EFFICIENT USE OF INNOVATION AND INVESTMENT POTENTIAL FOR REGIONAL DEVELOPMENT

The steps for the sustainable development of innovation and investment processes in the region and the necessary organizational economic measures for the support of the investment and innovation activity at various management stages have been determined for the sustainable growth of manufacturing and stocking of high-quality competitive produce. Complex strategic approach to region’s innovation development, which presupposes formation of proper innovation mechanisms for region’s competitive advantages intensification with the defined investment provision of finance, was provided. The concept of innovation development of the region was proposed, implementation of which is to provide for the qualitative changes in the structure of manufacturing and export for the increase in the importance of more produce.

Key words: innovative activity, investment system, innovation and investment potential, strategy, region.

Statement of the problem. Innovation and investment processes both at the national and regional levels have peculiarities stipulated by the specificity of the economic and political development. The distinctness of regional innovation and investment problems in Ukraine is associated with the formation of the new economic space and a crucially new economic development model. The strategic aim of sustainable development for the country is innovation and investment process intensification. Therefore, it is necessary to develop principally new management programs, which will promote structural and economic growth as well as improve
social protection of the population.

Current economic situation in Ukraine requires not only urgent measures aimed at reinforcing, enhancement and provision of the irreversibility of positive trends, but signifies the necessity of its rapid transition to the innovative development model [1, p. 132].

Ukraine is characterized by the disproportion in allocation of the natural resources potential and in the development level of certain regions, therefore, investment prospects must be regarded as at the regional level. Investments in the economy have always been considered the incentive for its potential intensification and development. Investment is made, predominantly, in the regional economy sectors that provide the biggest return on investment.

According to the Draft Strategy of Sustainable Economic Development of Ukraine, it is planned to increase the share of marketed innovative products to 15% in industrial scale volumes, to activate scientific research, to augment the technological potential of the industrial sector, in particular, through fostering innovative activity, by 2030 [2].

Fundraising for the innovation and investment activity with the account taken of the specificity of producing innovations got to the regional level. Economic development intensification, all local resources mobilization, social climate amelioration in the region and successful socio-economic development demand rational implementation of the available innovation and investment potential of the region [3, p. 291].

Regional peculiarities of innovation and investment processes within the period of market economy development are formed under the influence of the territorial development potential and reforms intensity. Capital accumulation in the regions is the main means of providing for the innovation development of the economy. The quality of innovation and investment development depends on a variety of factors: formation of favourable conditions for long-term investment projects implementation and application of various technologies for investment resources mobilization and effective application.
Analysis of recent researches and publications. Scientific publications of O. Vasilik, G. Vozniuk, A. Zagorodnii, L. Neikov, A. Persada, P. Rogozhin, V. Shevtshuk etc. are devoted to the research into theoretic and methodological aspects of investment development. Investment development management is researched by Yu. Bazhan, Z. Varnalii, A. Halchynskyi, V. Heiets, V. Nemchenko, I. Prokopenko, V. Semynozhenko etc. The problems of regional innovation and investment development have been studied in scientific works by Yu. Bondarenko, O. Dotsenko, O. Kamelina, M. Lesechko, O. Prosovych, T. Umanets and A. Chemerys. However, under the conditions of socio-economic development level and regional investment potential level differentiation, rational implementation of the available innovation and investment potential demands the development of adaptive strategies and implementation tools.

The purpose of the article. The aim of the article is development of theoretical and methodological provisions, methodological bases and practical guidelines on the effective employment of the innovation and investment potential of the region in order to provide for the territorial socio-economic development.

The main material of the research. Tactical miscalculations in the innovation and investment development at the level of the region are, primarily, stipulated by neglected peculiarities of long-term trends in the regional development at the stage of economy modernization, absence of clearly defined and scientifically grounded economic and social strategies as well as the weakness of the legislative provision for the effective employment of the regional innovation and investment potential, the imperfect mechanism of innovation program development funding, high level of fixed capital stock wear out, absence of effective management at the objects of financing, insufficient level of medium-sized and small business involvement, low level of innovation and investment process infrastructure development in the region.

