

PAPER • OPEN ACCESS

## Directions for increasing the level of environmental friendliness of innovative and investment attractiveness of transport and logistics companies

To cite this article: O Hutsaliuk *et al* 2023 *IOP Conf. Ser.: Earth Environ. Sci.* **1126** 012028

View the [article online](#) for updates and enhancements.

### You may also like

- [Criteria for classification of competitive housing projects in terms of their environmental friendliness](#)  
Ekaterina Nezhnikova

- [Active influence in dynamical models of structural balance in social networks](#)  
Tyler H. Summers and Iman Shames

- [Measuring level of friendliness of smart city: a perceptual study](#)  
Muhammad Sani Roychansyah and Sushardjanti Felasari

## Directions for increasing the level of environmental friendliness of innovative and investment attractiveness of transport and logistics companies

**O Hutsaliuk<sup>1</sup>, A Levchenko<sup>2</sup>, O Storozhuk<sup>2</sup>, A Zalevskyi<sup>3</sup>, T Doroshenko<sup>3</sup>, S Hryhorash<sup>2</sup>**

<sup>1</sup>Private higher education institution «Rauf Ablyazov East European University», 16, Nechua-Levytskoho Str., 18036 Cherkasy, Ukraine

<sup>2</sup>Central Ukrainian National Technical University, 8, Universytetskyi prosp., 25006 Kropyvnytskyi, Ukraine

<sup>3</sup>Flight Academy of National Aviation University, 1, Stepan Chobanu Str., 25005 Kropyvnytskyi, Ukraine

E-mail: alex-g.88@ukr.net

**Abstract.** The genesis of environmental friendliness, innovation and investment attractiveness of transport and logistics enterprises are relevant and require the formation of timely constructive approaches. The approach to evaluating the effectiveness of innovative activities in transport is substantiated, the use of which made it possible to establish the state of the processes of state regulation in this area. The stages of increasing investment attractiveness by the degree of intellectualization and partnership have been formed. It is proven that the assessment of the environmental component of the investment project is based on the principles of social and ethical marketing and is regulated by legislation. The investment strategy and its components have been improved. A system for supporting decision-making and goal-setting and institutional support for the genesis of transport and logistics infrastructure is proposed. The state of transport security of the regions is determined. An organizational model of the National Innovative Transport Hub and an approach to evaluating its functioning are proposed. It was determined that ecological and economic investments are aimed at increasing the economic efficiency of providing services in the transport sector, taking into account ecological interests.

### 1. Introduction

Modern economic conditions encourage enterprises to strengthen their positions in the market environment of enterprises. Almost any line of business today is characterized by a high level of competition. In order for companies to be competitive, they must intensify investment processes. An important role in the above-mentioned processes is played by investment attractiveness, the introduction of environmental innovations, which are catalysts for the expansion of the enterprise. These opportunities must meet the conditions of investors. For companies, one of the priority tasks of improving investment activities is the search for potential investors and providing them with information about the feasibility of investing. This is due to the need to ensure their sustainable development, increase competitiveness and social responsibility for environmental protection.



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](#). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Determining the level of one's own investment attractiveness is not the ultimate goal of an enterprise seeking investment. It is necessary to develop and implement measures to increase investment attractiveness, which are aimed at attracting new investors and improving investment conditions. If there are better prospects for the development of the enterprise, then investors will be ready to invest even more funds for enterprises.

Among the factors and reserves of increasing investment attractiveness, we have identified and studied in detail four groups: financial and economic, social, informational and environmental.

The issues of environmental sustainability of transport and logistics enterprises, the development and implementation of innovations, the use of investments are becoming increasingly relevant. However, the globalization processes of greening, the orientation of society and governments of developed countries to solving environmental issues of transport infrastructure actualize the study of problematic aspects and prospects for the introduction of eco-innovations and investments in enterprises.

## 2. Theoretical framework

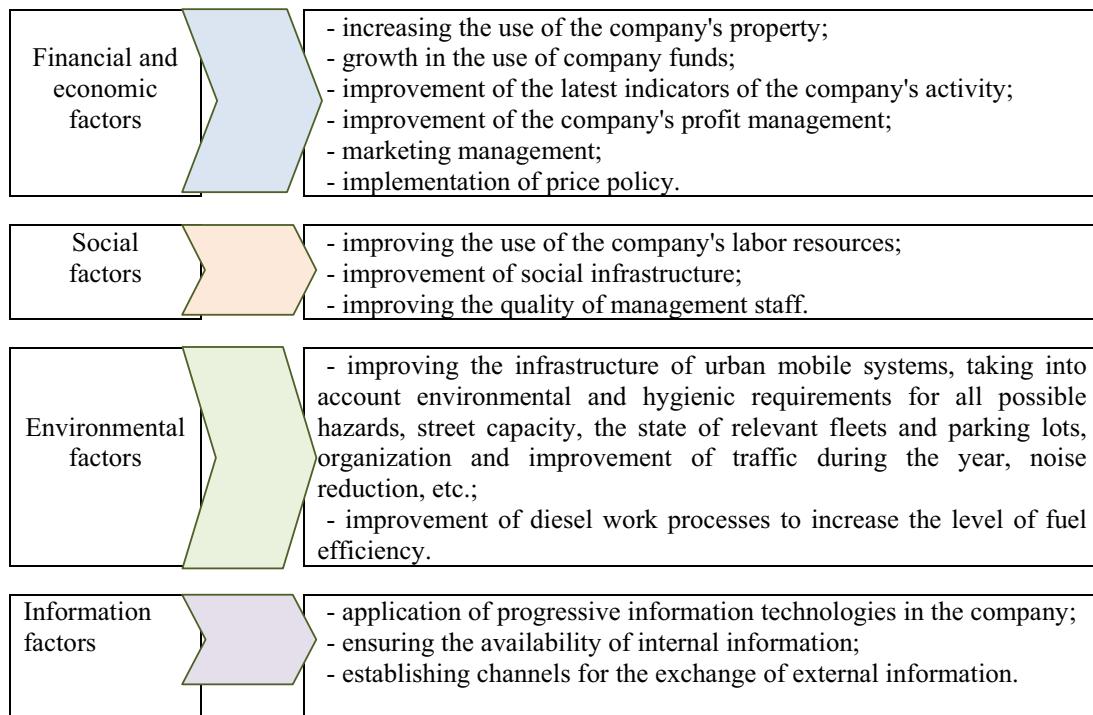
The importance of environmental, innovative, and investment activity, which leads to an increase in the scale of creation and use, is of decisive importance for the sustainable development of society. The increase in anthropogenic and technogenic load, the expansion of the list of society's effects on nature, a decrease in biodiversity, and other negative economic and ecological consequences accompany the increase in production potential and population consumption, as well as the change in the structure of the national economy. Therefore, the environmental friendliness of innovative investment activity as a determining factor of economic growth, the formation of directions and contours of future social development, and the provision of resources and ecological security require timely transformation on the basis of ecologically weighted and scientifically justified development and implementation.

