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SUSTAINABLE DEVELOPMENT OF A LOGISTICS COMPANY BASED ON THE IMPLEMENTATION OF A «GREEN» BUSINESS STRATEGY

Vladyslav Marchenko, Dmytro Bugayko, Danylo Bugayko. *«Sustainable development of a logistics company based on the implementation of a «green» business strategy». The modern world is changing incredibly fast. Scientific and technological progress is constantly opening new horizons for development, demonstrating an incredible number of new ways for improvement. Today, success is achieved by those who are able to be not only as flexible and efficient as possible, but also attentive to all aspects of potential development. It is important for a modern company to qualitatively form a list of personal priority areas for improvement, based on its own strengths, financial capabilities and available resources. It is obvious that today logistics plays a huge role in our lives and the environmental impact of its activities is very serious as it involves a huge number of enterprises, different companies, vehicles and customers. For a long time, people simply did not pay enough attention to the gradual process of environmental pollution and climate change. It is not surprising at all that today the effective concept of sustainable development has gained special popularity, as it wishes that both present and future generations can not only live in a healthy environment with an adequate standard of living, but also be able to satisfy all their possible needs and ambitions, using the available resources of the Earth with maximum rationality, respect and efficiency. The most effective way to follow this concept is the creation and gradual implementation of «green» business strategies. The development of a company in this direction can bring important benefits to it, and this can be best demonstrated on the example of the «Nova Poshta» company.*

Keywords: ecology, optimization, transport, efficiency, decarbonization, technologies, development, green logistics, prospects.

Владислав Марченко, Дмитро Бугайко, Данило Бугайко. «Сталий розвиток логістичної компанії на основі реалізації «зеленої» бізнес стратегії». Сучасний світ змінюється неймовірно швидко. Науково-технічний прогрес постійно відкриває нові горизонти розвитку, демонструє неймовірну кількість нових шляхів для вдосконалення. Сьогодні успіху досягають ті, хто здатен бути не лише максимально гнучким та ефективним, а й уважним до всіх аспектів потенційного розвитку. Для сучасної компанії важливо якісно сформулювати список особистих пріоритетних напрямків вдосконалення, виходячи з власних сил, фінансових можливостей і доступних ресурсів. Очевидно, що сьогодні логістика відіграє величезну роль у нашому житті, і вплив її діяльності на навколишнє середовище є дуже серйозним, адже вона задіює величезну кількість підприємств, різних компаній, транспортних засобів і клієнтів. Тривалий час люди просто не звертали належної уваги на поступовий процес забруднення навколишнього середовища та зміни клімату. Зовсім не дивно, що сьогодні особливої популярності набула ефективна концепція сталого розвитку, яка прагне, щоб і теперішнє, і майбутні покоління могли не лише жити в здоровому середовищі з достойним рівнем життя, але й були спроможними задовольнити всі свої можливі потреби та амбіції, використовуючи наявні ресурси Землі з максимальною раціональністю, повагою та ефективністю. Найбільш ефективним способом слідування цій концепції є створення і поступова реалізація «зелених» бізнес стратегій. Розвиток компанії в цьому напрямі може принести їй важливі вигоди, і найкраще це можна продемонструвати на прикладі компанії «Нова Пошта».

Ключові слова: екологія, оптимізація, транспорт, ефективність, декарбонізація, технології, розвиток, зелена логістика, перспективи

Introduction. The modern world is a truly complex system that combines an infinite number of elements, operating actors, ideas and decisions. And that is why it is obvious that efficient logistics plays a significant role in it.

The high level of competition forces market leaders to fight for every customer and quickly implement all possible modern innovative programmes. Technological breakthroughs of recent decades have provided humanity with a wide range of different directions for the development of the transport industry.

The concept of sustainable development has gained special popularity today. For a very long time, people simply did not pay enough attention to environmental pollution and the process of climate change, while today companies and enterprises all over the world are very seriously concerned about these issues, as the situation is becoming more and more serious at a rapid pace.

Currently, one of the most effective ways to succeed in this is to apply the green logistics principles. Implementation of such decisions can provide modern companies with a number of advantages, such as environmental protection, cost minimisation, transition to renewable energy sources, resource savings, development of an effective marketing strategy, decarbonisation and increased financial profit. Today, logistics is located at the centre of all processes, and that is why the introduction of key green technologies in this area can slow down the rate of environmental pollution and climate change.

