

FUTURE TECH PROGRAM AS A TOOL TO INCREASE COMPETITIVENESS OF INNOVATIVE TECHNOLOGICAL ENTERPRISES IN THE INTERNATIONAL MARKET

Zaitsev Ivan Alexandrovich, Chukhrina Victoria Vadimovna, Gurtskoy Lev Dmitrievich

Zaitsev Ivan Alexandrovich
Graduate student of Moscow State Regional Technological University
"Technological University" Korolev

Chukhrina Victoria Vadimovna
Chief Specialist, State Budget Institution Moscow Agency of Innovations

Gurtskoy Lev Dmitrievich
Applicant, AH-Russia scientific and research institute «Center»

Keywords:

government program, innovative enterprises, technological enterprises, the international market, increasing competitiveness, Future Tech, Moscow Government

Abstract:

The article discusses the program of the state budgetary institution “Moscow Agency of Innovations” Future Tech, which is aimed at supporting innovative technological subjects of small and medium enterprises by solving their urgent business problems by students of Moscow universities, as well as its contribution to improving the competitiveness of innovative technology companies in Moscow in the international market.

The article briefly reviews the market for small and medium-sized enterprises, indicates the share of innovative companies. The market needs and requests of technology companies are considered. Examples of innovative companies, partners and program participants are given, as well as an example of business cases that companies provide for solutions within the Future Tech program.

Introduction

In 2020, the Russian economy is rapidly transitioning to a digital model of functioning, which primarily implies the widespread introduction of digital technologies. The economy of Moscow can be called digital, there is a lot of evidence for this, one of which is the PGU portal.mos, a traffic control application, the Department of information technology, which controls the state digital technology network, the traffic control center, and more.

According to the degree of digitalization, Moscow can be compared with the leading European capitals. According to the UN rating, Moscow has become the leader of cities in digitalization, in 2020 Moscow took the first place among Russian cities in the smart city category. Among European capitals, Moscow can compete with cities such as Barcelona, London, Paris and Prague. Moscow can be compared to Tokyo in terms of the development of metro digitalization. (News about Moscow's leadership in the rating of smart cities), (News about Moscow's leadership in the UN rating on digitalization)

In the context of the digital economy, there is a need to develop innovative infrastructure within the city, including citizens, businesses, and city authorities, as only with the development of a common

innovation space, rapid overall development of the economy and all its participants is possible. (Gladkiy, Zaitsev, 2019, pp. 178–182), (Perschina et al., 2019, pp. 610-612)
Innovations ensure sustainable development of the region, participants in relations, and social strata, as well as economic security depends on innovations.

Moscow's innovative potential is growing every year, its innovation activity is at a fairly high level, and the city is actively developing its innovative infrastructure even in the face of sanctions and geopolitical instability. Moscow has 2,298 innovation infrastructure facilities, 36 technology parks, 59 centers for youth innovative creativity, and 17 development institutes. (Zaitsev et al., 2019, pp. 178-182)

Understanding the need for cooperation, participants in economic activities create associations in the form of innovation clusters, as well as joint programs. When making a strategic decision about the further development of the enterprise, management increasingly pays attention to government programs. (Sikyr et al., 2018, pp. 248 - 263)

1. Goal and method

The article discusses the program of the state budgetary institution “Moscow Agency of Innovations” Future Tech, which is aimed at supporting innovative technological subjects of small and medium enterprises by solving their urgent business problems by students of Moscow universities, as well as its contribution to improving the competitiveness of innovative technology companies in Moscow in the international market.

The article briefly reviews the market for small and medium-sized enterprises, indicates the share of innovative companies. The market needs and requests of technology companies are considered. Examples of innovative companies, partners and program participants are given, as well as an example of business cases that companies provide for solutions within the Future Tech program.

2. Results

The Moscow government follows the global trend of cooperation between the city authorities, business and scientific institutions and creates a number of programs aimed at developing innovative technology businesses in the city. In 2018, the Department of entrepreneurship and innovative development of Moscow was established, the subordinate institution of which is the Moscow innovation Agency. The purpose of this state institution is to develop innovations in the city. The innovation Agency brings together business structures, the city and technology companies to make Moscow the world's innovation capital. The Agency helps technology businesses Refine and bring innovative products to new markets. (Moscow innovation Agency)

In Moscow, there are more than 20,000 technological small and medium-sized enterprises (SMEs), of which more than 50% have a shortage of competent personnel, 40% need to develop competencies to solve current business problems (Fig. 1).

Figure 1: Problems of technological small and medium enterprises in Moscow



Source: Analytical data of the state budget of the Moscow innovation Agency.

Enterprises experience a number of difficulties when entering the market. according to surveys , one of the main difficulties is recruitment (Table 1).