Determining the level of one's own investment attractiveness is not the ultimate goal for an enterprise seeking investment. It is necessary to develop and implement measures to increase investment attractiveness aimed at attracting new investors and improving investment conditions. If there are better prospects for the company's development, then investors will willingly invest.

Increasing investment attractiveness can be the result of a direct improvement in performance, such as faster working capital by reducing debt, and indirect, such as increasing staff motivation, which will ultimately lead to improved financial performance. But the relationship between such factors and financial ratios is much harder to trace.

Among the active factors and reserves for increasing investment attractiveness, we have identified and studied in detail four groups: financial and economic, which have a direct impact on the level of attractiveness of the enterprise, and three groups of factors: social, informational, environmental (Fig. 1.).

There are many aspects to the use of fixed assets. It is directly determined by the ratio of the dynamics of prices for equipment and labor productivity; liquidation value of fixed assets; the level of equipment quality; the cost structure of fixed assets, their age structure; the level of logistics and supply of components; the degree of involvement of new state-of-the-art equipment; the level of loading of equipment in the production process, terms and intervals between repairs of fixed assets and more.



**Figure 1.** Factors of increasing environmental friendliness, innovativeness and investment attractiveness

Source: compiled by the authors [1,2].

The reduction of the period of working capital in circulation is achieved mainly due to the reduction of the time spent on receivables, as well as on the current account and at the box office. It is also important to monitor the timely transfer of working capital from the sphere of circulation to the sphere of production and vice versa.

A certain degree of liquidity of the company's assets is always present, but potential investors are interested so that if there is an immediate need, they could get the invested funds as soon as possible. If all the assets of the enterprise consist of cash, ie are absolutely liquid, the possibility of immediate return of funds to their depositors is resolved. However, the implementation of the maintenance process and, as a consequence, the increase in value added is impossible. Therefore, in the process of increasing liquidity, its measure is very important. Quantitatively, this is achieved by complying with the established limits of liquidity.

Analyzing financial stability, usually consider its main characteristic, namely the ratio of own and borrowed funds. Thus, in the US the ratio of 70% of equity and 30% of loan capital is considered optimal, in Europe - 50% to 50%, the Japanese model considers optimal to have only 20 - 30% of equity in total capital, emphasizing that the most efficient companies who enjoy the trust of banks - the main investors in the country. We usually recommend a share of 60 - 70% of equity. Finding this indicator within the specified limits indicates complete independence from creditors, along with the effective use of borrowed funds.

In the presence of profit, its effective use is the key to the high popularity of the company among potential investors. Thus, for joint-stock companies, the stable payment of dividends is a very important characteristic, as it allows to have a high level of the company's stock potential. However, an increase in dividends leads to a decrease in self-financing of the enterprise, which in the future may become an obstacle to further income growth.

The influence of another economic factor on the company's investment feasibility - marketing activity - is a rather significant problem. Stimulation of the wide provision of services through the appropriate advertising policy of motor vehicle services in various market segments, which will allow the enterprise to significantly increase all indicators.

No less important is the factor of improving the efficiency of pricing management for the services of a trucking company.

A separate factor in increasing the investment attractiveness of the enterprise is the availability of adequate information on prices for raw materials and components. Therefore, it is necessary to form special institutions on the market, the main activity of which would be monitoring. They will be able to give trucking companies the opportunity to get accurate information about prices in the market of trucking services and choose the best option.

The effectiveness of environmental protection measures can be related to many factors and does not always depend on the enterprise itself. Legislation defining liability for environmental pollution contains certain economic incentives for the application of greening technologies.

### **3. Methodology**

Evaluation of the environmental component of the investment program is based on the principles of social and ethical marketing and is regulated by the Laws of Ukraine and normative legal acts. A potential investor evaluates the production process from the point of view of greening the environment, which should guarantee the fulfillment of all project conditions.

An effective way to solve the problems of environmentalization of the transport industry is the activation of investment activities for the purpose of financing environmental protection and resource-saving technologies, carrying out measures to preserve the environment. One of the state programs for the support and development of transport companies is the program of innovation and investment policy of the government, which requires the creation of a single system of effective environmentally safe forms of management

In our opinion, the goal of ecological and economic investment aimed at increasing the economic efficiency of the provision of services in the transport sector, taking into account environmental interests, should be the transition of the system of transport enterprises to a quality level, in accordance with modern requirements of society.

