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Deploying a Corporate Learning System at the Innovative Startup

The article discusses an empirical study that was conducted by the authors, in which they surveyed focus groups of young innovative entrepreneurs who are at different stages of creating their own projects. The authors devote particular attention to how training programs for the founders and staff should be implemented as the startup develops from its early phases into a sustainable-growth business.

Many new innovative technology companies have begun to emerge and enter the Russian market. The study of the processes that take place in such enterprises is particularly important to answering the question of what steps should be taken to increase their survival rate during the early stages of their existence. To foster innovative projects

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at sustainable enterprises, a favorable environment must be created by providing modern facilities and developed innovative infrastructure, securing business partnerships, analyzing and applying international best practices, offering individual mentoring opportunities, as well as conducting various educational programs, seminars, and workshops. In the present study, we will consider the role that training plays in the life of a startup as it grows, and we will determine the most effective sociocultural training approaches that can be used to ensure the stable development of young innovative organizations.

The purpose of this study was to explore how modern innovative Russian startups address the need to train staff and managers, and in particular: to determine whether managers and employees were aware of the existence of this need, whether they had already adopted specific measures to meet it, the forms and content of the training programs that they prefer, and their willingness to spend company funds on staff training.

In the current study, we distributed questionnaires to two focus groups. Respondents from the first group (hereinafter referred to as Group A) were engineers and other professionals focused on innovation in science and technology. They included undergraduate and graduate students engaged in R&D, as well as the heads of innovative company divisions that have expressed their intention to commercialize their project through a spin-off. Representatives of Group A presented their innovative projects during the seed capital phase of the “Russian Capital for Russian Innovations” Russian Exposition of Business Angels and Innovators [1]. Respondents from the second group (hereinafter referred to as Group B) were young entrepreneurs who had already founded and registered their own businesses within the last year and received additional training in how to apply for grants from the Ministry of Economic Development of the Russian Federation through the “GROWTH” Young Entrepreneur Training Program [2]. Thus, the respondents in Group B were the founders and leaders of their own organizations, which were mainly still in the startup phase [3].

The questionnaire included both open-ended and closed questions. The questions asked whether the respondent’s company

offered additional training opportunities for its staff, whether the respondent was personally prepared to receive training; whether, in the opinion of the respondent, coworkers at the company needed training; what specific forms of training and training programs were suitable for organizational staff; the amount of financial resources that the company could allocate for training personnel; etc.

Most of the respondents in Group A recognized the need for training, both for themselves and for their team leaders. At the same time, 88 percent of respondents said that future regular employees would also need to undergo training. All respondents were unanimous in their willingness to take training classes. The most important areas for staff training that were identified include the art of negotiation (69 percent), project management (56 percent), company planning and management decisions (47 percent), conflict management (31 percent), and human resources management (25 percent); personal effectiveness and the fundamentals of entrepreneurship (19 percent each); crisis management (12 percent); and cross-cultural communication (six percent; see [Figure 1](#)).

There were also single responses indicating the need for additional trainings in marketing; reporting; legal support for establishing a company; and production management. Thus, for these members of innovative teams that had been incubated at universities and engineering environments and who were applying for seed funding, the main problems consisted in how to organize and conduct external and internal communications. However, these teams had yet to fully realize the specific goals for their businesses.

The following were identified as the most acceptable forms of training: distance learning (63 percent), trainings (63 percent), round tables (44 percent), seminars (31 percent), and individual learning plans (19 percent). Such formats as lectures were hardly ever mentioned, which indicates the respondents' preference for interactive forms of instruction. The popularity of distance learning was undoubtedly because respondents were mainly occupied with their projects (and thus did not have time to attend in-person classes). The majority of respondents (69 percent) believed that the optimal duration of training should be 72 hours; 25 percent chose 40 hours, and 13

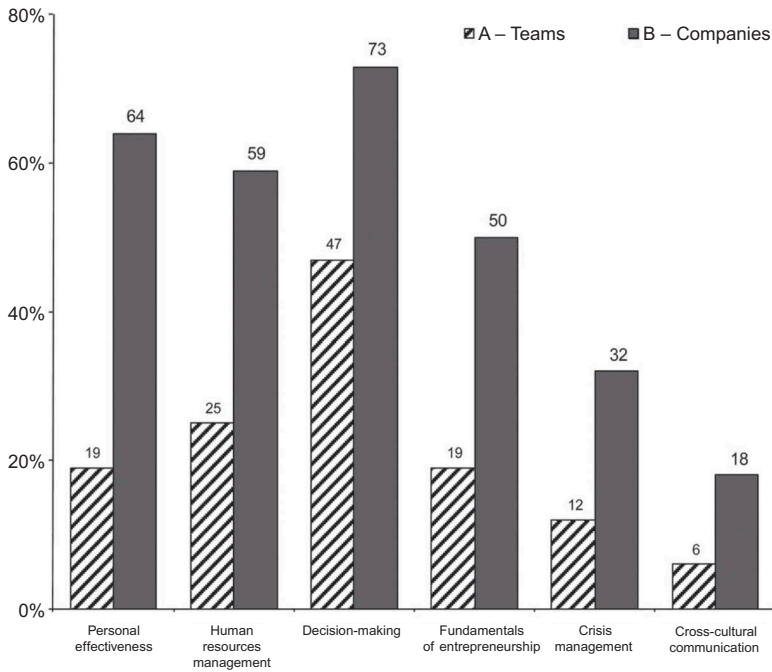


Figure 1. The Changing Needs of Company Founders for Training Programs as Their Startup Develops from the Articulation of the Business Idea (Seed Capital Stage) and a Small Team into a Young Innovative Company