Scholars and practitioners have distinguished the problems impeding the effective use the innovation and investment potential of the regions in the country: weakness of the legal and regulatory system for innovation activity management and stimulation; absence of a fixed formulated strategy of scientific, technological and innovation
development; absence of a consistent and sound external and internal policy; low activity of internal and external investors; adversity of the domestic economy to modern scientific achievements and technological innovations; absence of the effective innovation development financing mechanism; staff turnover and a decrease in the facilities in the scientific and technological as well as the innovation sectors; irrelevance of the performance and the structure of the scientific, technological and innovation sectors to the potential demands of the innovation development of the economy and the demand for advanced technologies.

Solution of the abovementioned problems concerning the innovation and investment potential demands a complex strategic approach to regional innovation and investment development model formation (fig. 1).

<table>
<thead>
<tr>
<th>Complex strategic approach to regional innovation and investment development model formation</th>
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<tbody>
<tr>
<td>coordinated activity of the state at the national and regional levels aimed at innovation development</td>
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<tr>
<td>employment of direct and indirect methods for fostering scientific, technological and innovation development</td>
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<tr>
<td>congruent development of the scientific and technological as well as the innovation and production systems etc.</td>
</tr>
<tr>
<td>introduction of methods aimed at the increase in supply and demand stimulation for science-intensive products</td>
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<tr>
<td>integration of the production, scientific and financial sectors</td>
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<tr>
<td>improvement of the innovative production level</td>
</tr>
<tr>
<td>sound integration of material and moral incentives for the innovation activity (development of an innovation culture)</td>
</tr>
<tr>
<td>strategic partnership between the state and independent economic entities</td>
</tr>
<tr>
<td>fostering the implementation of the whole set of innovations</td>
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</table>

**Figure. 1. Complex strategic approach to regional innovation and investment development model formation** (author’s development)
Increase in the importance of regions in the national economy stabilization and increase in its competitiveness demand formation of relevant innovation mechanisms for the regional competitive advantages enhancement with the specified investment funding.

The funding sources for technological upgrades to the economic complex must be applied in the interest of the region’s innovation development, namely, all the internal and foreign investments must be directed at the knowledge-based industry.

Regional innovation and investment system should be regarded as a complex system interaction of elements, in which businesses, public authorities, the government and local self-government bodies, research and education institutions, private organizations and innovation transfer institutions cooperate, thus, creating an opportunity for the use of the available innovation and investment potential of the region.

Innovation and investment potential of the region is a dynamic and adaptive multidimensional qualitative characteristic of the economic unit, the components of which are the scientific and technological, engineering and manufacturing, resource and human resources potential employed in the innovation and investment processes, a market for innovation products and the institutional capacity of the state to foster and support innovation and investment processes development in the region.

The regional economy must demonstrate high resilience in adjustment to changes in the external environment in order to survive and develop competences as well as actively form its life information space based on innovation activity deployment.

The primary step towards the rational use of the region’s innovation and investment potential is formation of the innovation market with the availability of the following components: firstly, a market for innovative products, secondly, a market for the appropriately qualified labour force. The regional innovation market is based on the given institutions: an information network for innovations, education institutions, innovation banks, non-governmental innovation support funds, technology implementation and transfer centers and innovation exchanges. Herewith, the information network for innovations is regarded as a data mining system, which
supports innovation activity and research and technology advancement. Therefore, it acts as an intermediary between the producer and the consumer of innovative products.

Successful functioning of the information network in the region demands creation of an opportunity to access the region’s innovation products database in other regions. Cooperation of innovative technologies implementation centers with higher education and research institutions, which propose their developments in the technological and effective industrial management sectors, are a prerequisite for promoting innovations.

The multidimensional classification of regions in terms of investments is grounded on the given system of indicators; gross regional product; volume of production; volume of agricultural produce; capital stock size; investments in capital stock; foreign investments; volume of retail turnover; incomes of the population; unemployment; tax and duties return to the budgetary system.

The primary tasks of the region’s innovation and investment system are presented in fig. 2.