An appropriate analysis of the patterns of development of financial, economic, environmental and social indicators is proposed to be carried out according to the following scheme [1,3]:

1) building a trend function that reflects the dynamics of the indicator as accurately as possible. Polynomial functions (of order greater than 2) are usually used for this;

2) differentiation of the trend function (determination of the derivative of the first order of this function). As a result, a function of the instantaneous speed of the indicator will be obtained, which will reflect the regularity of its change over time;

3) differentiation of the previously defined speed function (growth rates) of the indicator. The given procedure will make it possible to construct the function of the increase of the indicator. The gain in this case will reflect how much the speed will change per unit of time.

The use of linear, logarithmic, and power functions is recommended for building indicator forecasts using the trend extrapolation method.

The variant forecast should be built in several stages: analysis of the dynamic series for the presence of a trend with further substantiation of the trend function from the previously mentioned list based on the analysis of the values of the coefficients of determination; building a point forecast; construction of a variant forecast (in this case, pessimistic and optimistic) based on trend equations with intervals, estimation of regression coefficients.

The theory of fractal analysis is most often used to forecast the state of the markets.

The application of this technique is based on the cyclic nature of market processes, when the development process does not develop linearly, but has a cyclical repetitive nature [4].

In the study, it is proposed to use the R/S analysis method (normalized swing method) for fractal analysis. As a result, the fractality of the dynamic series will be calculated and the hypothesis about the possibility of forecasting the indicator will be confirmed or rejected, and mathematical methods of forecasting will be determined. The factor analysis algorithm for the development of monetary, ecological and social investment results is reflected in the following formulas, namely [4]:

Calculation of root mean square deviation according to formula 1:

$$S = \sqrt{\frac{1}{n} (x_i - \bar{x})^2} \quad (1)$$

Calculation of the range of variation according to formula 2:

$$R = X_{\max} - X_{\min} \quad (2)$$

Determination of the Hurst index according to formula 3:

$$H = \frac{\log(R/S)}{\log(n\pi/2)} \quad (3)$$

Calculation of the indicator of fractal dimension according to the formula  $D = 2 - H$  and its analysis in order to determine the dynamics of this function under different conditions:

1. The trend nature of the dynamics – the indicator maintains an upward or downward trend (that is, growth in the current period means growth in the future). Determination of the indicator trend equation and use of the trend extrapolation method

$$\begin{aligned} D &< 1.33 \\ 0.68 &< H < 1 \end{aligned}$$

2. The anti-persistent nature of the dynamics – the indicator changes the trend of growth or decline to the opposite (that is, growth in the current period means a decrease in future ones). There is no regularity of dynamics and forecasting is impossible

$$\begin{aligned} 1.5 &< D < 2 \\ 0 &< H < 0.35 \end{aligned}$$

3. The random nature of the dynamics - the indicator does not have an upward trend.

$$\begin{aligned} 1.33 &< D < 1.65 \\ 0.35 &< H < 0.67 \end{aligned}$$

Determination of the distribution law based on the analysis of the value of the virtual volume NF:

$$NF = \left( \frac{R}{S} \right)^2 \quad (4)$$

When using this method of analyzing the dynamics of the development factors of ecologically oriented entrepreneurship, the following notations should be taken into account:

$X_i$  - the value of the indicator predicted in the  $i$ -th year;  $X$  - the average value of the predicted indicator;  $n$  - size of the dynamic series; if  $NF = 4$ , then the indicator is distributed according to the bimodal law, if  $NF = 8$  – according to arcsine, if  $NF = 12$  – according to uniform, if  $NF = 21$  – according to Simpson's law, if  $NF = 28$  – according to Rayleigh's law, if  $NF = 32$  - by normal, if  $NF = 36$  - by Laplace's law, if  $NF = 42$  - by exponential distribution law.

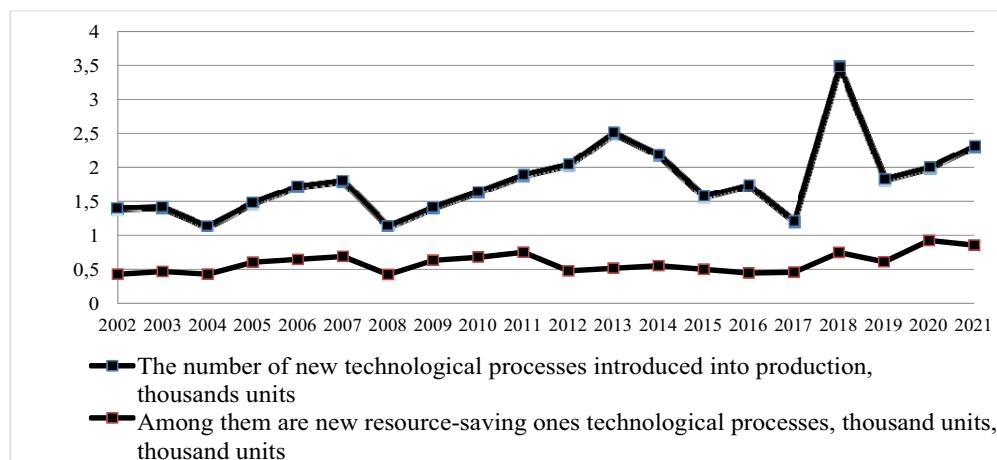
Summarizing the results of the above, the procedure for analyzing the dynamics of indicators characterizing the state and readiness for activation of the development of ecologically oriented transport entrepreneurship should be carried out with the help of analysis and economic interpretation of the nature and peculiarities of the dynamics of the relevant indicators using regression analysis methods (to construct a high-order polynomial trend function) and its differentiation, as well as analysis of the fractality of the dynamic series of the indicator and decision-making regarding the possibility and methods of forecasting. The Hurst coefficient can be interpreted as the probability that after the growth of the studied indicator, its further increase will continue.