percent believed that 10 hours was optimal. No respondents indicated extended periods of study (250 hours or more).

The following were among the training programs that respondents from Group A would most typically cite as already completed before: “Innovation Management,” “Startup Businesses,” “Innovation Management in the University,” and other courses that provide general ideas about entrepreneurship as a way of commercializing an existing project.

As for the training of the other members of the innovative team, the respondents recognized the need to train all categories of employees named in the questionnaire: managers (50 percent); developers (50 percent); marketers (31 percent); members of the

production unit/service department (31 percent); sales staff (19 percent); accountants (13 percent); and lawyers (13 percent). At the same time, some of the most useful areas for training that respondents identified related to general issues in the organization of the entrepreneurship: protection of intellectual property (50 percent); time management (44 percent); financial analysis (38 percent); lean production (31 percent); sales technologies (25 percent); stress management (25 percent); Internet marketing (19 percent); practical marketing (19 percent); and team building (13 percent).

And, finally, when answering the question of how much money should be spent annually on employee training and professional development, the most frequently selected option was “up to RUB 100,000” (50 percent of respondents). Another 13 percent expressed their willingness to spend up to RUB 300,000. However, 13 percent also proposed limiting training budgets to RUB 10,000.

In general, the obtained results testify to the fact that though the respondents in Group A unanimously acknowledged that all categories of employees, including themselves, needed additional training in business, they nevertheless did not fully understand who and what should be taught, nor were they aware of what outcomes should be achieved as a result of training.

In the survey of the respondents from Group B, the majority also recognized the need for training for themselves, for the management team, and for ordinary employees (96 percent of respondents, or almost eight percent more than in Group A). When answering the question of which training areas would be of personal interest, the respondents expressed an increased interest in training programs in company planning and management decision-making (from 47 percent to 73 percent) as well as human resources management (from 25 percent to 59 percent). Interest in the field of conflict management increased from 31 percent to 41 percent, which can be explained by the fact that managers must face the real problem of integrating members into the innovative project team at the team building stage (see [Figure 1](#)).

Respondents indicated that such training areas as personal effectiveness and the fundamentals of entrepreneurship were the

most important (64 percent and 50 percent of respondents, respectively). Respondents expressed a heightened interest in crisis management and even cross-cultural communication. The latter testifies to the fact that young entrepreneurs are already thinking about ways to enter international markets at the early stages of their company's existence.

When answering the question of what knowledge would help respondents improve their productivity during the early stages of their company's existence, the founders indicated that they needed to improve their knowledge of such specialized areas of business process organization as accounting (23 percent), Internet marketing (23 percent), competitor analysis (14 percent), business planning and strategic management (nine percent), project management (nine percent), and recruitment (nine percent).

The following training formats were identified as being the most suitable: trainings (81 percent), distance learning (32 percent), round tables (36 percent), and individual learning plans (32 percent). Less popular formats included seminars and lectures (27 percent of respondents for each). Both Group A and B identified trainings as the most practical format that best takes account of the realities of the business world by a wide margin. However, in Group B we observed a decline in the popularity of such formats as distance learning (from 63 percent to 32 percent) and an increase in the perceived desirability of lectures (from six percent to 27 percent), where the trainee has the opportunity to directly communicate with a leading specialist and obtain specific advice.

Most respondents in Group B reduced the optimal duration of training programs to 40 hours (64 percent) and even all the way down to 10 hours (27 percent), and only 27 percent chose programs lasting 72 hours. This is a marked contrast to respondents in Group A, where the majority preferred the latter period of study (69 percent). Obviously, company founders did not prefer the longer training periods because of their heavy workload at this stage in their company's existence (see [Figure 2](#)).

