

## Chapter 2

# MECHANISMS OF USING AND INTRODUCING INNOVATIONS IN ENSURING OF DEVELOPMENT THE ECONOMIC ENTITIES

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**SMARTIZATION AS AN  
ALTERNATIVE TO  
INNOVATIVE  
ACTIVITY**

Innovation has always been driving force of the progress. It is innovation that allows the company to apply the skimming strategy, leaving behind competitors, improving their performance and, sometimes, welfare of countries and the world as a whole.

However, innovation has two drawbacks: they are expensive and very few of them are commercially successful.

If we pay attention to statistics, then very small numbers of industrial enterprises are innovative-active: from 16 to 19% in recent years (Table 2.1).

The enterprise can accelerate and (or) reduce the cost of the innovation process. This can be done at the stage of innovation development at the expense of the fundamental and applied developments of partners – third-party enterprises and institutions. The main partners are:

- business angel – a private investor, that invests in innovative projects (start-ups) at the stage of setting up an enterprise in return for returning investments and equity capital (blocking and, rather than controlling).
- innovation fund – a fund of financial resources, created for the purpose of financing scientific and technical developments and risk projects. The source of financial resources is the sponsorship of firms and banks. The funds of the fund are distributed among the applicants for investment on a competitive basis;

Table 2.1

**Total expenditures for innovation activities**

Year	The share of enterprises engaged in innovations	Total cost	Including directions					
			research and development	Including		acquisition of others external knowledge	the purchase of machinery equipment and software	Other expenses
				Internal GDR	external GDR			
%	UAH million							
2013	16.8	9562.6	1638.5	1312.1	326.4	87.0	5546.3	2290.9
2014	16.1	7695.9	1754.6	1221.5	533.1	47.2	5,115.3	778.8
2015	17.36	13813.7	2039.5	1834.1	205.4	84.9	11141.3	548.0
2016	18.9	23229.5	2457.8	2063.8	394.0	64.2	19829,0	878.4
2017	16.2	9117.5	2169.8	1941.3	228.5	21.8	5898.8	1027.1

*Source: compiled by the author according to the State Statistics Service [2]*

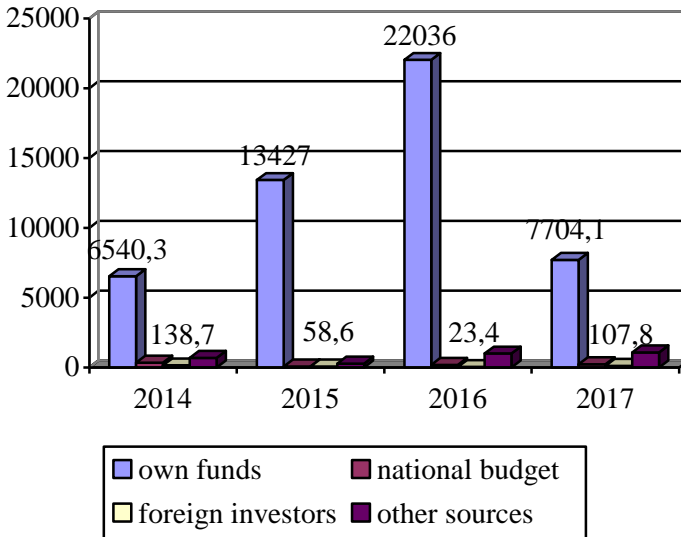
- grantees providing grants, that is, money or other means transferred by citizens and legal entities (including foreign ones), international organizations for conducting specific research, drafting bills, training personnel, and other purposes on the terms of the grantor. Grants are provided free of charge and without refund [1].

It should also be noted that Ukrainian enterprises are not yet able to attract foreign investment to finance innovation (Figure 2.1).

From the figure one can see how the financing of innovation activity in industrial enterprises has decreased: almost 3 times in 2017 compared with 2016. So this confirms the assumption of the first disadvantage.

Confirmation of the second disadvantage of introducing innovation activity is evident from Table 2.2, where a small part of the volume of the realized innovation product in the industrial volume is still decreasing with each passing year and in 2017 it is less than 1%.