The world is striving to improve, to constantly change, to be renewed and to move forward rapidly. The number of different perspectives on the use of green technologies in logistics is growing every day, and that is why it is so important to work on unleashing their full potential. Today, every logistics company wants to be not just

efficient, but modern, able to keep up with the times, ready for all possible challenges and problems that may arise.

The task of forming a highly effective «green» business strategy of a logistics company is very important and valuable, as it directly affects the final competitiveness of the company in the service market, the global level of optimisation of all its logistics processes, the quality and direction of marketing, the vector of the policy of implementation of modern green technologies, economic performance and prospects for the future.

The purpose of the article is to study the theoretical foundations for achieving sustainable development in logistics activities, as well as to demonstrate project recommendations for improving the «Nova Poshta» company through the implementation of a reliable «green» business strategy.

Presentation of the main results. An important step in the history of logistics was the emergence of a new direction of its comprehensive development in the form of green logistics. Green logistics represents the integration of various environmental considerations into the logistics process. It seeks to minimise the environmental impact of logistics activities.

A major argument is that the idea of green logistics has aspects of using advanced technologies and equipment to operate in a sustainable compromise that balances environmental and economic efficiency. The concept of green logistics is new for our country and is of great importance.

Today we have many promising solutions related to green logistics that have found their place in Ukraine and are being gradually implemented, as shown in Table 1.

Table 1. Popular green logistics decisions implemented in Ukraine.

No	Examples of popular decisions
1	Comprehensive improvement of transport networks aimed at highly efficient construction of routes, decarbonization of operational processes, minimization of delivery time, saving of natural resources and use of optimal modes of transport.
2	The development of digitization and cloud technologies to simplify communications, business processes and the introduction of an electronic document management system.
3	Re-processing or safe disposal of transport packaging and containers, both for the purpose of preserving the environment and qualitatively saving natural or financial resources.
4	Development of the principles of reverse logistics in enterprises and companies.
5	Application of modern technical and technological solutions for warehouses aimed at increasing their global performance indicators.

Source: Developed by Vladyslav Marchenko

Modern practice clearly shows that one of the most promising and effective options for business to minimise the negative impact on the environment and climate change is to implement a new, modern policy of «green» development.

Today, the key logistics representatives in Ukraine that have great prospects in this are «Ukrposhta», «Meest Express» and «Nova Posta». These are real leaders that adapt very quickly and efficiently to modern social needs and trends. In this work, it was decided to

analyze and study the company «Nova Poshta». Nova Poshta is the largest private operator of postal services in Ukraine and one of the most dynamic and fast-growing companies in the country in general [1].

It provides high-quality logistics and related services for businesses and individuals, both in Ukraine and abroad. Today, «Nova Posta» is an excellent example of a modern company that strives for continuous self-improvement in all possible aspects. The company has a leading position

in express delivery in Ukraine. In 2021, Nova Poshta delivered 372 million parcels and cargo [2].

Today, «Nova Posta» is a huge logistics network that covers not only big cities, but even small villages. The company's network has about 10,000 branches throughout

Ukraine, and the number of shipments in 2021 alone exceeded 430 million [3].

Thanks to a detailed analysis of «Nova Posta» indicators for the last years (using the company's financial report) - the percentage deviation between 2021 and 2020, as well as 2020 and 2019 was found and represented in Table 2.

Table 2. Key indicators of «Nova Poshta» income in the period 2019-2021

Indicator	Years			Deviation	
	2021	2020	2019	2021/2020	2020/2019
Revenue	20843502	16902857	13453318	23,31%	25,64%
Gross profit	4402498	4025771	2948976	9,36%	36,51%
Other operating income	202834	166643	145518	21,72%	14,52%
Financial result from operational activity: operating profit	1611195	1538307	1024144	4,74%	50,20%
Other financial income	1814806	687882	493080	163,83%	39,51%
Financial result before tax: profit	2794933	1090142	868357	156,38%	25,54%
Net profit	2600320	991292	782954	162,32%	26,61%

Source: Developed by Vladyslav Marchenko&Danylo Bugayko

Also, not less interesting situation occurred with significant changes in the costs of «Nova Posta» company in recent years. The

conducted vertical and horizontal analysis of data for 2019-2021 is shown in Table 3.