As for the training of the other members of the innovative team, all respondents confirmed the need to train all categories of employees named in the questionnaire: sales staff (59 percent); founders (55

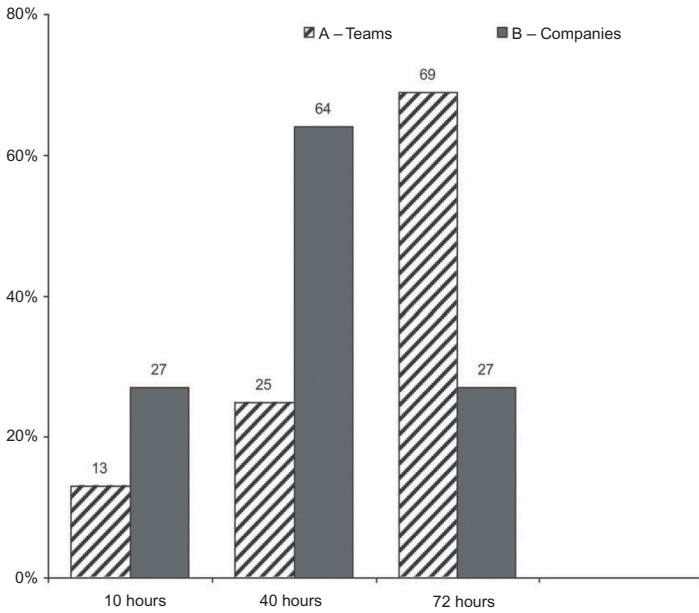


Figure 2. Changing Preferences for the Optimal Duration of Training Programs for Founders as Their Startup Develops from the Articulation of the Business Idea (Seed Capital Stage) and a Small Team into a Young Innovative Company

percent); managers (41 percent); marketers (41 percent); members of the production unit/service department (41 percent), accountants (14 percent); lawyers (14 percent), and developers (9 percent).

Compared with the answers of the respondents in Group A, one can single out a tendency to expand the role of training for “sales staff” (from 19 percent to 59 percent) and marketers (from 31 percent to 41 percent), which is explained by the importance that founders place on developing a competent strategy for entering the market and ensuring active sales during the early stages of the company’s existence. Because company founders tend to be themselves well versed in the technical details of their operations and deliverables, they expressed less of a need to provide additional external training to their production/service personnel. Nevertheless, they were more likely to express interest in this area than

respondents in Group A, though the difference was not as great (38 percent as opposed to 31 percent).

Group B considered the following to be the most useful areas for training: time management (68 percent); sales technologies (64 percent); Internet marketing (59 percent); practical marketing (59 percent); financial analysis (50 percent); team building (41 percent); stress management (36 percent); protection of intellectual property (32 percent); and lean production (14 percent). Group B respondents were also more likely than those in Group A to express a desire to receive training in sales technologies (64 percent as opposed to 25 percent) as well as in practical and Internet marketing (59 percent as opposed to 19 percent for both). This difference in the responses between the two groups can also be explained by the fact that young companies must develop their sales at this stage, when they are just entering the market. The share of respondents interested in team building issues increased from 13 to 41 percent in connection with the need to recruit staff for their enterprise. Group B respondents were less interested in learning about how to protect intellectual property, which can be explained by the fact that company founders had already acquired the necessary minimum knowledge in this area when they patented their first innovation around which they founded their new company (see [Figure 3](#)).

Respondents replied that they could not accurately determine the optimal duration of training for their staff (apparently due to lack of real experience). Thirty-six percent each chose 40 hours and 72 hours, 32 percent determined that the length should be 10 hours, and 14 percent thought that 250 hours of training would be appropriate. No respondents specified longer training programs, which confirms the general trend favoring short-term programs.

And, finally, when answering the question of how much money should be spent annually on employee training and professional development, the most frequently selected option was “up to RUB 100,000” (55 percent of respondents), just as was true of Group A. However, another 32 percent of respondents believed that the training budget should be limited to RUB 10,000, and only one respondent was willing to spend RUB 300,000 but with the reservation “depending on the result.” The decrease in the amount of money that

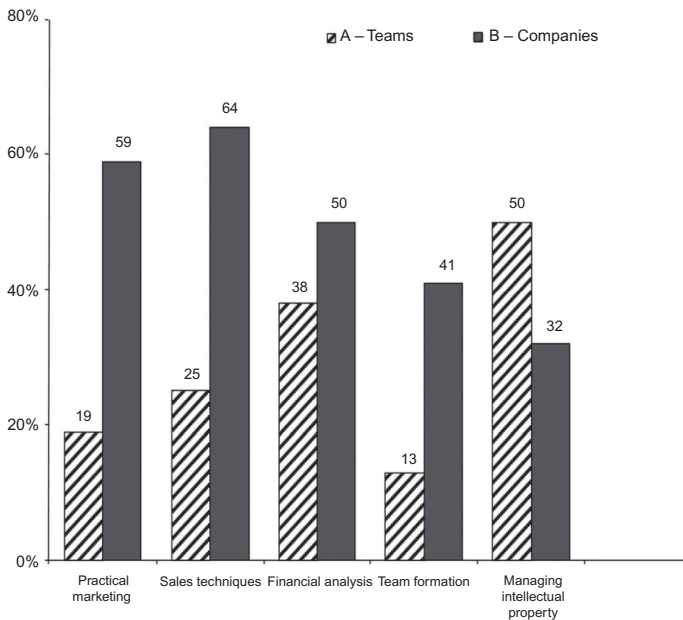


Figure 3. The Changing Needs of Company Founders for Startup Staff Training Programs as Their Startup Develops from the Articulation of the Business Idea (Seed Capital Stage) and a Small Team into a Young Innovative Company

Group B respondents were willing to spend each year on staff training in comparison with Group A suggests that young companies have particularly limited funds at this stage, and the founders of established enterprises are more conservative about how they spend their resources.