An important factor affecting the competitiveness of the motor vehicle enterprise is the improvement of quality and preservation of the environment. This requirement applies not only to improving the quality of services provided, but also to their compliance with international quality standards. Having a huge number of quality requirements greatly increases the costs associated with the provision of services and their testing, allows you to enter the international market with world-class prices for services.

Social factors and reserves for the growth of investment attractiveness include the use of effective models to stimulate high performance, progressive forms of payment and incentives, incentives and compensation payments, which ultimately lead to improved financial and economic performance of the enterprise. Their influence can be traced during the calculation of the investment attractiveness rating and is reflected in its final value.

#### 4. Results

Environmental innovations implemented in companies give them competitive advantages. In confirmation of the above, starting from 2018, the number of resource-saving, technological processes implemented at enterprises, albeit slightly, is growing (Fig. 2). This indicates the intensification of processes of awareness of the need for changes under the influence of limited resources, improvement of pollution control, and renewal of technical and technological support of enterprises with technologies of new formation.



**Figure 2.** Number of implemented new technological processes at enterprises of Ukraine, thousands of units

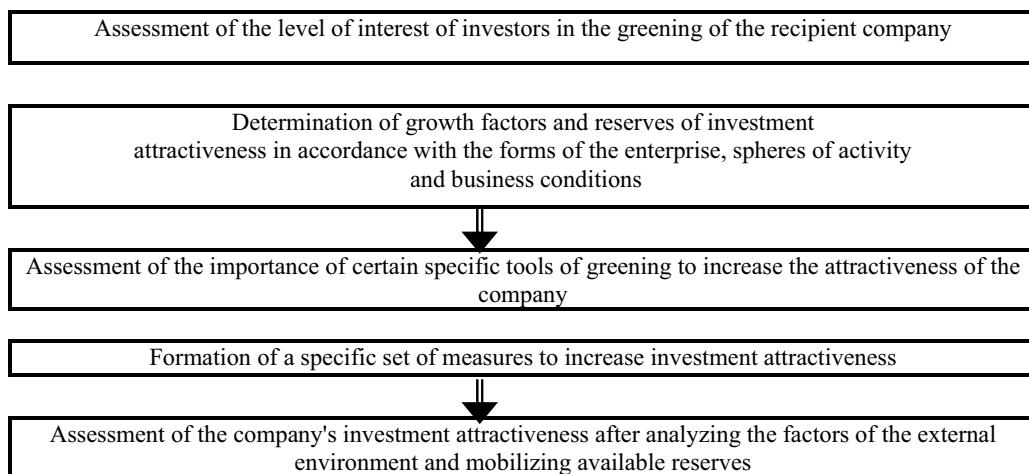
Source: compiled by the authors [5].

Among the ecologically innovative components of the formation of the enterprise's investment attractiveness, it is worth highlighting innovations in the areas of activity of the transport enterprise. First of all, these are innovations in the production activity of the enterprise. These include innovations that reduce the amount of emissions into the environment. The next group should refer to innovations in changing the composition of products, namely the creation of products from environmentally friendly materials or secondary raw materials. In the management sphere, such innovations can include waste management, introduction of new methods of energy saving, etc.

Considering the information flows of the enterprise, they should not be regarded as a closed system. Not only sound education but his alertness and dedication too are most required. Within the country's economy, the most necessary measures are to simplify relations with the tax administration, the transition to exclusively electronic payments to counterparties.

The growth of the company's management of investment activities is the result of the creation of a mechanism for identifying and optimally using reserves to increase investment attractiveness. The simultaneous use of all reserves to increase investment attractiveness is practically impossible, primarily due to the lack of funds, qualified specialists, and the full range of information necessary for the implementation of relevant measures. Practice proves the inefficiency of dispersal of efforts in many areas of investment activity. Everything needs to be focused on individual, most important investment projects. This requires the development of specific recommendations for identifying the most influential aspects, measuring the degree of impact and the final consequences.

It is proposed to increase investment attractiveness in stages (Fig. 3).



**Figure 3.** Stages of increasing the level of investment attractiveness

Source: compiled by the authors [6,7].

At the first stage, the actual environmental value of the investment attractiveness of the potential recipient company is assessed.

The second stage involves determining the list of factors and reserves for the growth of investment attractiveness in accordance with the organizational and legal form of the enterprise, the field of activity and specific business conditions, taking into account environmental factors.

At the third stage, an assessment of the significance of certain specific factors for increasing the investment attractiveness of the enterprise in terms of environmentalization is carried out. From among the identified factors and reserves for the growth of investment attractiveness in the next stages are selected primarily those that do not require significant capital investment and do not require large expenditures of time. The following are the measures that should potentially have the greatest effect, but which involve significant costs and large time losses.

The fourth stage is associated with the formation of a specific set of measures to increase investment attractiveness.

At the fifth stage, the investment attractiveness of the enterprise is assessed after the influence of certain factors and the mobilization of available reserves. The evaluation should be carried out according to the same method as in the first stage. This allows you to track the effect of taking appropriate measures. The use of reserves to increase investment attractiveness leads to a change in financial ratios, the value of which, in turn, is reflected in the general indicator of the attractiveness of the enterprise. After the implementation of these measures to increase investment attractiveness, if they are effective, the company will receive a higher rating than in the first stage. The investment favorability of the enterprise largely depends on the creation of a strategy related to the realization of its investment potential in the future, as well as ensuring compliance with the general strategy of

financial and economic development and the main goals of the enterprise. enterprises. The investment strategy should be formed with a focus on available and potential financial, organizational, personnel, technological, raw materials, energy and other resources that are available to the company and which can be attracted on favorable terms.

