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Post-Assignment

Sustainable Aftersales

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Sustainable Transportation



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TABLE OF CONTENTS

Company and business model.....	3
Chosen company.....	3
Business model	3
Work process (what steps it involves, e.g illustrated diagram)	4
Flow-chart of work process	4
Software used during the process	4
Customer feedback.....	5
Overview of workshop layout and equipment.....	6
Body repair services and equipment.....	8
Electric car charging infrastructure.....	10
Waste management.....	11
Inspection	14
BIBLIOGRAPHY	15

Company and business model

Chosen company

For our work in the post-assignment phase, we chose an authorised ŠKODA AUTO passenger car service in Kosmonosy which is located next to Mladá Boleslav.

This service station was founded in 1970, and today it is an authorised service station of ŠKODA AUTO a.s. It is the company's main service centre, offering a wide range of services to the public and all users of ŠKODA AUTO company cars.

Business model

For generating income, this service offers a really great range of services. The most used services are warranty and post-warranty service and repair of ŠKODA AUTO cars as well as tyre service. Other activities of this service include preparation of vehicles for technical inspections, conversion of vehicles for disabled persons, axle geometry, paint shop services and also the sale of original parts and accessories. They also offer consumer goods such as oils, adblue and also ŠKODA AUTO merchandise.

The centre's customers include ŠKODA AUTO owners of all ages and a large proportion of customers are users of ŠKODA AUTO company cars. Service and accident repairs are carried out on company cars, as well as their return.

After return, the company cars are prepared for inclusion in programs for their subsequent sale to customers.

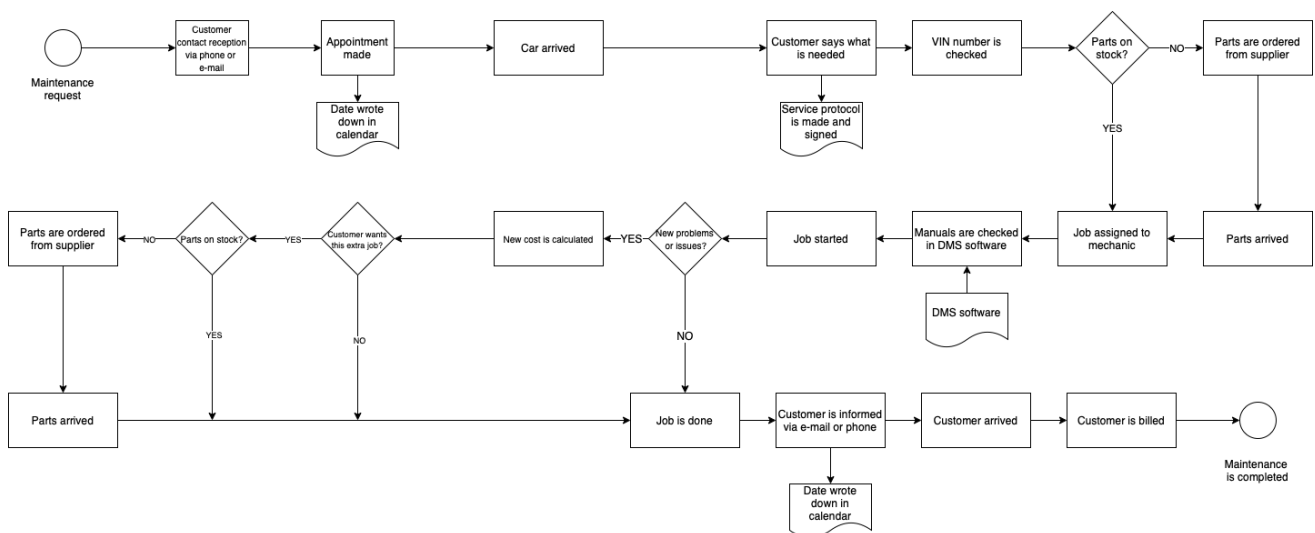
Work process (what steps it involves, e.g illustrated diagram)

Flow-chart of work process

Flow-chart of work process can be seen at Picture 1. There are no other comments necessary.

Source: Skoda Auto internal document

Picture 1 - Flow-chart



Software used during the process

They are two important software used during this process – DMS and web calendar. DMS can be shortcut for Document Management System, but in this case, it is name for the software itself.