Table 3. Key cost indicators of «Nova Poshta» in the period 2019-2021

Indicator	Year 2021	%	Year 2020	%	Year 2019	%	Deviation 2021/2020	Deviation 2020/2019
Material costs	2133966	10,98	1439947	9,27	1328450	10,56	48,20%	8,39%
Staff costs	5742731	29,55	4529467	29,16	4202519	33,42	26,79%	7,78%
Contributions to social activities	1213180	6,24	951549	6,13	824113	6,55	27,50%	15,46%
Amortization	1406127	7,23	930615	5,99	675301	5,37	51,10%	37,81%
Other operating expenses	8939137	45,99	7679615	49,45	5544309	44,09	16,40%	38,51%
Total	1943514 ₁	100	1553119 ₃	100	12574692	100	25,14%	23,51%

Source: Developed by Vladyslav Marchenko

«Nova Poshta» strives to integrate all aspects of the sustainable development concept in the best possible way. Many of the company's projects often focus on several

sustainable development goals at the same time and successfully implement them, as can be seen in Fig. 1.

Company projects	Implemented sustainable development goals																
	No1	No2	No3	No4	No5	No6	No7	No8	No9	No10	No11	No12	No13	No14	No15	No16	No17
Humanitarian Post of Ukraine			●								●						●
Sport activities			●								●						●
Nova Poshta Business School				●				●	●								
KRUTO Nova Poshta				●													
Ecological responsibility												●	●				
Social activities and programmes			●	●						●	●						
Bicycle parking			●								●						
Book reading				●													
Colored parcels										●							
Rehabilitation of ATO participants			●														

Figure 1 – Achieved sustainable development goals in company projects

Source: Developed by Vladyslav Marchenko&Dmytro Bugayko

A detailed analysis of the company allowed us to develop its roadmap, depicting in a convenient graphical form the projects that have already been implemented, are being implemented or are planned. Having studied the company, we have chosen, it is

possible to see promising opportunities for its improvement in the chosen direction and represent it in the form of roadmap in Fig. 2.

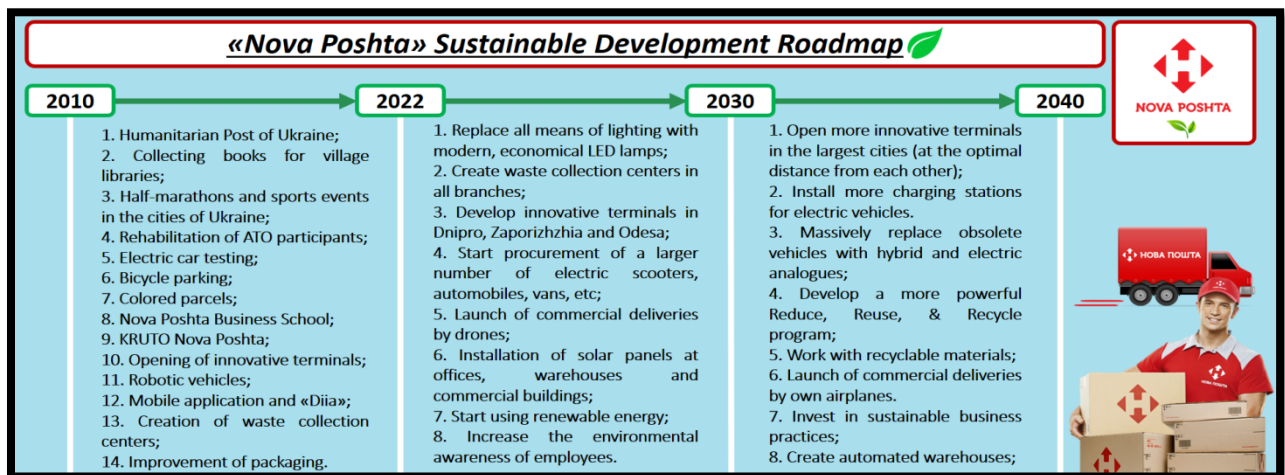


Figure 2 – «Nova Poshta» sustainable development roadmap.