The strategy of environmentalization of investment activities is, on the one hand, a purposeful system of methods and methods, mechanisms for achieving long-term ecologically significant goals in conditions of environmental instability. On the other hand, it is a certain philosophy of the general direction of the development of investment activity, which is based on the principles, ideas and tasks of the evolution of society, a holistic view of the functional role of investment activity in the accumulation of natural wealth, its transformation into an ecologically balanced activity in the long term in accordance with opportunities and needs society.

The importance of forming a strategy for greening the investment activity of transport enterprises is determined by the fact that transport is one of the constituent parts of the country's economy, which is considered a powerful tool for achieving a dynamic social and economic genesis of the country's regions. The determining factors for building a strategy for the greening of investment activities include: rates of economic growth, rates of investment growth, efficiency and institutional security of mechanisms for regulating environmentally oriented investment processes, the state of the market for investment resources, the investment climate and investment attractiveness of the country, regions, individual enterprises for environmentally oriented investments, the quality of the workforce, political and legal stability, the state of protection of property rights and insurance, various types of risks, including resource and environmental risks, development of investment infrastructure, level of risks, etc. The strategy of greening investment activities should be developed in such a way as to ensure the implementation of strategic directions of greening the national economy and be implemented in the process of current investment activities based on the selection of environmentally safe and effective investment projects and programs.

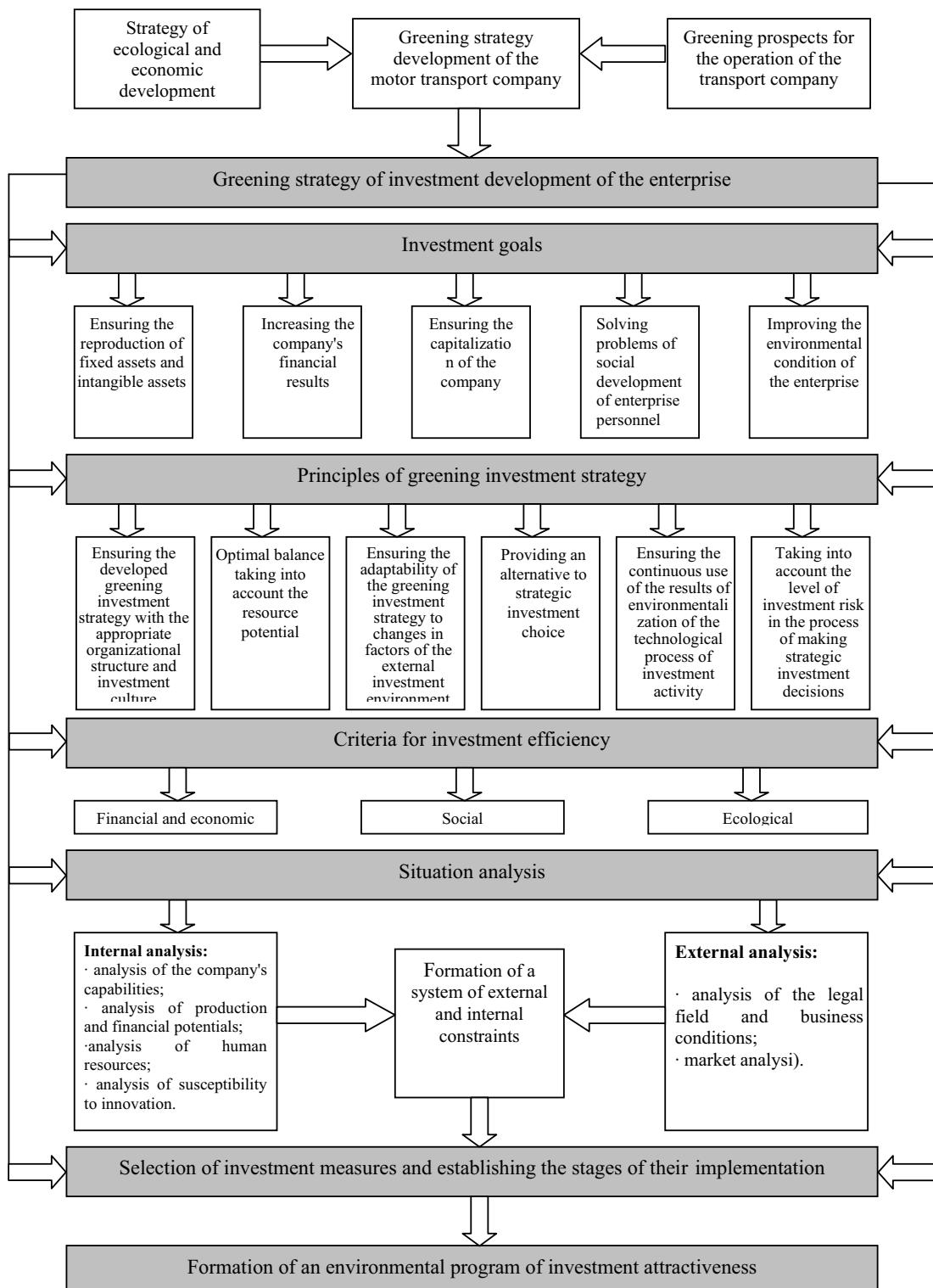
The importance of forming a greening strategy for investment activity is:

- activation of the ecologically oriented investment process and growth of the economic effect of investments;
- ensuring the implementation of the long-term goal of achieving ecologically balanced development based on the determination of priorities for investing in the most urgent environmental problems;
- creation of a regime of stimulation of various types of ecologically oriented investments;
- strengthening the innovative focus of economic investment;
- increasing the resource and environmental security of the country and economic systems due to coordination of strategic and tactical actions and prediction, forecasting of long-term consequences and results from investments for the protection and restoration of the natural environment;
- establishment of inter-level relationships between the course of investment processes aimed at reproduction of natural capital and provision of resource and environmental security at all levels.