This software contains different modules, the most important ones are:

- Module for SKODA AUTO a. s. databases of manuals and service procedures
- Module for payments and billings

- Module for parts on stock
- Module for ordering parts from supplier

This system is very practical and useful, but from some reasons, it does not contain module for calendar. Because of this company uses web calendar where they are writing down appointments and overdrafts of vehicles.

Web calendar was chosen for its simplicity and accessibility (you can access it from any computer in, or within the company – if you know the password).

Customer feedback

Every customer receives satisfaction questionnaire. These questionnaires are checked, and results are presented at company meetings.

In case of negative feedback, customer is contacted by specific employee and asked about this feedback. Employee must deal with this situation and improve customer satisfaction, if it is impossible, customer is at least asked about more information about this case. With this information company can do measures against it.

Overview of workshop layout and equipment

Workshop machinery and workshop layout was basically the same as in finish company ESS Autotalo. The authorized repair shop is very well equipped and there is no lack of basic instruments or tools. The repair shop is dedicated exclusively to the ŠKODA AUTO car brand and has several buildings.



There is no special or extraordinary equipment in comparison to ESS Autotalo company. There are also workplaces dedicated specifically to hybrids and electric cars. There is all the

necessary high-voltage equipment that is designed to work under power. Mechanics are specially qualified to work with hybrid and electric cars to make sure they are safe and confident in their work.

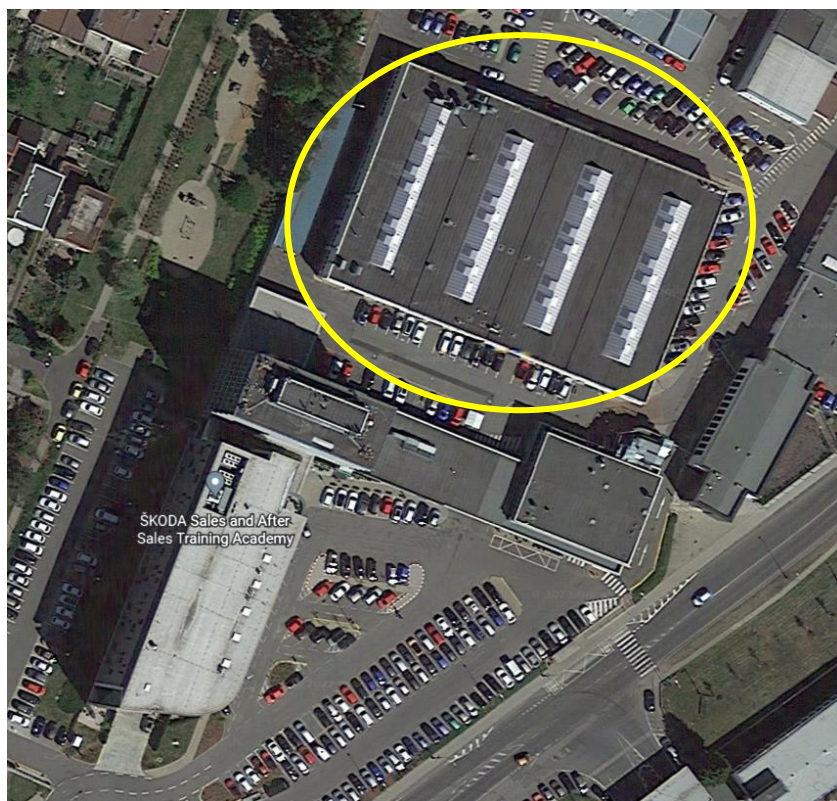


Body repair services and equipment

Our company itself has its own car repair shop where car bodies are repaired after minor or major accidents. As mentioned in the previous chapter, the layout is the same as we have seen in Finland.

If the damage exceeds half a million crowns, i.e., 20 thousand euros, the car is assessed as a total loss and is not repaired but scrapped.

The yellow circle indicates the garage.





ŠKODA AUTO uses the Group's warehouse, which is located not far from the car plant. This is one of three central warehouses of the Volkswagen Group, the other is being in Kassel, Germany, and the last one in Martorell, Spain.

This warehouse delivers throughout the Czech Republic, among other places, but also imports throughout Europe.



Electric car charging infrastructure

The EV chargers are located all around Mlada Boleslav city. Most of them are owned by SKODA AUTO. SKODA AUTO has around a hundred chargers right in factory, which enable SKODA AUTO employees to charge their vehicles during the working shifts. Our company has around 4 Škoda Wallboxes iV which enable charging with 11 kW. Another charging spot is located around 100 meter from our company. This charger is level 3 and equipped with CCS connector. It offers you to charge with up to 150 kW. The payment is through the RFID card.