As the above research and our private communications show, most company founders are aware of the need for training, but they do not immediately understand how to use training tools (both for themselves and for their staff) in order to ensure the sustainability of their business and improve its chances for survival. Counting on personal intuition and creativity often leads entrepreneurs to become overconfident about how to organize and manage business processes. At the same time, as we see, most innovative entrepreneurs objectively lack the fundamental knowledge in which to ground their business

ambition and managerial self-reliance. Back to when their startup idea was only beginning to take shape, many entrepreneurs would fail to invest appropriate efforts in systemically learning about managing individual organizational and operational aspects relevant to their future business. We witnessed how their stubborn reluctance to study proper management procedure, even after they read the relevant literature, led them to lose control over their developing companies, panic, and abandon their management responsibilities at their company.

Company founders acquire and accumulate managerial competencies as the company matures. The composition of training programs as well as their content, duration, and the amount of training costs depend on the company's stage of development. The relationship between the level of company maturity and the level of training provides a road map of training for both the founders themselves and the staff that are hired by the startup (see [Figure 4](#)).

During the stage when the founders articulate an idea for their business (the seed stage), they are still choosing a way to commercialize their invention. At this time, they finalize both the product and the business model. They find out for themselves how they can achieve their goal by starting a new company, and what processes will occur as a result of their choice. That is why training at this stage serves, above all, as an instrument that motivates them to start a business. Competitions, game programs, and seminars on the basics of entrepreneurship provide would-be entrepreneurs with an opportunity to learn about the life of a startup before plunging into business for themselves. At this stage, the organization does not yet have employees as such, and the future entrepreneur is trained on an equal footing with the other members of his team.

At this stage, a host of webinars, seminars, and trainings on developing creativity and the theory of inventive problem solving (TIPS) as well as various trainings held as part of "Creative Startup and Startup Professional Schools" [4], including techniques for analyzing the needs of clients and developing a step-by-step plan for implementing the project, are useful [4]. Such training formats as the summer courses on "Innovations and Technical Creativity" and "Innovative Business" at the Seliger

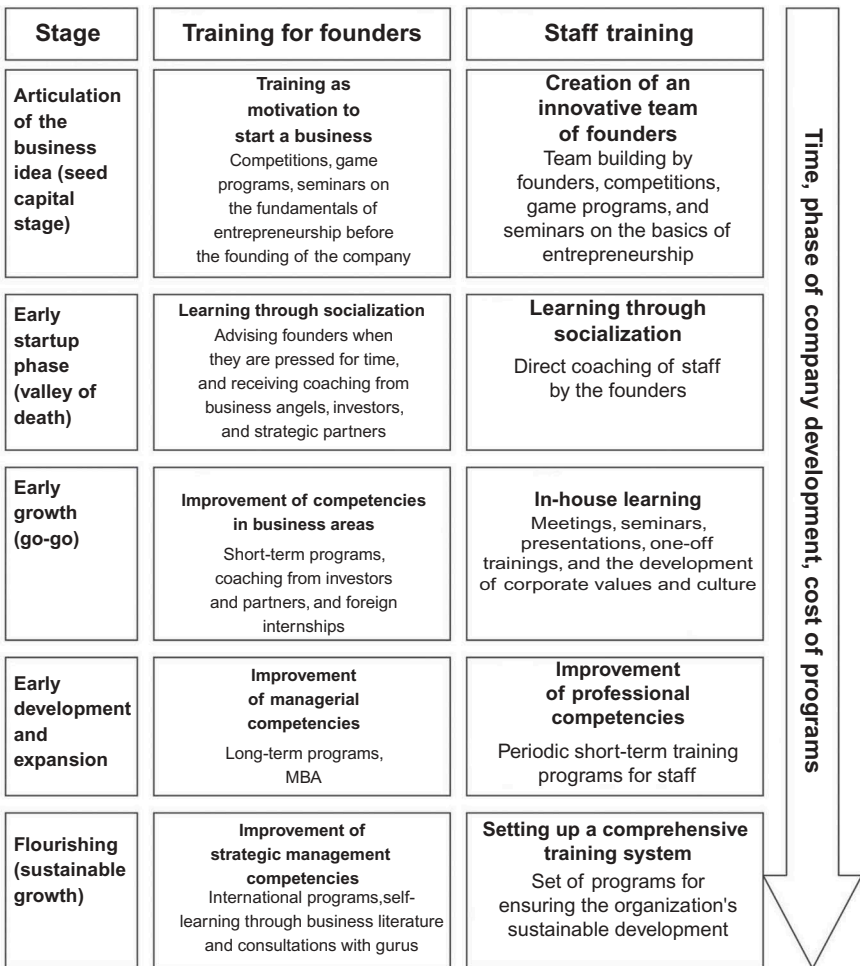


Figure 4. Forms and Directions of Training for Innovative Team Members Depending on the Company's Development Stage

All-Russia Forum, the “Zvorykin Award” All-Russia Contest of Innovation Projects, the All-Russia Youth Innovation Convention, and the “Innovative Technology Business” (ITB) Entrepreneurial Contest of Innovative Business Plans have all gained wide popularity. More extensive programs in this segment

(for example, “Startup Management” [5]) help enrollees prepare a packet of documents for obtaining business development support from the regional government.