Table 1: Difficulties faced by the company when entering the market

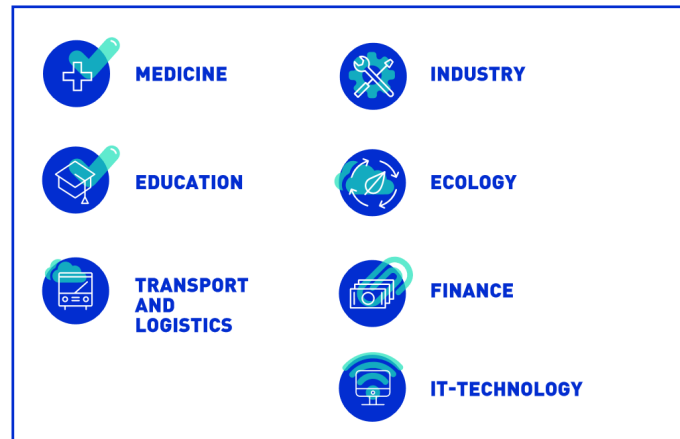
Excessive requirements for the salary	50%
Specialists with the right competencies like stability	45%
The reare not enough specialists in the market with the right specialists	45%
It is not possible to pay a dequate money	33%
They don 't know where to find employees with the right specialists	13%

Source: Analytical data of the state budget of the Moscow Agency of Innovations.

Based on the presented statistics, we can conclude that Moscow innovative companies lack resources to enter the international market. Enterprises have an acute problem of lack of personnel, or rather lack of ways to solve problems, since the final goal is to solve the problem, and the staff is a tool to achieve the final goal. Due to this problem, companies are not competitive enough in the international market. (Sekerin ed al., 2018, pp. 165)

The Future Tech program, implemented by the Moscow innovation Agency, is a tool for increasing the competitiveness of innovative technology companies in the global market. The program solves the problems of technology companies through young people, i.e. students of Moscow universities and graduates. Companies in 7 different areas can participate in the project (Fig. 2). Future Tech program)

Figure 2: *Tracks of the Future Tech program*

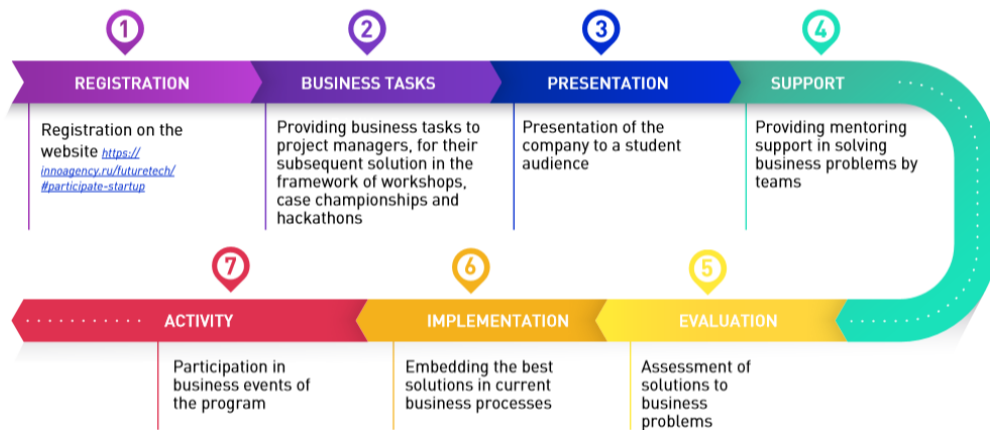


Source: Compiled by the authors.

Future Tech allows you to solve the company's business problems with the help of students participating in the program, get non-standard solutions for business, test your own technologies and hypotheses, get access to a large audience of young professionals and their new ideas, form an innovative brand, and get PR promotion.

The company's path in the Future Tech program is shown in figure 3 (Fig. 3)

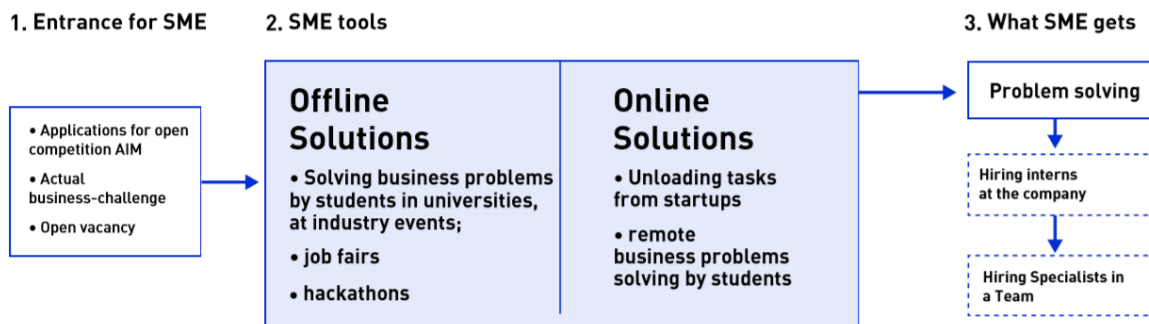
Figure 3: *Chain of company actions in the Future Tech program*



Source: Compiled by the authors.

At the same time, various tools are used to achieve the ultimate goal of solving a business problem (Fig. 4)

Figure 4: *Tools of the Future Tech program*



Source: Compiled by the authors.