Thus, we can assume that in modern realities, Ukrainian industrial enterprises need to look for another way to increase their welfare apart from innovation activity. Moreover, the author believe that not always



**Figure 2.1 Sources of funding for innovative activities of industrial enterprises**

*Source: compiled by the author according to the State Statistics Service [2]*

(not at all stages of the life cycle) innovation is necessary. Innovation is a breakthrough tool; it should be used at certain stages of the enterprise's life cycle (Figure 2.2).

Therefore, innovations should be used at the following stages:

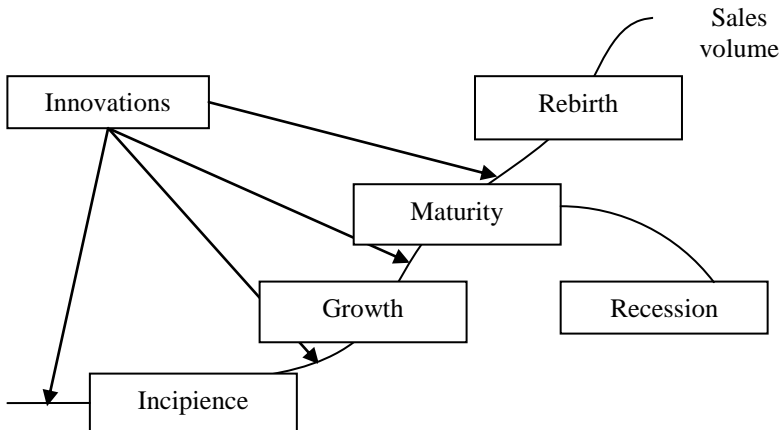
- the birth of the enterprise – the stage preceding the establishment of the enterprise, its occurrence / formation. Probably the best stage for innovation: the enterprise still has no competitors and there is time to increase volumes;
- from incipience to growth and from growth to maturity – the right time for process or managerial innovation: the enterprise has not yet increased the necessary funds for decent competition.
- for the sake of revival – the second (after the birth) on the importance of the stage of innovation: there are already many competitors on the market, sales / production are falling, growth is slowing down. This situation is due to the high level of competition and saturation of the market. At the maturity stage, enterprises can also generate a good level of profit, but the transition to a downturn is inevitable unless implemented.

Table 2.2

**Implementation of innovations at industrial enterprises**

Year	Share of enterprises that introduced innovations. %	Introduced new technological processes and processes	incl. low-waste, resource-saving	Introduced production of innovative types of products, names	Of these, new types of technology	Share of realized innovative products in volume of industrial, %
2013	13.6	1576	502	3138	809	3.3
2014	12.1	1743	447	3661	1314	2.5
2015	15.2	1217	458	3136	966	1.4
2016	16.6	3489	748	4139	1305	...
2017	14.3	1831	611	2387	751	0.7

Source: compiled by the author according to the State Statistics Service [2]



**Figure 2.2 Application of innovations at certain stages of the company's life cycle**

Source: developed by the author

- at the downside, the company loses its competitiveness, sales and profits are falling. Lack of innovation reduces enterprise profitability. All decisions become very conservative. The enterprise refuses any innovations and even does not go to the

minimum risk, goes into a mode of hard economy and reduction of expenses, can begin to leave the industry or go to the stage of rebirth. But at this stage, introducing innovation is very difficult, because, as a rule, the company has already spent almost all the resources to maintain its life at the stage of recession.

A reality of Ukrainian industrial enterprises is that most of them are in the stage of maturity or decline, that is, at the stages when innovations require significant funds for their introduction.

An alternative to innovation is the enterprise's smartization. First of all, it should be noted that the author adheres to the classical definition of the term innovation, namely the definition I. Schumpeter [3] as a volatile process of introducing new combinations in five cases: the introduction of a new product, the introduction of a new method of production, the opening of a new market, the conquest of a new source of raw materials or semi-finished products, regardless of whether it existed before, in general, the introduction of a new organizational structure.

The term "smartization" recently often used by domestic and foreign scientists [4-7], but this term does not have the definition. Moreover, this term is for the most part considered in the context of smart-city rather than industrial enterprises.

Smartization term corresponds to the approach of P. Drucker [8] to the criteria to be met management targets that have to be written in the context of "reasonable management" with such development:

- 1) specific (what needs to be achieved?);
- 2) measurable (how will the result be measured ?);
- 3) attainable (at the expense of what can achieve the goals);
- 4) relevant (definition truthfulness of purpose);
- 5) time-bounded (definition of time the end of which the goal should be achieved).

