct relevance for the automotive value chain	3
Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	No direct relevance	6.
Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development	Highly relevant since automotive sector enterprises need to participate local and international networks (value chains) to unlock their potentials	3.

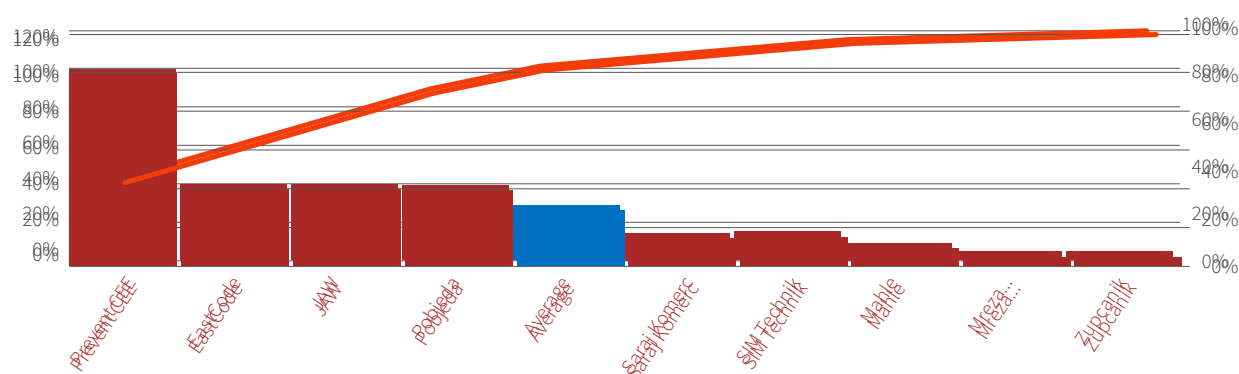
Annex 6 – Summary of the collected results (Automotive)

Item	Business indicators
General business indicators	<ul style="list-style-type: none"> → Sales - Sales in 2018 have shown increase by 10.7% compared to 2017, with average sale revenue at 20,842,700 BAM. All surveyed companies have shown growth in sales revenue. → Exports - According to survey, export in 2018 has increased by 10.7% compared to 2017, and out of surveyed companies that are exporting, 87.5% (7) noted increase. Average export value of surveyed exporting companies was 22,460,674 BAM. → Employees no. - Total number of employees among surveyed companies in 2018 has increased by 14% in comparison to previous year. 87.5% (7) of companies had an average increase by 13.64%, while one company had decrease by 25%. Employment increase in 2018 has increased number of female employees by 31.55% in comparison to 2017. → Note: Prevent CEE d.o.o. was excluded from those indicators as revenue from Prevent is bigger than sum of all companies we have surveyed, along with number of employees as this company has well established markets and all revenue is from exporting. Worth noticing is that Prevent CEE d.o.o. is employing 3000 woman out of 6500 employees, due to the nature of product / services portfolio (e.g. sewing and tailoring).
SDG 4	<ul style="list-style-type: none"> → Number of trainings / educations of employees in 2018 (no.) – 100% of surveyed companies organizes and/or participates in training / educations of employees. In average, one employee participates at 1 education on yearly basis. → Share of employees (in %) who took part in training / education sessions in 2018 (%) - In average 30% of employees, participate in training / education sessions.
SDG 8	<ul style="list-style-type: none"> → Investment in new equipment / technologies supported by foreign capital (joint venture, parent company, or similar) - 100% of surveyed companies had invested in new equipment / technologies. None of the companies received foreign capital to support their investments, while 44.44% (4) companies got support from parent company. → Share of employees (in %) trained in the use of newly purchased technologies in 2018 (%) - On average 14% of employees are trained on how to use of newly purchased technologies.
SDG 9	<ul style="list-style-type: none"> → No. of new quality standards / certificates introduced / upgraded in 2018 (no.) – total number of new certificates introduced in 2018 was 6 while renewed 24. In total number of companies, 22.2% (2) introduced and renewed certificates, and 88.89% (8) companies in average renewed 3 certificates. Largest share among certificates takes ISO 9001 that is present in all of surveyed companies, followed by ISO 14000 and ISO 140001. Additionally, 77.7% (7) companies own IATF 16949. → Share of external support (financial or technical) received from donors or authorities for QS / certificates in the volume of total cost in 2018 (%) – External support from donors was received by one surveyed company through WHAM project that provided 50% financial support.
SDG 12	<ul style="list-style-type: none"> → Share of production inputs (in % of total value) purchased from domestic suppliers or supplied through your own production of production inputs in 2018 (%) – In average percent of production inputs from domestic suppliers in total production is 43%. → collaboration with scientific / research institutions (such as institutes, universities) in implementation of R&D or innovation projects or activities throughout 2018 <ul style="list-style-type: none"> → no. of institutions (no.) → no of projects / activities (no.) <p>66.66% (6) of companies collaborate with 1 to 2 institutions. Total number of activities related to R&D or innovation projects in realized in 2018 was 12. Companies in average participated at 2 activities in year, while only 33.33% (3) companies did not participate at any activities.</p>
SDG 17	<ul style="list-style-type: none"> → Number of clusters or other forms of company associations in which company participates (no.) - 55.56% (5) of surveyed companies is participating in average at 2 to 3 forms of association (AHK, Automobile group cluster, employers association, Chamber of Commerce). → Involvement into international wood industry suppliers' value chain (yes / no) – 66.66% (6) of surveyed companies is involved with international value chain