<table>
<thead>
<tr>
<th>The primary tasks of the region’s innovation and investment system</th>
<th>provisions for innovative enterprise development in the region; creation of conditions for innovative product manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>organizational and financial support in holding innovation-based events; technology transfer organization</td>
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<td></td>
<td>organization of cooperation between entrepreneurs and research institutions</td>
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<td></td>
<td>low internal and external investors’ activity</td>
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<td></td>
<td>formation of a communication network between enterprises, regional authorities and local self-government bodies</td>
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<td></td>
<td>production systems formation; fostering human resources competences enhancement</td>
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</tbody>
</table>

**Figure 2. The primary tasks of the region’s innovation and investment system**

(compiled on the basis of sources 3-9 development)
Foreign investors will not come to the regions with the underdeveloped infrastructure and outdated production techniques and technologies at enterprises.

With the account taken of the abovementioned, it is considered necessary to improve the investment attractiveness of the innovation objects by means of introducing innovative products support and various services or support at the local level [10, c. 170].

Study of the approaches to evaluation of the innovation and investment sphere of the region enables to determine the basic indicators for evaluating the investment and innovation potential in the region in a table 1.

Table 1

<table>
<thead>
<tr>
<th>Potential</th>
<th>Indicators for evaluating</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Investment potential</td>
<td>direct investments in the economy of the region</td>
<td>thousand, UAH</td>
</tr>
<tr>
<td></td>
<td>foreign investments in the economy of the region</td>
<td>mln, USD</td>
</tr>
<tr>
<td></td>
<td>public investments</td>
<td>thousand, UAH</td>
</tr>
<tr>
<td></td>
<td>internal investments</td>
<td>thousand, UAH</td>
</tr>
<tr>
<td>Innovation potential</td>
<td>the number of university-educated workers</td>
<td>thousand people</td>
</tr>
<tr>
<td></td>
<td>the number of workers with an academic degree</td>
<td>thousand people</td>
</tr>
<tr>
<td></td>
<td>the number of research workers</td>
<td>thousand people</td>
</tr>
<tr>
<td></td>
<td>advanced technologies implementation and mastering</td>
<td>thousand, UAH</td>
</tr>
<tr>
<td></td>
<td>new products manufacturing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the number of patents, certificates, projects and</td>
<td>quantity</td>
</tr>
<tr>
<td></td>
<td>innovation programs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the amount of funding for science and education</td>
<td>thousand, UAH</td>
</tr>
<tr>
<td></td>
<td>development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>availability of technological parks as well as</td>
<td>quantity</td>
</tr>
<tr>
<td></td>
<td>innovation and technological centers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>new products manufacturing</td>
<td>thousand, UAH</td>
</tr>
<tr>
<td></td>
<td>expenditure on implementing innovations</td>
<td>thousand, UAH</td>
</tr>
<tr>
<td></td>
<td>the volume of marketed innovative products</td>
<td>thousand, UAH</td>
</tr>
</tbody>
</table>

(compiled on the basis of sources 3-9 development)

When forming regional investment attraction strategies, it is necessary to pay particular attention to the specific structure of capital coming to the economy. It is necessary to attract investments to the most effective industries along with feasible
use of limited resources and guarantee of maximum socio-economic effect aimed at improving the competitiveness of the economy in the region.

Modern regional and national programs are aimed only at direct investments attraction, however, international practices show the importance of portfolio investment for the sustainable development of certain industries of the economy. Regional statistics in Ukraine provides no information of portfolio investment at the regional level and requires improvement in terms of expanding the statistical base on both direct and portfolio investors. In policy measures, it is worth emphasizing attraction of other forms of investment, which will be beneficial for the regional economy.

By 31.12.2018, the sum of 2.5 bln dollars in direct investments was raised in the economy of Ukraine, which is 520 times higher than the sum by 1.01.2000 [11].

Basic inflows of direct foreign investments are made in the form of purchasing the existing assets in Ukraine and are not associated with the establishment of new enterprises. Thus, large-scale structural transformations of the economy due to foreign investment inflow are quite unlikely. Considerable interest from foreign investors lies not in the strategic industries of the state, but in the industries characterized by rapid capital turnover and high profitability.