Among the principles of the strategy of environmentalization of investment activities, we single out the following:

- hierarchies of the relationship of the developed strategy at the macro-, meso- and micro-levels;
- consistency and complexity of strategy formation and its stages;
- focus on long-term goals of sustainable development and achieving global environmental efficiency;
- reasonableness and multivariate choice;
- evolutionary, which covers the system of elements and includes the continuous increase of ecological potential and the result of investment processes.

The basis for developing the greening strategy of the investment activity of road transport enterprises is the definition of the mission (goals, goals), the structure of production and economic activity and the general strategy of the enterprise's economic development [8]. The diagram of the investment genesis strategy of the motor transport sector is presented in Figure 4.



**Figure 4.** Creation of a greening strategy for the investment genesis of a motor transport company

Subordination to environmental imperatives requires the creation of a strategy for the greening of investment activity, which combines its main components: development principles, definition of goals and objectives, priorities, mechanisms for achieving set goals, control, diagnosis and evaluation of implementation results.

The level of development of society, the features of the greening model and the methods of its implementation are interdependent, so each stage of the gradual movement of society has certain opportunities for the greening of the company's capital investments. The development of the company's capital investment greening strategy should be coordinated from a single center and be distinguished by a strong integration potential in relation to different hierarchical levels of implementation (at the macro level - state strategy, at the meso level - regional, at the micro level - the strategy of individual corporations and enterprises) and short-term practical-tactical actions. The main principles of forming the greening of the investment strategy of motor transport enterprises should be [9]:

- consideration of the enterprise as an open system capable of self-regulation;
- taking into account the basic strategies of greening the operational activity of the enterprise;
- coverage of all levels of management of the enterprise's investment activities;
- adaptation of the greening investment strategy to changes in environmental factors;
- ensuring alternative strategic investment choices;
- focus on the professionalism of the enterprise's investment managers in the process of implementing the enterprise's greening investment strategy.

The development of the greening strategy of the investment activity of transport enterprises is carried out in stages (Fig. 5).

In the process of forming the company's investment perspective, the existing system of goals of the overall economic development strategy should be taken into account (for example, capital growth, change in the ratio of real and financial investments, change in the sectoral and regional focus of investments). programs). At the same time, it should be based on the statement that the level of development and dynamism of investment processes in modern conditions form the strategic basis for sustainable economic growth. And the policy of sustainable economic growth should replace the existing policy of growth of mainly regenerative character.

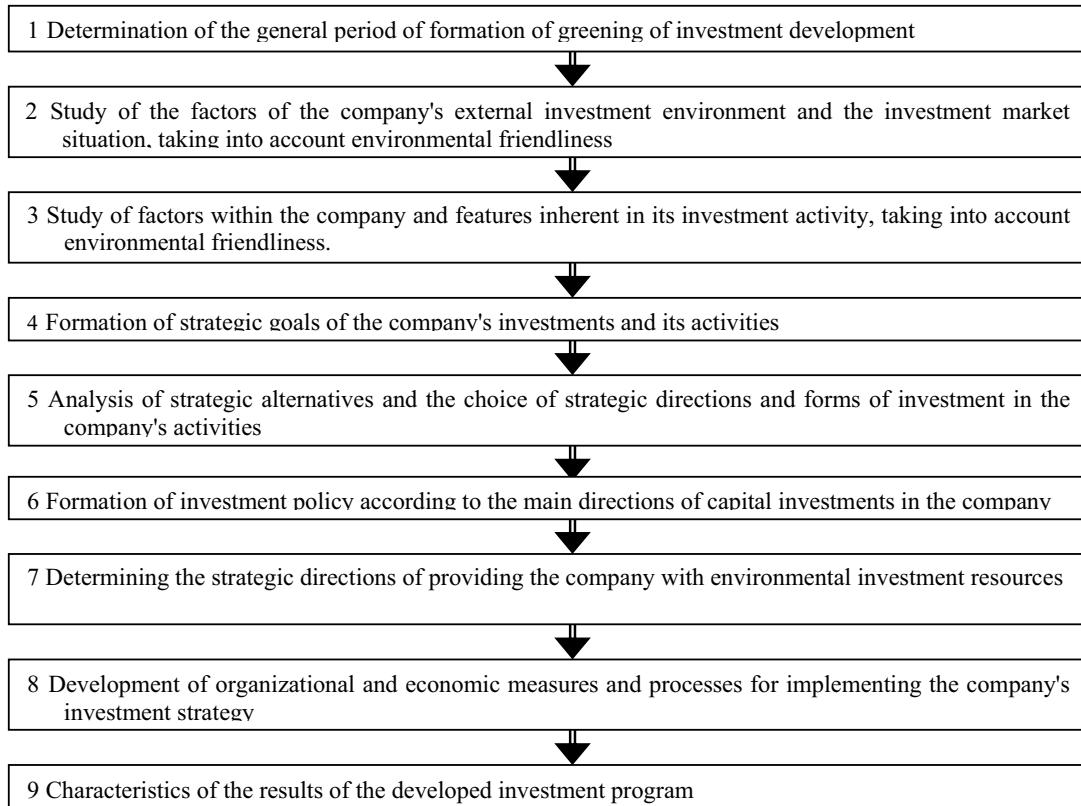
Main strategies may include those that are primarily targeted on the implementation of innovations to reduce the environmental hazards of production, the strategy of environmental responsibility for the consequences of investment activities for society, nature, etc.