Source: Developed by Vladyslav Marchenko.

It is obvious that some of them already have first attempts of implementation, but their full realisation and development will take many years. All the initiatives in this roadmap can be divided by key goals: the most efficient and rational use of resources; use of renewable energy sources; waste management; raising environmental awareness; process automation; improvement of the social situation; decarbonisation of the company's activities.

In our time, «green» business strategy represents a set of initiatives, projects or ideas that a company plans to gradually implement in its operations in order to improve its impact on the environment, economy and society as

a whole. Today, a «green» business strategy is one of the most practical tools aimed at supporting the idea of achieving sustainable development. The easiest way to explain its importance is to use the example of the previously chosen company. Therefore, it is important to understand the company's progress in this area.

By reviewing the company's activities and its sustainability reports, several key areas of the company's green activity can be found. In recent years, the company has started to use modern electricity accounting systems and has also formed a set of energy consumption standards. At the same time, the installation of new LED lamps and replacement of

outdated lighting sources with modern analogues allows the company to significantly save resources. The parallel process of using high-quality energy-efficient heaters allows the company to significantly reduce costs during the heating period. Moreover, an incredibly important step was the use of the «3R» principle based on the norm: 1. Reduce; 2. Reuse; 3. Recycle. And the last, at the moment, important issue in the field of the ecology that this company is really concerned about is the emission of carbon dioxide into the earth's atmosphere.

For logistics companies, the process of using renewable energy sources, and especially the implementation of strategic plans for the electrification of vehicles, is indeed very important. Therefore, the company's business strategy should be supplemented by the inclusion of a plan to more intensively replace obsolete vehicles with more modern and efficient electric models.

If we pay attention to the implementation of the steps of the green course in the logistics activities of Ukrainian companies, we can see that «Nova Poshta» became one of the first representatives of our market interested in the possibilities of switching to electric vehicles in order to minimise the negative impact on the environment from the transportation of various goods and products. The company has long ago started to study international experience in this area, analysing various transition options, innovations, technological advances, environmental, economic and social aspects of this issue, in search of the best solutions. Today, «Nova Poshta» already has a practice of testing electric vehicles. A good example is the «Citroen Berlingo Electric», which was tested by this company to deliver customer orders in Kyiv. After detailed testing, «Nova Poshta» noted that the experience gained through their use in logistics operations was successful.

The list of advantages of electric vehicles is really wide: price, reduced financial costs for fuel, easy maintenance, low noise, novelty,

safety, popularity, environmental friendliness, etc.

If we talk about the disadvantages of electric vehicles, then today there is also a certain list of obvious disadvantages: the battery, slow charging of the electric car, not cheap batteries, a small number of charging stations, limited speed, limited range, etc.

Thus, having analysed the advantages and disadvantages of electric cars, it can be stated that this transport is already really capable of bringing its owner great benefits. However, we should not forget about the mentioned limitations, despite the fact that most of the key problems of these vehicles are directly related to the transitional technological and service period. All of them, of course, will be gradually solved, in parallel with the development and global popularisation of the green course in the world, both among ordinary citizens and businesses.

The policy of gradual replacement of outdated vehicles with modern, environmentally friendly models is one of the most practical and effective ways of green development for logistics companies today. Despite its complexity, a huge number of companies around the world have already begun to implement it, as they see the green course as a new future for logistics.

When implementing the idea of replacing the company's outdated fleet with new electric analogues, the main examples of benefits for «Nova Poshta» are: significant reduction in fuel costs; maximisation of reliability, quality and safety; the possibility of creating new services and offers; minimisation of potential operating costs; increased labour productivity; reduction of vehicle maintenance costs; minimisation of downtime costs; improvement of the company's image both in the Ukrainian market and in the international arena; formation of a powerful marketing strategy; increasing the level of environmental friendliness of its vehicles, which will be achieved by reducing harmful emissions, especially carbon dioxide.