Investment provision for the Ukrainian economy modernization with uniformity and complementary of its regional complexes has been, is and will continue to be the critical direction of reformation. One of the unexploited resources for improving the investment climate and feasibility of the investment decisions made is the enhancement of professional competences of all stakeholders of the investment activity and investment management professionalism as well as the quality of the overall investment processes state regulation system.

Sound use of the available scientific and technological as well as the innovation potential must become one of the priority tasks aimed at overcoming technological inferiority of Ukraine compared with the leading countries in the world.

The composite investment performance index may be the return on investment index taken in order to display the investment performance results in the region upon the criterion of return on the available investments in the corresponding kinds of
economic activity, i.e. with the account taken of the influence of accrued capital level in various industries of the given region on provision of their further functioning.

Formation of the regional innovation and investment system stipulates evaluation of the innovation and investment state of the regional economy. The system of indices, which characterize the innovation process in the region, may be classified into four groups. The first group (ideas generation): the number of experts, who do research and technical work; the number of doctors and candidates of sciences; staff inventive activity; internal current expenses on research and technical work done using regional organizations’ own resources. The second group encompasses the number of organizations, which do research and technical work; the amount of the accomplished research and technical work; the amount of research and technical work done using own resources; the number of enterprises that implement innovations. The third group (knowledge mastering) includes the total expenditure by innovation activity areas, the number of introduced new technological processes at industrial enterprises, the amount of innovative products commercial manufacturing, the number of implemented innovation proposals. The fourth group covers the amount of marketed innovative products in the region and exported from Ukraine.

Adaptation of technological parks to the Ukrainian economy and regional innovation potential development is the allowance for expanding nationwide innovation-driven growth capacity. Regional approach to innovation activity presupposes conducting macroeconomic reforms and formation of prerequisites for entrepreneurs’ effective performance as well as changes in the innovation and region management sphere.

It is worth not only to cover the sphere of forming the basis for the regional economic policy in the direction of foreign investment attraction as a prerequisite of its adaptation to the peculiarities of the international division of labour, but also solve specific issues of top-priority regional scenario development (regional investment maps), new instruments for foreign investment promotion and modern forms of international investment and production cooperation.

At the regional level, the criterion of industrial production sustainable development
and high product competitiveness realization, design of import-substituting, export-oriented, science-intensive and high technology products, which will promote growth of the population employment rate, their social security, an increase in budget revenues as well as an increase in manufacturing facilities utilization efficiency, is realization of the steps presented in fig. 3.

Figure 3. Steps towards sustainable development of innovation and investment processes in the region encompass (compiled on the basis of sources 12-16 development)

The efficiency of the innovation and investment process in Ukraine and its regions depends heavily on the management organization structure. Institutional support, in particular, which, in accordance with the current legislation in Ukraine, encompasses primarily: specific territories for strategic development, technological parks, research
and industrial parks, plays a critical role in fostering investment attractiveness and the innovation and investment process intensification in the region. Namely, government bodies mediate and implement national policies in the field of innovation and investment activity.

Implementation of the abovementioned actions requires significant means, which is quite problematic under the present-day conditions. Thus, the main task currently lies in selection of the most appropriate and efficient innovation and investment activity incentivization instruments on the part of the government. The effect of this selection depends on the set aim, available funds and facilities as well as the main investment and innovation potential of the region.

Complex analysis and evaluation of conditions and outcomes of the regional innovation and investment activity of the regions is an integral stage of forming and implementing the integration strategy of Ukraine.

The number of directions of regional innovation and investment potential formation and development depends on the quantitative estimation of the aggregate of generalized components for analytical study of regional potential development dynamics and trends. Therefore, revealing the trends in regional innovation and investment potential evaluation enables to distinguish the level of investment processes and lay the groundwork for investment development programs motivation. The region’s cooperation efficiency describes the state of regional innovation and investment potential implementation. Stable growth dynamics and competitiveness of the regions, in which innovation and investment programs are effectuated, foster increase of secure foreign investments in the socio-economic system.