The founders of an already established company in its early stages are fully occupied by its organizational development. The need to attract private investments, secure orders, attract customers, and pass through the “valley of death” means that managers have an extreme shortage of temporary resources. Therefore, as we saw in the research, training mainly occurs through communicating with other entrepreneurs, directly consulting with specialists, and receiving coaching from business angels, investors, and strategic partners.

The most important factor is the training that startup’s core employees, including the founders themselves, receive from the venture capital investors (business angels or venture funds). This kind of training is provided both during meetings with the investor (which function like coaching sessions) as well as when the latter exercises their managerial functions on the board of directors. This is the period that the founders seek to join various associations and clubs for young entrepreneurs to foster such communication. The learning process has not yet been set for recent hires, so they receive training directly from the founders themselves.

By attending various events and presenting their projects at exhibitions, the founders are able to seek out and attract investors as well as to exchange experiences with other entrepreneurs and project leaders. They are also able to gain confidence as business leaders at these events. Such events include The “Russian Capital for Russian Innovations” Russian Exposition of Business Angels and Innovators, which was held in regions bordering the Volga [1], and the “StartUp Village” International Innovation Festival at the Skolkovo Innovation Center [6]. The extended network of business clubs organized under the name City StartUp Club [7] offers events for members. This platform for self-development and self-promotion is new to Russia, but it is already well known in Europe. Startup teams that are interested in commercializing their projects join forces and become a collective intellectual force. They help and support each other by developing new scenarios that will allow them to compete better in high-tech markets.

The Skolkovo webinars [8] are good examples of remote resources that founders can watch to learn topics related to innovative entrepreneurship. The RusBase media platform [9] presents news about Russian IT startups, market analytics, and educational online materials for entrepreneurs and investors [10].

During the early growth (go-go) phase, the founders as the executive team of their company must significantly improve their competencies in the main areas that affect the functioning of their business on a day-to-day basis: marketing, finance and accounting, supply and production, organizational management, logistics, and staffing. This is demonstrated by the trend that we discovered from the above study. In recognizing the need to expand their own knowledge, managers actively resort to buying short-term programs, coaching sessions with investors and partners, and foreign internships. The need to effectively market new products and services is a priority concern for a young innovative startup. Sales departments are created, and staff is trained in the basics of marketing, sales, and negotiation techniques during a series of one-off external trainings.

For startup employees, such internal corporate communication channels as meetings, presentations, and special seminars with invited trainers are the main forms for acquiring knowledge. A huge resource for this is the internal training briefing, which is held by a unit/department manager and where, employees focus on a specific skill or block of information, such as, for example, how to initiate a dialog with a client. This allows employees to reinforce their understanding of general training materials and to implement theory in practice or in a real business situation. At the same time, joint training provides the foundation for the creation of a sound corporate culture and streamlined operations.

The topics of seminars become oriented to specific business tasks: “Marketing for Entrepreneurs,” “The Real Power of Numbers: How to Use Financial Reports to Develop Your Business,” “Cash Flow Management for Enterprise Growth,” “A Guide to Strategic Planning for Entrepreneurs,” “The Art of Leadership and Running an Effective Enterprise,” “Executive Recruitment and Retention,” “Corporate Governance at Successful Enterprises,” etc. (The Center for Entrepreneurship of the U.S.-Russia Investment Fund [11]).

Because entrepreneurs have an ever-growing lack of time, books and courses on time management have become very popular.

When a company is in its early growth period, the founders must pay attention to improving their managerial competencies. By this time the company has created divisions, and now it is necessary to assign managers to them who can establish well-coordinated cooperation between employees without disrupting the ability of the top executives to manage the company. Training programs for regular company employees become mandatory. They are no longer one-off sessions. At the same time, priority training is given to those units where the business process must be made sustainable. Venture capitalists who seek to invest for equity begin to show interest in the new startup.