Despite the fact that today «Nova Poshta» is one of the best representatives of the Ukrainian market, it, like all other companies, undoubtedly has absolutely limited resources, capacities, strengths and opportunities. In recent years, the company has been closely monitoring the development of the electric vehicle market and studying it in detail, as it is seeking to upgrade its fleet to efficient models of this type in the future.

That is why it was decided to form a «green» business strategy for «Nova Poshta» based on the first optimal purchase of electric vehicles for transportations. Today, the number of electric vehicles in the company's fleet is currently quite low, and these are not high-performance minibuses that can carry a sufficient number of parcels, but mostly ordinary electric scooters. «Nova Poshta» is constantly working and developing to achieve leadership in all possible aspects, and at the same time forming ambitious plans for its future, both in the domestic and international markets.

Everyone needs to understand that since «Nova Poshta» currently uses several thousand vehicles in its operations, the task of immediate transition to electric versions is simply impossible for it, as this process

requires an incredible amount of resources and capabilities. That is why we decided to develop a «green» business strategy for the purchase of the optimal number of electric vehicles, which will act as the first, full-fledged practical step towards the future decarbonisation of the company's activities.

Taking into account the current, very difficult situation in the country, this «green» business strategy is obviously not aimed at a global scale, but rather serves as a convenient transition to the company's future more intensive actions. It is as stable as possible and is focused on a period of eight years, from the beginning of 2023 to the end of 2030.

Based on all the analysed data, the company's experience in this area, the availability of appropriate infrastructure and readiness for such changes, we decided to purchase the optimal number of electric vehicles annually, in the amount of 35 units.

Having analysed the market in detail, we can note that it would be reasonable to consider an electric vehicle from the «Peugeot» company in this «green» business strategy. «Nova Poshta» already has positive experience of using various vehicles from this company and is fully satisfied with them. The chosen «Peugeot e-Partner» is a fully electric commercial vehicle with zero emissions.

Table 4. Main data about the selected «Peugeot e-Partner»

No	DATA	VALUE & INFORMATION
1	Gross Vehicle Weight (kg)	2390
2	Maximum Indicative Payload(kg)	800
3	Load space (m3)	3,3
4	Length	Standard
5	Body Style & Trim Level	Panel Van Professional Premium +
6	Version	e-Partner 50kWh Auto 800 Professional Premium +
7	WLTP CO2 g/km	0
8	Price	£28585 at rate 45 (1286325€)
9	Battery	Lithium-ion 50kWh
10	Range (WLTP)	Up to 170 Miles (275 km)
11	Max torque CEE (Nm /rpm)	260 / 3674
12	Max power CEE (kw (hp)/rpm)	100 (136) / 5500
13	Maximum speed (mph / kmh)	84mph
14	0-60mph (secs)	11,2
15	Charging time / Quick Charge - DC Current (100kW)	0-80% - 30mins

Source: Developed by Vladyslav Marchenko

It has gained success in the market and has become very popular among people because it meets high standards and has decent specifications. This is exactly the case when the vehicle meets the important principle of «price-quality».

This transport vehicle is a great option for business because it has: good load capacity; optimal cargo compartment volume; high mobility; quiet engine; ease of maintenance; high efficiency; smooth movement without jerks; intense acceleration; minimal vibrations during operation. It is very reliable and equipped with a modern control system that provides the most convenient driving experience for the employee. The main data about the selected transport vehicle is given in Table 4.

«Peugeot e-Partner» is equipped with a modern high-voltage battery. Especially pleased with the distance that it is able to

drive (from 190 km to 275 km on a single charge) which is undoubtedly good for such an electric model. In our «green» business strategy, these electric vehicles are primarily recommended to be used for transportation in large cities with a great number of citizens, such as: Kyiv, Kharkiv, Lviv, Dnipro, Odesa, etc. In addition, they can be safely used in their «satellite cities», which are at an optimal distance. «Peugeot e-Partner» has decent characteristics that directly correlate with many other cars used by the company. For an interesting comparison, we can take as an example, not the outdated transport of the company, but the modern, basic version – «Peugeot Partner», which runs on ordinary fuel (and long ago, after the company's testing, was indicated as reliable model). Main data about the «Peugeot Partner» is mentioned in Table 5.