Undoubtedly, the greening strategy of the investment development of motor vehicle enterprises should be oriented towards strengthening the innovative component and increasing labor productivity [10].

Intensive development of investment activities and increasing the competitiveness of domestic producers is extremely important task, as its solution promotes Ukraine's entry into world commodity markets and the creation of foreign exchange reserves necessary for modernization of production. This increases the interest in developing a strategy for greening investment and innovation activities and economic growth.

The defining provisions of an effective state investment policy for greening the strategy of investment activity are the following:

- the basis for determining the amount of direct public investment should be the demand for transport services both in the current period and in the long run;
- in conditions of acute limited resources, selective support should be carried out on the basis of the choice of individual objects of investment direction;
- each priority area should be implemented in public investment programs, because one of the factors increasing the investment potential of economic development is the centralization of public funds in the budget;
- the strategy of environmentalization of investment activities should have a clear legislative support.



**Figure 5.** The sequence of developing a strategy for greening the investment activities of transport enterprises

An urgent issue today is the development and adoption of a new program to stimulate investment in the economy of Ukraine, which will determine the directions for the country's economy to exit the investment crisis and intensify investment activity. This document should provide the prerequisites for increasing the volume of investment and tasks to stimulate them, areas of state support for investment activities and organizational and legal mechanism of investment [11].

The main principles of successful implementation of the investment strategy should be:

- increase in the volume of capital investments of enterprises due to profit and depreciation;
- improvement of credit principles of investment financing;
- increase in the amount of investment resources formed on the stock market due to the savings of the population;
- introduction of an economic mechanism for investment risk insurance;
- ensuring the stability of legislation governing the investment regime.

Before choosing an investment strategy for the enterprise, it is necessary to form a set of alternative strategies and conduct a thorough analysis. Within the chosen basic strategy, several areas of action are possible, which are called strategic alternatives.

Basic strategies in investment management can be formed in relation to this branch of management as a whole, or in relation to any of its subsystems (real or financial investments). The most well-known basic strategies: growth, stabilization, reduction (crisis).

When stabilizing, the main strategic priorities are the desire to reduce costs, to the stability of external and internal support.

During the crisis (reduction) the main strategic priorities are the restructuring of the existing investment management system, reducing the intensity of investment, redistribution of investment resources. In the end, the development of the investment strategy of the motor vehicle enterprise should be aimed at ensuring the stability and reliability of its production and economic activity, improving the quality and increasing the volume of transportation, expanding the types of transport services and preserving the environment.

The development of an investment strategy for greening the motor vehicle enterprise is considered as an integral part of the planning system of its activities in the current and long-term periods. In this regard, considerable attention should be paid to the use of some types of financial planning, control - budgeting. Capital budgeting itself involves planning an enterprise's investment in fixed and current assets to ensure that the return on those investments is estimated over the long term, that is, over several years. Each element of capital budgeting should be designed as a separate investment project, for which a cash flow forecast is made. The conclusion on the feasibility of investment is made on the basis of comparing the volume of investment and projected cash flows, taking into account the cost of capital that is planned to raise to finance investments [9].

In general, the initial components of investment planning are the search and formation of investment options, determining the relative and absolute size of their profitability, establishing funding opportunities from various sources, assessing the reliability of implementation and success of a particular investment option. To solve such complex, and sometimes uncharacteristic of management problems, it is advisable to involve research and consulting firms or temporarily hire scientists in this field of scientific and practical knowledge. The correctness of the adopted scientific and technical decisions is confirmed by the favorable impact of investment on the quality of transport services, expanding their range, increasing the profits of truckers.

The company determines the volume and direction of investment, the limits of expansion of its activities, the principles and conditions of investment, the line of conduct in the investment market in connection with possible changes in the economic situation in the country and regions.

The strategy of environmentalization of investment activity and attractiveness is developed on the basis of the established investment policy of the enterprise, the essence and direction of which is to choose the most rational ways of preserving and expanding the production potential. Therefore, the following should be highlighted as its main provisions [11-13]:

- achievement of economic, ecological, scientific-technical and social effect of investment;
- application for each investment object of specific methods of efficiency assessment, based on the results of which the selection and implementation of investment projects that ensure maximum efficiency of the enterprise;
- the company receives the largest return on invested capital;
- the company's use of state support for the efficiency of the use of investments in the form of budget appropriations;
- ensuring the minimization of risks of investment projects. Protection of projects from non-commercial risks by providing state guarantees and investment insurance;
- ensuring the liquidity of investments. This provision should be followed when the external investment environment changes. Due to this, the profitability of individual investment objects can significantly decrease, which will negatively affect the investment attractiveness of the company.

When creating a strategy for greening the investment activity of a transport company, it is necessary to pay attention to the following factors:

- technical level of production;
- the impact of the company's activities on the environment;
- the company has both its own financial resources and the ability to raise loans in the form of loans and borrowings;
- financial conditions for investing in the capital market;
- commercial and budgetary efficiency of investment projects to be implemented;
- conditions of insurance and obtaining appropriate guarantees against non-commercial risks.

Successful implementation of the directions of the company's investment operation greening strategy is possible under the condition of supporting the intellectual potential of investment activity, stimulating the increase of its creative return, establishing criteria for choosing the most ecologically effective strategies. , the formation of an economic mechanism that would make the process of implementing scientific and technical progress vital and profitable. Therefore, there is a need in society for the development of greening of investment activities as part of the general plan for the ecologically balanced genesis of motor transport companies.

The infrastructure sector is important in shortening the duration of the investment cycle and increasing its efficiency. From these positions it is necessary to strengthen the repair and maintenance base of motor transport enterprises, the system of production and technological equipment, warehousing and other production services.