At this stage, the company's founders are able to consider enrolling in such advanced, long-term training programs as MBA. The most common program offerings here are as follows: "MBA in General and Strategic Management," "Executive MBA," "Executive Director Program," and "Project Management Based on the P2M Methodology," including project planning and management in Microsoft Project. The series of events organized by the Russian Venture Forum and the Russian Venture Fair [12], the Russian Private Equity and Venture Capital Association [13], and the Venture Russia portal [14] provide networking venues and practical guidance for early-growth companies that seek to raise venture capital funding. The National Association of Business Angels [15] in conjunction with the Skolkovo Moscow School of Management conducts the Ready4Equity program for training startup business angels and entrepreneurs about how to best proceed to early rounds of venture capital funding [16]. The program is aimed at developing the professionalism of the main participants in the early-stage venture capital market, namely individual investors (business angels) and entrepreneurs, and increasing their effectiveness.

During the sustainable growth period where the company begins to flourish, the founders focus their attention on their overall development strategy. Therefore, they train to improve their strategic management competencies by taking part in foreign programs, teaching themselves through books, and making

contacts with business gurus. In addition, at this stage they demonstrate an increased amount of interest in religious thinking. In trying to make sense of their business and the mission of the innovative company at the philosophical level, the entrepreneur is preparing to implement the new idea or project that will take their enterprise to the next level or allow him to found a new company. During this period, a comprehensive training system for employees must be completely established. The company creates a unit that is responsible for planning and delivering regular staff trainings, etc. Staff training programs are designed to promote a unified corporate culture as well as to teach it together with various aspects of the company's operation to new employees. Department managers and junior executives undergo training in managerial competencies to prepare them for senior management roles at the company.

Individual international MBA programs are becoming increasingly popular with founders. Such programs as the joint project of the business school of the National Research University Higher School of Economics and the Maastricht School of Management [17, 18] provide alternate training opportunities in various countries. The emphasis in these MBA courses shifts from operational management to issues of corporate strategy and value management. The books of business gurus, their biographies, and even quotes from these works constitute the major sources for the self-education of founders.

Thus, the task of training for founders is to help them start a company as an instrument for introducing innovation. Employee training should aim to ensure the continued stable existence and development of the established enterprise as well as maintain stable production output. At the same time, new leaders are expected to emerge from the employees being trained and to be ready to tackle current challenges within the framework of the existing business model, unless the founders themselves at some point decide to cease innovative entrepreneurship and to confine their role solely to the C-suite functions in the existing business, which does not happen all that often.

In using training as an instrument to ensure the company's sustainable development, the founders first learn to choose training programs for both themselves and the staff. To begin with, the founders must assess the situation and identify the problem that is stalling the startup development. After the founders assess themselves and their employees, they must identify the shortcomings in their own competencies or the competencies of the staff that are holding back the company. Next, the optimal training that can be used to obtain the required new competency must be selected. After the completion of the training, it is important to consolidate all newly learned knowledge, abilities, and skills by using internal communications and external monitoring procedures to ensure that the correct behavior (sequence of actions) is repeated to address the problem that the training was designed to solve. We propose the following steps to create a system for training staff at a young innovative enterprise:

1. Assessment of the current situation and identifying problems that are slowing down the innovative enterprise's development.
2. Determination of training objectives depending on the objective and the level of professional and personal employee development at this stage of the company's development.
3. Development of a system of training measures, including monitoring of knowledge acquisition and skills building and establishing a system for supporting learning outcomes.
4. Inclusion of a training system in the staff motivation system.
5. Organization of training events while taking into account the company's needs and characteristics.
6. Consolidation of acquired skills.
7. Receiving feedback on learning outcomes as the problematic situation changes.

The training system for employees undergoes a period of development and attains its full structure by the time the company achieves steady business growth.

As a result, it must create a unit responsible for conducting performance reviews and training staff as well as developing a

systematic concept that can be used to identify problems and ensure continuing organizational training.

In our opinion, the founders should commit to a learning organization concept as soon as possible in order to improve the survival rate of their innovative company during the early phase of its development. American academic Peter Senge proposed the term “learning organization” for the first time in his book *The Fifth Discipline* in 1994. The learning organization is understood as an organization whose employees never stop learning. And training is not viewed as the simple accumulation of knowledge, but as the ability to effectively use this knowledge, in other words, applied “learning” [19].

There are several times fewer founders than newly recruited personnel at a young company that is starting to grow. Therefore, it is vitally important that all of the newly arrived employees undergo training in one form or another. At the same time, employees participate in group trainings in addition to individual trainings in which the core staff members of the startup participate. This allows the company to develop group knowledge. As a result, this allows for conditions to be created for training the organization’s entire staff.

It is important to note the need for the founders and top management themselves to undergo training. This will provide the driving force for transitioning to a learning organization, and it will support and expand the company’s focus on becoming this type of corporate environment.

There is no standard template model for an effective training program for founders. As we showed above, innovative enterprises that have just gone into business do have similar training requirements. However, each organization has a specific structure and functions in a specific operating environment that imposes certain requirements on leaders. Various business designs and development strategies will require them to exhibit different styles of leadership. At the same time, the better the topic of the training is able to provide concrete steps for how to implement the organization’s strategy, and the closer it is to the founder’s position, the more useful it will be for them. Most often, the founders select a training program for

themselves on the basis of intuition, self-analysis, and while considering the lack of knowledge in specific business areas. They search for suitable programs on the Internet and learn about their effectiveness from other entrepreneurs who have already taken the courses.