3. Implications and recommendations

The program is implemented in two directions – online and offline. Here is an example of an algorithm for conducting a case championship. The case-championship consists of a correspondence and full-time stage. The correspondence stage is held for 2 weeks, and the full-time stage is a pitch session, during which students will present their decision to the expert Commission.

1. Students who want to participate in the case championship are registered on the website <https://innoagency.ru/futuretechjob/#participate>
2. Registered participants are grouped into teams of 4 to 7 people (or with the help of the University)
3. Students receive 25-30 case studies with additional information if necessary (there may be several teams for each task)
4. From all the solutions, the TOP of the best ones are selected, who participate in the face-to-face defense before the expert Commission

The task of the participants is to analyze the situation in 2 weeks, understand the essence of the problem and present solutions. Future Tech provides an organizational mentor and assigns mentors from startups so that participants can ask questions that interest them.

These solutions will be evaluated by representatives of the University, founders of startups, representatives of aim, experts from partners.

Based on the results of full-time defense, the best students can complete an internship at a startup, participate in an Intercollegiate case championship and hackathons.

Here is an example of a case from «Visionary» company. Visionary was founded in early 2019 as a manufacturer of solutions in the field of renewable and digital energy. Since February 2019, the company has been developing Visionary Power Module-a smart energy storage device to reduce the cost of upgrading and maintaining networks in large cities and remote areas. Visionary plans international expansion and studies the global market for point-of-entry into specific regions and segments. Now the company is looking at opportunities to enter the markets of the United States, Africa (North Africa, Nigeria, South Africa), the Arab region, India. The company has given the following tasks to solve for each of the proposed new markets:

1. Determine the total market capacity of energy storage systems and energy management systems.
2. What companies represent these markets?

For example, one of the major players in the energy management system market in the United States is Schneider Electric. At the same time, a big player in the US electricity storage market is Tesla (Power Pack).

3. Find examples of projects implemented using the company's products from Clause 2
4. Determine the cost of projects or the cost of equipment and work (for example, request a tap)
5. Make a list of energy companies (power generating and grid companies), mobile phone tower operators, oil and gas producing companies

Conclusion

Within the framework of the Future Tech program, participants will solve the tasks set, thereby ensuring the competitiveness of the innovative company in new markets. Moreover, the solutions are provided to the company free of charge as part of the program for the development of innovative entrepreneurship in Moscow. The company will not have to spend money on an expensive specialist to solve one specific task, which also saves money.

Students get practical experience in solving real business problems, develop their competencies, and receive confirmation of their competencies from an existing company in the form of a certificate, thank-you letter, or recommendation letter in their portfolio. Also, able students get the opportunity to get a job in a company or take an internship there, which will undoubtedly have a positive impact on their career path.

The Future Tech program ensures the competitiveness of Moscow's innovative technology enterprises in the international market, as well as develops students' applied skills in solving business problems.

References

Future Tech program [Electronic resource]. — Mode of access: <http://futuretech.innoagency.ru/> (accessed: 12.03.2020).

GLADKIY S. V., ZAITSEV I. A. The Role of innovations in ensuring economic security and sustainable development of the region in the conditions of geopolitical instability In: *Actual aspects of institutional Economics: evolution of geopolitical challenges*. Materials of the III international scientific and practical conference. 2019 C.

Moscow innovation Agency [Electronic resource]. — Mode of access: <https://innoagency.ru/ru/> (accessed: 12.03.2020).

News about Moscow's leadership in the UN rating on digitalization [Electronic resource]. - Access mode: <https://mir24.tv/news/16376898/moskva-zanimaet-pervoe-mesto-v-reitinge-oon-po-cifrovizacii-gorodov-mira> (accessed: 12.03.2020).

News about Moscow's leadership in the rating of smart cities [Electronic resource]. — Mode of access: <https://www.kommersant.ru/doc/4275958> (date accessed: 12.03.2020).

PERSHINA K.V., GOROKHOVA A.E., POPOVSKII Iu.N., SEKERIN V.D., Tarabrin Ph.M. Development of manufacturing systems based on integration with controlling as a competitive

advantage of industrial companies. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, volume-8 Issue-6 April 2019.

SEKERIN V.D., GAISINA L.M., SHUTOV N.V., ABDRAKHMANOV N.Kh., VALITOVA N.E. Improving the quality of competence-oriented training of personnel at industrial enterprises In: *Quality - Access to Success*. 2018. T. 19. C.

SIKYR M., ABRASHKIN M.S., SEKERIN V.D., GOROKHOVA A.E. The impact of R&D of high-tech engineering on GDP growth in Russia. In: *International Journal of Mechanical Engineering and Technology*. 2018. T. 9. C.

ZAITSEV I. A., LYFENKO A. A., KHOMYAKOV A. A. Criteria for evaluating the success of the program of innovative development of the city in order to guarantee economic security in the conditions of geopolitical instability in the digital economy. In: *Actual aspects of institutional Economics: the evolution of views and geopolitical challenges*. Materials of the III international scientific and practical conference. 2019 C.