### 5. Conclusions

Considerable attention should be paid to the development of social and domestic infrastructure: housing construction, children's out-of-school institutions, clubs, sanatoriums. All this will create the necessary conditions for the stabilization of labor collectives of road transport enterprises and will increase the efficiency of their work. Therefore, based on the above, it is safe to say that the investment strategy of trucking companies is one of the most important components of strategic management and is to develop a system of measures that are mutually consistent in time, resources and performers and aimed at making a profit through investment in the most promising , from the standpoint of market conditions, areas of transport enterprises.

Strategic development of investment activities in the field of road transport should focus on creating a highly efficient socially oriented and receptive to STP economy, ensuring a high quality of life of the population of Ukraine, effective motivation for entrepreneurship, strengthening equal partnerships in global economic communication.

Implementation of environmental innovations and investments is a tool for solving not only environmental, but also economic problems of domestic transport enterprises. Choosing environmentalism as a vector of development will enable them, first of all, to ensure the capacity for sustainable development, to increase competitiveness not only in the domestic market, but also in the markets of other countries. The implementation of environmental sustainability of innovations and investments will make it possible to reduce the degree of environmental danger of Ukrainian companies in the transport sector, both high-tech and low-tech, providing potential opportunities for increasing economic performance.

### References

- [1] Boyko O, Tomareva-Patlakhova V, Bondar Iu, Karpunina M 2020 Methodical approach to ensuring cluster - logistic development of the market of transport systems services of Ukraine. *Economic innovations* 22 4 77 29-39
- [2] Bondar Iu 2017 Investment portfolio diversification// *Global and national economic problems* 16 286-297
- [3] Shmatko N, Bondar Iu, Tokareva V, Kovalenko N, Klenin O and Kotlybai V 2021 Project management as a development tool for greening of enterprises of the national economy. *IOP Conf. Series: Earth and Environmental Science* 915 012037. <https://doi:10.1088/1755-1315/915/1/012037>
- [4] Morency C, Chapleau R 2003 Fractal geometry for the characterisation of urban-related states: Greater Montreal Case. *HarFA - Harmonic and Fractal Image Analysis (e-journal)* 30-34
- [5] State Statistics Service of Ukraine 2020 *Transport i zv'iazok Ukrayny u 2019 (Statystychnyj zbirnyk. Avhust Trejd. Kyiv)*
- [6] Bondar Iu 2017 Investment attractiveness of agro-industrial enterprises Priorities of enterprise development in the XXI century (International. scientific-practical Conf, Oct. 29 Kropyvnytskyi: RVL) p. 253-256

- [7] Tsimoshynska O, Koval M, Kryshtal H, Filipishyna L, Arsawan W E and Koval V 2021 Investing in road construction infrastructure projects under public-private partnership in the form of concession. *Naukovi Natsionalnoho Hirnychoho Universytetu* 2 184-192
- [8] Hutsaliuk O, Koval V, Tsimoshynska O, Koval M, Skyba H 2020 Risk management of forming enterprises integration corporate strategy. *TEM Journal* 9 4 1514-1523.
- [9] Meyer, Peck M, Stenason J and Zwick C 1959 *The Economics of Competition in the Transportation Industries*, Harvard University Press. Cambridge
- [10] Prokopenko O, Kysly V and Shevchenko H 2014 Peculiarities of the natural resources economic estimation under the transformational conditions. *Economic Annals-XXI* 7-8 40-43
- [11] Ogryzek M, Wolny-Kucinska A 2021 Sustainable development of transport as a regional policy target for sustainable development – a case study of Poland. *International Journal of Geo-Information* 10 132. <https://doi.org/10.3390/ijgi10030132>
- [12] Noussan M, Hafner M, Tagliapietra S 2020 *The Future of Transport Between Digitalization and Decarbonization. Trends, Strategies and Effects on Energy Consumption*. Cham, Switzerland: Springer. <https://doi.org/10.1007/978-3-030-37966-7>
- [13] Rodrigue J-P 2020 *Transportation, sustainability and decarbonization. In The geography of transport systems. The spatial organization of transportation and mobility. (5th edition)*. New York: Routledge.
- [14] Yankovi O, Hutsaliuk O, Tomareva-Patlakhova V, Shmatko N, Kabanova O and Rud Y 2020 Comprehensive forecasting of interconnected socio-economic indicators as a methodological basis for adopting optimal management. *2020 International Conference on Decision Aid Sciences and Application* 299-304 9317073
- [15] United Nations Organization 2016 *Mobilizing sustainable transport for development: Analysis and policy recommendations from the United Nations Secretary-General's High-Level Advisory Group on Sustainable Transport*
- [16] Paschenko Yu, Nykyforuk O 2008 *Transportno-dorozhnyj kompleks Ukrayny v protsesakh mizhnarodnoi intehratsii: monohrafija*. Nizhyn, Aspekt-Polihra
- [17] Hutsaliuk O, Bondar Iu, Sereda N, Babych O, Shchoholieva I 2021 Organization and management of the development of ecological tourism in a circular economy *E3S Web Conf.* 255 01026 <https://doi.org/10.1051/e3sconf/202125501026>
- [18] Trachenko L, Lazorenko L, Maslennikov Y, Hrinchenko Y, Arsawan I W E and Koval V 2021 Optimization modeling of business processes of engineering service enterprises in the national economy *Naukovi Visnyk Natsionalnoho Hirnychoho Universytetu* 4 165-171
- [19] Laktionova O, Koval V, Savina N and Gechbaia B 2021 The Models of Matching Financial Development and Human Capital in National Economy *Bulletin of the Georgian national academy of sciences* 15 (2) 177-184