An innovative startup by its nature requires a training program that teaches employees management skills that are relevant to innovative high-risk enterprises. According to data from our study and in the opinion of specialists [20], an effective innovative manager should have these additional competencies. An innovative manager should know

- methods for finding new ideas and technical solutions;
- the fundamentals of management and technologies for protecting intellectual property that can be deployed at the enterprise level;
- the fundamentals of generating a business plan for an innovative project as well as methods for evaluating such a project;
- principles, methods, and tools for providing marketing support for the innovation process, including market research and segmentation; organization of the development and production of new products that have not yet been adopted on the market; and stimulating demand as well as promoting sales and product innovations;
- standards and methods for ensuring the quality and the competitiveness of innovations;
- innovation management concepts and methods;
- methods for effectively commercializing new products;
- possible types of innovative strategies and policies and their content as well as tools for creating and implementing them at the enterprise level;
- methods for assessing the innovative potential of an enterprise; and
- the main elements of the research infrastructure and existing programs to support innovation in the region and the country as a whole.

An innovative manager should be able to (possess the skills to)

- apply methods for finding new ideas and technical solutions;
- possess the skills for finding and working with information about achievements in scientific and innovative fields;

- assess the market attractiveness of the innovation and its competitiveness;
- protect intellectual property rights in order to ensure the company's competitiveness on the market;
- select a type of innovative strategy and policy for the new company and develop them;
- know innovation process planning methods;
- form a creative group of innovative developers, assess the group's status, and motivate the group to exercise creative thinking;
- know methods for how to manage creative professionals;
- draft a project business plan;
- determine the sources and main methods of attracting investments to develop the innovative project; and
- organize the production process at the enterprise in accordance with the system approach methodology for managing innovations.

Today, the Russian Federation offers a significant number of programs in this area. However, in our opinion, startup interest in these programs has been dwindling lately. Most of the existing training programs provide knowledge in one or several innovation areas, and they differ in their theoretical rather than applied orientation. Typically, they include the following topics: how to prepare a business plan, marketing, team building, etc. Entrepreneurs who have completed such training programs receive specific and, in some cases, profound knowledge. However, because of their low practical orientation, lack of knowledge of their actual sector of the economy, and lack of business ties, they are not able to provide entrepreneurs with a solution to their main problem: securing project resources. As a result, the obtained knowledge is forgotten after a short period of time.

Programs can be made more effective by designing them around providing advice and educational assistance to help the student implement their own project and perform a significant amount of work on their own. Courses must focus on the problems of bringing specific technologies and new products to market that are directly related to the challenges facing the students. Such courses help the student gain practical skills. The second fundamental feature of successful programs is that the instructors are practitioners, or even investors and potential strategic partners of the project under development. In other

words, they are people who are already working in a real innovative business as managers or consultants. This is the particular approach that underlies coaching programs for venture capital entrepreneurship [13].

The basis for the effective acquisition and accumulation of necessary competencies is practical training: learning by doing. In this study, we will focus on how the competence approach is applied to the training system for startup founders and personnel. This approach has gained traction recently due to the rapid expansion in the information flow as well as the increasing complexity of the objectives that employees have to achieve to develop and release innovative products and services for the knowledge-based economy.

Employees who enter a young organization with a flat hierarchy often have to be “multitaskers,” that is, they must possess and know how to apply various kinds of knowledge, abilities, and skills. Therefore, we believe that it is most appropriate for an innovative startup to focus on trainings that develop staff competencies to the maximum degree possible. This is also due to the fact that both the founders and their fellow young workers receive training as they work directly on the project, when they have to make decisions in the face of various uncertainties dictated by the initial shortage of resources.

The training methods and techniques that are used in the competence approach make it possible not only to acquire the knowledge itself, but also hands-on experience in how to apply it and where it can be used to best effect. The predominant methods are those that ensure the individual’s self-development and self-actualization and allow them to seek out and understand appropriate ways of solving life situations (project methods, situational analyses, portfolios, production practices, internships, etc.).

It is particularly significant for a high-tech enterprise to employ specialists who are capable of applying the acquired knowledge and skills immediately in an innovative project setting. As innovative development factors increasingly take hold in the marketplace, these specialists will come to constitute the “strategic core” of a high-tech enterprise, as they will ensure the implementation of key business processes that are responsible for the creation of innovations and the

effective use of innovative developments. In the process of innovation management, these specialists have the opportunity to make the most effective use of acquired knowledge, abilities, and skills through the mastery of new competencies and the advancement of these competencies to the highest level of development. Such dialectics are extremely important for increasing the effectiveness and productivity of the company staff [21]. Thus, all specialists involved in the innovation process must have their own distinct competence related to innovation. This can be the competence to create a new product and bring it to market, to generate a set of organizational and managerial innovations, etc. Therefore, the retention of staff with strong competencies in the field of innovation and the surfacing of the intellectual potential of this category of staff are, in fact, factors that ensure the vitality and sustainable development of a young high-tech enterprise.