Table 5. Main data about the selected «Peugeot Partner»

No	DATA	VALUE & INFORMATION
1	Gross Vehicle Weight (kg)	2385
2	Maximum Indicative Payload(kg)	984
3	Load space (m3)	3,3
4	Length	Standard
5	Body Style & Trim Level	Panel Van Professional Premium +
6	Version	Partner BlueHDi 130 S&S EAT8 Auto 1000 Professional Premium +
7	WLTP CO2 g/km	156
8	Price	£22080 at rate 45 (993600€)
9	Max torque CEE (Nm /rpm)	300 (221) / 1750
10	Max power CEE (kw (hp)/rpm)	96 (131) / 3750
11	Maximum speed (mph)	114
12	Fuel consumption (l/100 km)	5
13	Euro status	Euro 6.4
14	Fuel system	Diesel High pressure turbo-charged direct injection
15	FUEL TANK CAPACITY Litres (gallons)	50 (11)

Source: Developed by Vladyslav Marchenko

The company has absolutely successfully created an electric model, carefully saving the main characteristics of the basic transport in a

new, modern body, which can be clearly seen in Fig. 3.



Figure 3. «Peugeot Partner» and «Peugeot e-Partner»

Source: Developed by Vladyslav Marchenko

Directly comparing their characteristics, we can clearly see that Peugeot Partner: «Gross Vehicle Weight» is a little lower; «Maximum Indicative Payload» is better; «Load space» is similar; «WLTP CO₂» in comparison with electric is optimal; «Price» is lower; «Max torque CEE» is higher; «Max power CEE» is slightly lower; «Maximum speed» is higher.

These vehicles can also be compared by the cost per kilometre. The official report states that «Peugeot Partner» consumes 5 litres of the fuel per 100 kilometres. Knowing that in Ukraine the price for it is 52 hryvnias (as of November 2022), let's calculate the cost per 1 kilometre:

$$5 * 52 / 100 = 2,6 (\text{€}).$$

The data on how many kWh the «Peugeot e-Partner» consumes per 1 kilometre varies from various factors, conditions and driving, so we will find it directly using the ratio from the official data (where 275 kilometres corresponds to 50 kWh):

$$50 / 275 = 0,18 (\text{kWh}).$$

Now we can see that this transport vehicle needs 0,18 kWh to drive 1 km. Knowing that in our country, the price of electricity for this type of business corresponds to 5,75 hryvnias per kWh, let's calculate using the ratio how much money the company spends per 1 kilometre driven by it:

$$0,18 * 5,75 = 1,03 (\text{€}).$$

Now, we can find out how much more expensive the delivery version of the «Peugeot Partner» is compared to the electric

«Peugeot e-Partner» by finding the difference between the results of formula 3.1 and 3.3:

$$2,6 - 1,03 = 1,57 (\text{€}).$$

As we can see, the difference is quite noticeable, which is undoubtedly a plus of electric model, paying for which a little bit more at the beginning, you can save in the process. Of course, ordinary users (for whom the price of electricity is even lower) can fully experience it. Based on the obtained result, we can calculate for what mileage the initial overpayment for the electric «Peugeot e-Partner» will be achieved. The first step on this path will be the calculation of the difference in price between the two transport vehicles:

$$1286325 - 993600 = 292725 (\text{€}).$$

Initially, such finances may seem noticeable, but if we will look at all the opportunities that are opening up for the company in case of buying exactly this vehicle, then they are absolutely reasonable. Knowing that on one kilometre of driving, the electric model chosen in the «green» business strategy saves significantly, we can check how many kilometres these vehicles need to drive to achieve the difference in their price. Let's calculate this indicator for «Peugeot e-Partner»:

$$292725 / 1,03 = 284199,02 (\text{km}).$$

Keeping in mind its characteristics, we can mention that this result is a good medium-term indicator. Considering only the price of energy, the overpayment for an electric model will be paid off in a few years. For a more interesting comparison, we can calculate how many kilometres an ordinary «Peugeot Partner» needs to drive to make its

expenses for fuel reach the level of overpayment for an electric model:

$$292725 / 2,6 = 112586,54 \text{ (km)}$$

After the calculations, the difference in price between the two vehicles no longer seems so great, and we can see that buying expensive fuel it will be made up in a fairly short period of time. This is despite the fact that these calculations are based on perfect conditions for a given vehicle, and such concepts as maintenance, breakdowns, traffic jams, and many, many others are simply not taken into account. In addition to all the above, it is necessary to calculate the total costs that will be spent on the implementation of this «green» business strategy:

$$8 * 35 * 1286325 = 360171000 \text{ (€)}$$

The final amount is not big, if we take into account that the strategy is aimed at 8 years,

and «Nova Poshta» already has a large number of vehicles that need such an upgrade. The considered vehicle has good specifications that will allow the company to carry out its activities more efficiently. The difference in price between the two models is not so fundamentally significant to once again postpone the idea of a green future for a few more years.

The longer we delay with this initiative, the more serious the consequences will be in the future. In addition, we should not forget about the marketing aspect of this question, which is of great importance. By properly coordinating the action plan around this project, «Nova Poshta» can get huge benefits, opportunities and advantages that will cover all the costs invested. The main data and obtained results are shown in Table 6.

Table 6. Main data and results obtained from calculations

Main data and results obtained from calculations	
«Peugeot Partner»	«Peugeot e-Partner»
The price of the transport vehicle	
993600 €	1286325 €
Resources for 1 km of driving	
5 litres of fuel	0,18 kWh
The price for 1 kilometre of driving	
2,60 €	1,03 €
The difference in the price for 1 km of driving	
1,57 €	
How many kilometres must be driven for energy costs to set the level of difference in the price of vehicles	
112586,54 km	284199,02 km

Source: Developed by Vladyslav Marchenko&Dmytro Bugayko

According to the company's reporting data, all of its vehicles (more than 5,800 units) travelled 18300000000 km in 2020. Electric vehicles in the total amount are 2%. Based on this, we calculate the positive effect of the introduction of electric transport, taking into account the next assumptions:

- 2% of the total number of km:
 $183000000 * 0,02 = 3660000 \text{ (km)}$

- effect from the use of electric vehicles:
 $3660000 * 1,57 = 5746200 \text{ (€)}$

- assume that the share of electric transport will increase by 0,005 each year of the project life cycle, the term of which is 8 years.

- discount rate is 14%.

- the amount of investment costs corresponds to the amount of purchase of 35 units of electric vehicles: 45021375 (€). Taking into account all these, the investment project efficiency indicators were calculated and presented in Table 7.

Table 7. Calculation of investment project efficiency indicators

Year, t	Positive Cash Flow	Investment costs	Net Cash Flow	Discounted Cash Flow
0		45021375	-45021375	-45021375
1	5746200		5746200	5040526,32
2	7182750		7182750	5526892,89
3	8619300		8619300	5817781,99
4	10055850		10055850	5953870,46
5	11492400		11492400	5968792,44
6	12928950		12928950	5890255,70
7	14365500		14365500	5740989,96
8	15802050		15802050	5539551,71
Total	86193000	45021375	41171625	
Net Present Value (NPV)				457286,47
Profitability Index (PI)				1,0102

Source: Developed by Vladyslav Marchenko&Dmytro Bugayko

Therefore, taking into account the calculations, the project is feasible for implementation, since the profit from its implementation is 457286,47 (€), and the profitability index is 1,01. The article is a logical continuation of a number of publications of authors on the subject of sustainable development of logistics and transport [4-10].

Conclusions. As a result of the research carried out in this work, all the tasks were completed and the goals were achieved. The modern concept and importance of sustainable development, green technologies and green logistics was explained. Thanks to the conducted research, we realised that for many years, green logistics was considered in the world as an unnecessary direction, which was quite complex. Today, our awareness is changing in a positive way. This work helped us to perform an analysis of «Nova Poshta» company. We noted a large amount of information about the company, starting from its place, importance and ending with its operational indicators and green initiatives. We confirmed that «Nova Poshta» is one of the best representatives of the Ukrainian market, which has good development prospects, especially in the green logistics. Today, «Nova Poshta» is the largest private operator of postal services in Ukraine and one of the most fast-growing companies in our country, which provides high-quality logistics

and related services for businesses and individuals.