Under the smartization, the author understands the targeted implementing at the enterprise the latest world's innovations in order to ensure its economic security.

In its turn, economic security is a state of the economic system characterized by the presence of competitive advantages, which are achieved by the effective use of existing own and borrowed resources, timely implementation of a set of measures to maintain the normal working conditions of the system to maximize the achievement of the goals in the short and long term in conditions constant change of environment [9].

Thus, *smartization* – is the targeted optimal implementation of the enterprise's latest global achievements in innovation to ensure efficient use of existing own and borrowed resources, increasing synergetic efficiency of all processes at the enterprise in order to maximize achievement of objectives in the short and long term in constant changes in the surroundings.

Like any process, a smartization consists of several stages defined by its definition:

1. An analysis of the enterprise's activities in order to identify weaknesses
2. Definition of global proposals for the implementation of innovations for these processes
3. Budget calculation for implementation
4. Correction of measures to ensure maximum synergy effect and depending on the budget of the enterprise
5. Development of a plan for the gradual introduction of a specific complex, specifying terms, budget and responsible persons
6. If not all measures for the processes that were identified in the first stage have been introduced, the plan for the complete smartization of the enterprise
7. Monitoring of interim results and, if necessary, its correction
8. Constant monitoring of all processes of the enterprise in order to identify weaknesses

Smartization – is a very individual process that depends on many factors of the internal and external surroundings of the enterprise: the size of the enterprise, the country of operation, the scope of operation, dependence on resources, the availability of qualified personnel, etc. However, for all spheres it is possible to distinguish common features. So, for domestic industrial enterprises:

- the dependence on energy. In Ukraine, each year, the cost of energy increases, which significantly increases the cost of the enterprise. To impose this direction, it is possible to introduce two options:
  - a) transition to alternative sources;
  - b) review of interaction with suppliers and producers of electricity.It is also worth considering the transition to interchangeable resources.
- the use of high-tech automated equipment. Such equipment, firstly, significantly less energy, secondly, it accelerates

production, and thirdly, minimizes the use of human resources, which avoids the costs of subjective errors, illnesses, the dismissal of workers, etc. From 01.01.2019 the minimum wage increases to UAH 4,173, what leads to an increase in taxes and expenditures. Moreover, the scientific and economic growth of China allowed the market to offer analogues of European equipment, which sometimes even surpass them in technological capacity, but much cheaper. The development of world logistics and trade allow Ukrainian enterprises to import them into the country without significantly increasing their final value;

- the implementation of a risk management culture. Risk management should be considered at the enterprise as a system process, in which all the employees of the enterprise take part.
- The introduction of management accounting and analysis. Accounting in many respects makes it impossible to in-depth analysis of all processes in an enterprise. Thus, the enterprise's smearing can be delayed in the first stage, because the company does not have sufficient relevant information for analysis. Moreover, the development of the software allows integration of management accounting and analysis in parallel with the accounting so that workers do not need to spend time on management accounting, all this happens automatically and allows you to receive a variety of reports for making managerial decisions.
- the social responsibility [10].
- the use of open procurement of resources – raw materials, components, etc. With only clarification – where it is possible, because there are a number of industrial enterprises that choose the supplier of optimal raw materials through years of trial and error. However, unified raw materials and components such as packaging, water, computer equipment can be purchased every time from new suppliers – those who offer with other similar features, the lowest price.

Several times we turned to responsible persons who must take part in the smartization of the enterprise. In order to prevent loss of information or reconsideration of processes, we recommend creating a working group of enterprise' smartization, which should be headed by a top manager (director, financial director) and should include heads of all major departments of the enterprise.

### *Conclusion*

As the study showed, the enterprise's smartization is a decent alternative to innovation-activity, which should be used by domestic industrial enterprises.

*Smartization* – is the targeted optimal implementation of the enterprise's latest global achievements in innovation to ensure efficient use of existing own and borrowed resources, increasing synergetic efficiency of all processes at the enterprise in order to maximize achievement of objectives in the short and long term in constant changes in the surroundings. A smartization consists of several stages, an individual process for each enterprise, which depends on many factors of the internal and external surrounding of the enterprise. The study revealed its common features for domestic industrial enterprises. Also were presented the stages of smartization, which must be carried out at the enterprise by the working group on smartization.