Waste management

SKODA AUTO a. s. focuses on sustainability, and the company is planning sustainability strategies for the future. The strategies includes a section focusing on the environment and includes, for example, a green logistics strategy, a green product or a green dealership (as you can see in the Figure 1).



Source: Skoda Auto Sustainability report 2019/20

Figure 1 Sustainability Strategy 2025

SKODA AUTO a. s. has a big impact on the environment and is working to modernise its waste management systems and reduce waste. The following table shows their progress in recent years.

ENVIRONMENT AND SUSTAINABILITY MANAGEMENT OVERVIEW

	2010	2017	Δ %	2018	Δ %	2019	Δ %	2020	Δ %
	Base	Current status		Current status		Current status		Current status	
Energy (MWh/vehicle)	2.18	1.48	32.4%	1.39	36.2%	1.43	36.6%	1.58	30.1%
CO ₂ emissions (kg/vehicle)	1 070	483	54.9%	429	59.9%	397	63.9%	461	58.2%
Waste (kg/vehicle)	28.30	0.82	97.1%	0.78	97.2%	0.32	98.9%	0	100.0%
Water (m ³ /vehicle)	2.77	1.77	36.2%	1.71	38.2%	1.69	38.9%	1.74	37.0%
VOC emissions (kg/vehicle)	2.76	1.49	46.1%	1.41	48.9%	1.43	50.2%	1.52	47.0%
Production (vehicles)	533 405	870 496	63.2%	902 467	69.2%	907 942	76.4%	749 610	45.7%
Reduction of environmental impact			Ø 53.3%		Ø 56.1%		Ø 55.2%		Ø 51.0%

Comparative figures presented in 2017 and 2018 include production in Aurangabad, India which is immaterial to the total value. Adjusted Reduction of environmental impact without this entity would be 54.1% and 56.6% respectively.

Source: Skoda Auto Sustainability report 2019/20

Figure 2 Environment and sustainability management overview

The next figure shows the reduction of the environmental impact of production. It shows that SKODA AUTO a. s. has not sent any waste from its production processes to landfill.

REDUCTION OF THE PRODUCTION IMPACT ON THE ENVIRONMENT 2010 – 2020



Source: Skoda Auto Sustainability report 2019/20

Figure 3 Reduction of the production impact on the environment

The company has begun to actively incorporate circular economy principles (This means, for example, using recycled solvents or using oil filtration equipment). It extends the life of primary materials and minimizes the production of hazardous waste. The goal for the coming years is to link suppliers and waste processors. One of the components is the tyre take-back system, which was already launched in 2009. Under the tyre take-back scheme, 265 642 tyres were recycled in one year.

Other processes with used tyres are that most of this waste is converted into secondary raw materials suitable for further use, which has reduced the use of primary raw materials. For example, the granulate from used tyres has been used in the production of suspension and anti-vibration elements, urban furniture, noise barriers, playground equipment or in the packaging industry.

END OF LIFE PRODUCT RECYCLING*

		2020	2019	2018	2017	2016
Vehicles	Collected (pcs)	5 342	4 551	4 629	4 252	4 618
Used tires	Collected (pcs)	265 642	243 241	251 965	218 272	194 500
Used Pb accumulators	Collected (t)	994	1 166	975	875	638

*data on take-back and recycling by ŠKODA AUTO within Czech market
Recycling rate is not reported due to its limited accuracy.

Source: Skoda Auto Sustainability report 2019/20

Figure 4 End of life product recycling

Recycling of materials used in production, as well as at the end of the vehicle's life cycle, significantly reduces the environmental impact.

In Skoda Auto there is some processes based on recycling. The waste management is focused on reusing of some materials (for example plastics).

In addition, SKODA AUTO a. s. has many different waste bins where employees can sort their individual waste. They have bins for plastic, glass, hazardous waste, paper and mixed waste. Compared to Finland they do not have bins for used cloth that is reused, they do not clean these materials if they are contaminated from oil and other substances, but throw them away. There is definitely a great potential to reduce waste for SKODA AUTO a. s. in this section.

Inspection

Nearest technical inspection takes place around 300 meters away from our company.

However, there is no co-operation with our company. Unfortunately, we were not able to visit this company to compare our outputs from Finland.



BIBLIOGRAPHY