It is worth both augmenting foreign investments in Ukraine and substantial domestic investors’ activation. Thus, one of the basic current tasks of the government policy is the combination of both internal and external processes development as well as ensuring a favorable investment climate for all business entities.

Domestic and foreign expertise generalization in the field of innovation and investment enables to distinguish a wide variety of business actions to be effectuated at varying management levels with the aim of investment and innovation processes
intensification in the region. Generalization of the abovementioned actions is presented in the table 2.

### Table 2

**Business actions investment and innovation activity support at various management levels**

<table>
<thead>
<tr>
<th>Management levels</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National</strong></td>
<td>application of the entire set of regulatory tools (legislative acts, credit mechanisms, preference schemes) aimed at private investments attraction and innovations implementation; extensive use of indirect incentivitation methods (establishment of management consultancy services, infrastructure development, labour force mobility enhancement); extension of long-term funding of fundamental research and development in the field of new technology development; elaboration of purpose-built programs for encouraging private investment in the innovative activity; development of partnership between the state, industries and the academic community; increase in the level of research and technical expertise; innovation policy shift beyond the national boundaries</td>
</tr>
<tr>
<td><strong>Regional</strong></td>
<td>enterprise innovation solutions support within the framework of the external business activity of the local authorities; fostering involvement of small businesses in the region in large companies’ innovation projects; information support and consulting of innovation and investment projects by regional innovation centers; research and development organizations involvement in enterprises technology modernization; enterprises management consultancy organization; support to functioning clusters and formation of a new network of innovation businesses; increase in regional infrastructure components; establishment of specialized technology transfer centers for small and medium-sized businesses; encouragement of business partnership development between regional research and education centers and business entities; tax benefits aimed at fostering regional investment and innovation development; earmarkings for regional government bodies; effectuation of purpose-built regional innovation and investment activity support programs</td>
</tr>
<tr>
<td><strong>Entrepreneurial</strong></td>
<td>governance mechanism impact broadening for investments made in innovations uptake and implementation; strategic alliances formation, involvement of external consultants in enterprise innovation strategy development and innovation project business plans preparation; ability to fulfill government order; venture capital mobilization</td>
</tr>
</tbody>
</table>

(author’s development)
For the purpose of innovation and investment activity intensification at the regional level, implementation of innovation-oriented development strategy for regional investment activity is needed. Areas of realization of innovation-oriented strategy of investment development of the region: formation and development of the innovation complex of the region; creation of highly competitive regional environment that stimulates activization of investment activity of the region, attraction of capital into the region's economy; structural diversification of the foreign economic sector of the region on the basis of innovative technological development and the spread of interregional and cross-border cooperation; expansion of existing and creation of new strategic competitive advantages of the region; distribution and strengthening of strategic positions and international economic relations of the region, increasing the effectiveness of the region's participation in the international division of labor; the development of cross-border cooperation and the creation of a network of territorial clusters, which will realize the potential of innovation activity in the region.

One of the ways to fulfill this task may be the elaboration of an effectual program for investment promotion at the regional level, which will result in a more effective and rational targeted use of investments in top-priority industries.

Investment activity administrative barrier remedial work cannot be done immediately. Its organization demands ongoing monitoring of the current legislation with the view to evaluate incoherence of individual norms, distinguish excessive administrative procedures and optimize functions and structures of state administration bodies.

Therefore, a conclusion can be made that effective implementation of innovation and investment regional development strategy encourages development of territorial mesoscale structures and provides consolidation of resources and economic interests at various levels of business activity as well as establishment of the innovation and investment development management system with the account fully taken of the regional specificity and government priorities. Implementation of the given strategy fosters regional economic complex and its international bonds development,
promotes coordination of meso-level business entities’ efforts, elaboration of mutual priorities with the aim of cross-regional cooperation and reasonable integration of the country into the world economic system.