### **References**

1. *Bashynska I. (2012) Marketing communications of innovation-active industrial enterprise: formation, integration, development: monograph. – Donetsk: Publ. "Noulig" (Donetsk branch), 199 p.*
2. *<http://www.ukrstat.gov.ua>*
3. *Schumpeter J. (1982) Theory of Economic Development. - M.: Progress, 1982. - 456 pp.*
4. *Filyppova S.V., Malin O.L. (2017) Public-private partnership: problem issues and strategic tasks in the context of the smartening of innovation development [Electronic resource] Economy: realities of time. Scientific Journal. - 2017 - No. 5 (33). - P. 5-15. - Journal Access Mode: <https://economics.opu.ua/files/archive/2017/No5/5.pdf>*
5. *Bashynska I., Filippov V.Yu. (2018) Reasonable system of urban passenger transport as a component of Smart City: monograph. – Kharkiv: View of "Dios Plus", 2018. - 120 s.*
6. *Iryna Bashynska, Volodymyr Filippov, Nadiya Novak (2018) Smart Solutions: Protection NFC Cards with Shielding Plates, International Journal of Civil Engineering and Technology (IJCIET) 9 (11), 2018, pp. 1063 - 1071*
7. *Francesco Schiavone, Francesco Paolone, Daniela Mancini (2018). Business model innovation for urban smartization. Technological Forecasting and Social Change, 2018, DOI: 10.1016/j.techfore.2018.10.028*
8. *Drucker P. Management Practice / P. Drucker. - M. Williams, 2007. - 400 p.*



9. *Bashynska I. (2014) Section 3.2. Clarification of the definition of the definition and economic content of the category "economic security of the enterprise" (pp. 14-20) to the count. monographs Economic security in the conditions of globalization of the world economy: [collective monograph in 2t.]. – Dnipropetrovsk: "FOP Drobyazko SI", 2014 - T. 2. - 349 p.*
10. *Filyppova S.V. (2017) Social responsibility in the strategy of management of a domestic enterprise: problem issues Integration of the mechanism [Electronic resource] / Economy: realities of time. Scientific Journal. - 2017. - No. 2 (30). - P. 5-17. - Journal Access Mode: <http://economics.opu.ua/files/archive/2017/No2/5.pdf>*

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**STATE AND PROSPECTS OF PRODUCTION OF FUNCTIONAL FOOD PRODUCTS: INTERNATIONAL EXPERIENCE**

The popularity of “healthy” food throughout the world is constantly growing. The current development of the world market of health nutrition describes the following figures: in 1995, the sales of “health products” amounted to 10 billion US dollars, after 5 years, in 2000 – 15 billion dollars, in 2002 – about 33 billion dollars, in 2008 – 75 billion dollars. Today, the potential of this segment of the food market is estimated at \$ 120 billion, representing 5% of the total volume of the world food market. Almost 40% of the market for health foods is owned by the United States, 25% by Japan, and more than 30% by Central European countries, among which Germany, Great Britain and France are leading [1].

The populations of these countries are increasingly adhering to the rules and standards of rational nutrition. In Europe, caterpillars began to take into account the personal wishes of customers for cooking from “healthy” ingredients. Retailers are forced to adapt products that are marketed to individual consumers who prefer health products when choosing food.

**Management mechanisms and  
development strategies of  
economic entities in conditions  
of institutional transformations  
of the global environment**

**Collective monograph edited by  
M. Bezpartochnyi**

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The authors of the book have come to the conclusion that it is necessary to effectively use modern management mechanisms and development strategies of economic entities in order to increase the efficiency of their activities. Basic research focuses on financial diagnostics of the enterprise, assessment the quality of services, efficiency of business process management and implementation of innovative projects, monitoring of the labor market, diagnostics of the country’s debt security, and research of the country’s investment image. The research results have been implemented in the different models of development the commercial awareness, smartization, production of functional food products, use of eco-innovation, development of the e-commerce market, formation a new paradigm of work motivation, crisis management of economic security, modern tools of higher education management. The results of the study can be used in decision-making at the level of international business, ministries and departments that regulate the processes development of economic systems, ensuring stability and efficiency. The results can also be used by students and young scientists in modern concepts of the development of economic entities in the context of institutional transformations of the global environment.

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**Management mechanisms and development  
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**Ekonomisko vienību vadības mehānismi un  
attīstības stratēģijas globālās vides institucionālo  
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