Detailed diagnostics of «Nova Poshta» has shown that today a really serious threat to the company is the emergence of powerful market players that will be able to attract the company's clients to their side, and that is why «Nova Poshta» must constantly take care of its comprehensive self-improvement and development in order to increase its overall competitiveness. Furthermore, we were able to analyse «Nova Poshta» financial indicators and operating results. As we can see, the company has good performance indicators and high market success. Of course, the impact of the «COVID-19» pandemic on its operations can be seen in the corresponding years, but since «Nova Poshta» has adapted to all new conditions, it was able to quickly restore its high results. The analysis of the company's green activities showed that its environmental strategy is quite simple and consists of three main directions: Energy saving; 3R principle and CO2 emissions reduction. Having seen the results of its activities, we can state that the company was able to achieve certain success in each of them.

We revealed the issue of decarbonization of logistics processes. Special attention was paid to demonstrate the importance of achieving the goal of electrification of transport. The company's position on this issue was explained and its first steps on this

path were described. We have qualitatively listed the key advantages and disadvantages of electric vehicles, identified their prospects and opportunities. As a result, it was concluded that they already have a large number of significant advantages, but the existing drawbacks should always be taken into account as well.

The last part of the work was devoted to the conceptual model of sustainable development of the «Nova Poshta» company due to the implementation of a «green» business strategy. The key emphasis in this thesis was on the decarbonization of the company's activities. Based on the limited resources of the company and the current situation in our country, this work was aimed at forming a «green» business strategy of the company through the optimal purchase of electric vehicles. As «Nova Poshta» uses thousands of vehicles in its operations, we noted that the transition process would not be quick, but quite complex. That is why we have demonstrated our «green» business strategy as a transition stage to future more active actions of the company. Taking the smoothest character, we focused it on the annual purchase of electric vehicles, in the amount of 35 units over an eight-year period. Having attentively analyzed the current market, in our «green» business strategy, it was proposed to consider the electric model «Peugeot e-Partner». We mentioned all its data, listed the key strengths and weaknesses. In our «green» business strategy, these electric transport vehicles were recommended to be used for transportations in the largest cities of the country. It was pointed out that «Peugeot e-Partner» has decent characteristics. We noted its key data, and directly compared with the electric version to identify its strengths and weaknesses.

We have calculated the cost per kilometre of both vehicles and how much more expensive the «Peugeot Partner» delivery option is compared to the electric model. The result was confirmation of the high level of environmental friendliness and economy of

«Peugeot e-Partner». Having found how much «Peugeot e-Partner» is more expensive than «Peugeot Partner», we stated that if we list all the advantages that the company can get, in case of buying the electric version, then the difference will be absolutely justified. Based on the results obtained, we calculated for what kilometre mileage the initial overpayment for the electric «Peugeot e-Partner» will be achieved. In the case of the usual «Peugeot Partner» - in a fairly short time, which is not a plus, as its starting advantage is quickly offset by the high cost of fuel (the price of which continues to rise). This is despite the fact that in the calculations, almost perfect conditions were taken for this transport, and such common things as long period of maintenance, expensive breakdowns, endless traffic jams, and many, many other concepts were not taken into account. The same calculations were made for the electric «Peugeot e-Partner» (based only on cheaper electricity). It will take place in the medium term, in a few years. This allowed us to see that the difference in price between these two cars is not as significant as it might seem.

Having calculated the total costs that will be spent on the implementation of this «green» business strategy, we have noted that they are not significant, as this strategy is planned for 8 years, and the company «Nova Poshta», already today, has a sufficient number of vehicles that need such a good update. Since the transport selected for the project has optimal characteristics, it can easily find its place in a large route network throughout the country. We reminded that we should not forget about the marketing aspect of the issue, as «Nova Poshta» can get huge benefits from it, which will cover all the invested efforts and resources several times over.

Finally, we decided to find out the positive effect of the introduction of electric transport, taking into account flexible assumptions. Based on them, the investment project efficiency indicators were calculated. It is absolutely clear, that given project is

feasible for implementation, its profit is great and the profitability index is 1,01.

As a final conclusion, it can be noted that the idea of a green future for the company should not be postponed for a few more

years. «Nova Poshta» must start to act now. The longer it delays with the transition initiative, the more serious consequences for it will be in the future.

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