Annex 7 – Description of selected priority indicators (Automotive suppliers)

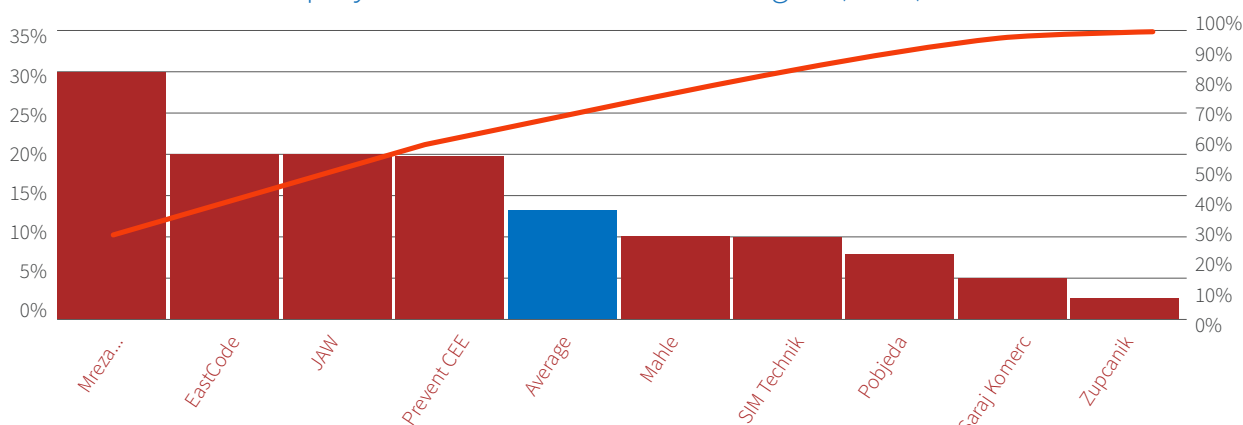
Indicator	Share of company employees participating in training and education activities (relevant for SDG 4)
Unit	% (of total number of employees), yearly basis
Short description	This indicator is relevant for companies' involvement into education and lifelong learning activities. It tracks percentage of employees involved into education and training activities.
Purpose	This business indicator is derived from the SDG 4 (4.4 Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship). It is important since technical and vocational skills need to constantly improved.
Baseline value	30% (2018)
Limitations / Challenges	The indicator does not follow the content of relevant training and education activities in which companies participate. A more detailed survey would help to obtain relevant information on the training areas and detailed characteristics.
Data sources	Annual company survey / training and education institutions reports

Share of total employees participating in training and education (2018)



Indicator	Share of company employees trained in the use of new technologies (relevant for SDG 8)
Unit	% (of total number of employees), yearly basis
Short description	This indicator measures contribution to promotion of sustained, inclusive and sustainable economic growth, full and productive employment and decent work. It measures the percentage of employees trained in the use of new technologies and equipment (machines, tools).
Purpose	This business indicator is derived from the SDG 8 (8.2 Achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors). It is important, since the full potential of introduction of new equipment / technologies, which lead to higher productivity and profitability, is achieved through well-trained high quality workforce.
Baseline value	14% (2018)
Limitations / Challenges	The indicator follows the share of employees trained in the use of new technologies, but does not contain detailed qualitative information on the training areas and content.
Data source	Annual company survey / business reporting

Share of total employees trained in new technologies (2018)



Indicator	Share of companies collaborating with science / research institutions (such as institutes, universities) in implementation of R&D or innovation projects or activities (relevance for SDG 12)
Unit	% (of total number of surveyed companies), yearly basis
Short description	The indicator is set to follow the companies' involvement into scientific and research activities and projects. It tracks companies' contribution to ensuring sustainable consumption and production patterns. Greater companies' participation in R&D activities ensures more sustainable resource management.
Purpose	This business indicator comes from the SDG 12 (12.a Support developing countries to strengthen their scientific and technological capacities to move towards more sustainable patterns of consumption and production). Participation in R&D projects and activities contributes to company efficiency, competitiveness and profitability. At the same time, improved enterprise resource management improves national consumption and production patterns, making them more sustainable.
Baseline value	66,7% (2018)
Limitations / Challenges	Additional qualitative data would help to determine the benefits of enterprise participation in R&D or innovation projects or activities.
Data source	Annual company survey / R&D institutions reporting

Company	R&D collaboration
Saraj Komerc	No
EastCode	Yes
JAW	No
Mahle	Yes
SIM Technik	Yes
Pobjeda	Yes
Mreza-Network	No
Zupcanik	Yes
Prevent CEE	Yes
Average	66,67%

Indicator	Number of clusters or other forms of company associations in which companies participate (relevance to SDG 17)
Unit	Number (of clusters or other forms of associations per company), yearly basis
Short description	This indicator follows companies' contribution to strengthening the means of implementation and revitalization of the global partnership for sustainable development. Herewith, we track companies' collaboration through clusters / associations.
Purpose	This business indicator is derived from the SDG 17 (SDG 17.7. Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships). Enterprise collaboration is a key to achieve greater purchase and supply power in approaching international suppliers and buyers, along with many other potential benefits from collaboration.
Baseline value	1,56 avg. per company (2018)
Limitations / Challenges	Although the indicator does follow the number of clusters and other association forms in which the companies participate, it does not follow the intensity and quality of this collaboration. Additional qualitative survey would help to track the actual collaboration benefits for companies.
Data source	Annual company survey / Clusters and associations reporting

Number of forms of associations in which companies participate (2018)