Investment activity of the region is determined by its income level with regard to economic growth potential and, respectively, investment attractiveness and the possibility of investment with accumulated potential, and the liquidity ratio, which characterizes cashflow movement in the region and the ability to transform the accrued capital into real cash. Profitability of the region with regard to its impact on its investment activity is determined by the indicators of the obtained gross revenue in the region and the factors which extend influence on it as well as real income of the population, namely, the amount of profit-making enterprises, inflation level and export-orientedness of the region etc.

Research and development systems functioning and innovation development are influenced by multiple exogeneous and endogeneous factors. This requires their systematization, definition of strengths and possibilities, which are feasible to be used when conducting a complex system of changes.

The majority of regions are characterized by structural deformations and development and production potential depletion. Developed industrial regions demonstrate a high level of capital stock wearout, and in some industries it tends to be critical. Modernization rate and investment quote in the fixed capital in these regions are insufficient.

Effective regional innovation and investment systems formation with the feasible use of the available innovation and investment potential will ensure funding and regional development stimulation with the account taken of the local specificity of regional programs and will create new skilled workplaces to provide for the socio-economic development of the region.

Under the conditions of globalization, implementation of the innovation and investment strategy of the region gains importance, which would ensure qualitative changes of the production and export profile towards the emphasis on more technology-savvy and competitive products, innovation and investment development
of manufacturing in the region with the aim of its competitiveness enhancement as well as ultimate and complex utilization of all available resources in the region (Fig. 4).

**Figure 4. Regional innovation and investment development concept**
(compiled on the basis of sources 12-16 development)
In the process of regional investment promotion strategies, it is necessary to pay particular attention to the composition of capital coming into the economy. Modern regional and national programs are aimed only at direct investment attraction; however, international practices justify the necessity of portfolio investment for the sustainable development of certain sectors of the economy. Regional statistics of Ukraine does not contain information on portfolio investment at the regional level and requires improvement of the aspect of statistical base sprawling both through direct and portfolio investments. Program activity should emphasize promotion of all kinds of investment, which may be particularly beneficial for the regional economy.

The majority of the regions in the country mainly do short-term planning with problems to be solved by the socio-economic development plan are limited to the solution of current needs to provide for the correspondent living standard of the population. However, the primary issue of the region’s competitive activity is the direction of its innovation and investment development with the application on condition of innovation and investment potential application with obligatory implementation of innovative technologies, which requires various developments for differing investment volume and behaviour.

Investment provision of the Ukrainian economy modernization in harmony and complementarity of its regional complexes remains the prime direction for reformations. One of the underutilized resources of investment climate amelioration and the feasibility of investment decision-making is the increase in professionalism of all investment activity stakeholders, investment management professionalism, the and quality of the entire investment processes government regulation system.

The basic directions of innovation and investment potential development at the regional level are as follows: enhancement of socio-economic strategy competitiveness; creation of favourable conditions for positive investment climate formation in the region as well as in the country; positive regional investment image formation; free access of potential investors to the investment proposal catalog of the region. Herewith, the precondition of the efficacy of the feasible innovation and
investment potential utilization strategy is the establishment of the action plan in the government, taxation, monetary and foreign economic spheres.

It is important to give top priority to innovations at all levels and in all government bodies. The top-priority directions of regional innovation and investment development aimed at present-day socio-economic development of the region involve machine building and knowledge-intensive production, fuel and energy complex for energy-efficient and non-emitting energy technologies implementation.

**The conclusion of this study and further research in this area.** The increasingly intensive processes of scientific, financial and production companies integration into various large entities of various forms of vertical or horizontal corporation business in the region, along with other positive results, may become factors for the proper sustainable scientific, technological and financial basis for innovation activity development.

The main aim of the effective use of innovation and investment potential in the region is creation of favourable conditions for the increased fundraising from diverse business entities for the regional innovation activity. It is worth fostering efforts and resources for fulfilling the primary stages of large-scale investment projects, opening prospects for the application of capital provided by various business entities.

Therefore, effective implementation of the regional innovation and investment potential is possible only on condition of complex innovation and investment processes support in the region; organizational, technical support and human resourcing; funding of the innovation and investment activity; investment and innovation incentivation mechanism.

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