It should also be noted that training staff not only in professional competencies, but also in the principles of the company's operations and corporate culture are important factors for ensuring the company's survival. In this way, the ideology of the founders can be extended to the entire newly formed team. According to researchers, this aspect is the key one, and when it is not present it reduces the effectiveness of the corporate learning and development system.

Suppose that the organization has defined the requirements for the competencies of key employees, developed training programs, and formulated ways to assess staff competencies. The company now expects employees to apply the acquired knowledge in practice after the end of the training, and it expects a consequent boost in innovative activity, teamwork, and the number of implemented projects. However, this is not what happens in practice. Apparently, the reason lies in the inconsistency between goals. The consequence of this is the unwillingness to apply the knowledge, skills, and abilities that were obtained on the job. For a young team to reach a consensus about goals, it is necessary for it to clearly define the interests of all participants. The company management expects that it will recoup the costs of training through the implementation of projects that were developed during the course of training. At the same time, very specific indicators can be considered as effectiveness criteria: revenue, market share, level

of customer satisfaction, costs, and others. Students expect to achieve career growth, salary raises, more responsibilities, etc. However, there is a contradiction. It cannot be said that the trainees are not interested in the company's problems. More accurately, we are talking about a difference in priorities. That is why external training programs that do not teach goal coordination and integration into the corporate culture often do not produce the expected results.

It is impossible to boost the effectiveness of training and form a "learning startup" without assessing the performance of newly hired employees. Young managers often do not attach sufficient significance to this. At the same time, when performing this evaluation, the founder compares the employee occupying a particular position with a specialist who is ideally suited to this position. Therefore, a system of periodic employee performance reviews should be instituted to ensure that employees are performing their job duties and functional responsibilities.

In the West, U.S. companies were the first to implement the practice of performance reviews in the early twentieth century. The management by objectives methodology, which was developed in the 1960s, measures how well an employee achieves assigned goals, and, accordingly, compares the employee's current level of performance with his peers and with a set of established standards. The performance management technique was developed already in the 1980s [22]. This technique not only evaluates the employee's demonstrated performance, but also how it was achieved. The method was distinguished by the fact that it involves extensive feedback from the employee, and it could serve as a tool for predicting his future professional development as well as career planning at the company. In the early 1990s, the objectivity of assessments increased with the arrival of the new "360 degree" social evaluation technique, which proposed systematically surveying a group of company employees as well as people outside the company (supervisors, subordinates, colleagues, and customers) that the employee interacts with. At the same time the assessment center technique also began to gain popularity. This center proposes a comprehensive assessment based on competencies. Initially, this technique was mainly used to evaluate senior

executives with a view to appointing them to executive positions and to add them to the company's candidate pool.

In Russia, staff at innovative organizations have traditionally been evaluated through performance reviews. This technique, in fact, incorporates elements from all of the above methods. According to experts, it is difficult to create a performance evaluation system at an organization that equally balances the factors of accuracy, objectivity, simplicity, and comprehensibility. Therefore, the periodic performance review system is currently the most widespread and developed tool [23]. Periodic performance review is a specific feedback tool that is used at organizations. A professional and psychological evaluation system that is tailored to innovative enterprises could, in our opinion, include

- an assessment of professional knowledge, abilities, and skills (qualification potential);
- degree of versatility of knowledge, possession of several competences at once;
- assessment of creative abilities (creative potential);
- assessment of initiative, responsibility, ability to cooperate with coworkers and be a team player (communication potential) as reported by other company employees; and
- assessment of knowledge of the company's operations and its corporate values, as well as observance of the adopted corporate code of conduct.

The employee performance review produces a detailed description of the individual's qualifications; level of knowledge; and personal, psychological, and creative potential. The performance review evaluates how well the employee performs their responsibilities and functional duties. At the same time, this form of evaluation can only be given by another person (which is in contrast to a piece of equipment, whose parameters and characteristics can only be measured by other technical means).

At an early-stage innovative organization, the employee performance review is conducted by the founders as they directly interact with coworkers and solve current problems. As the company adds

more employees, human resource specialists assume responsibility for conducting performance reviews. They participate in the creation of performance review committees and work on them. They prepare the necessary documentation, compile lists and schedules for performance reviews, and supervise the performance review process. By organizing performance reviews in this way, the company is able to increase the effectiveness of staff management by positively impacting employee motivation. Feedback positively affects the motivation of employees, and it allows them to adjust their behavior in the workplace and achieve increased productivity. In addition, performance reviews positively influence the planning of professional training and employee development. These reviews make it possible to identify shortcomings in the qualification level of each specialist and to provide measures to correct them. Employee performance reviews reveal the employee's professional weaknesses and strengths, allowing them to prepare individual development plans and effectively build their careers. In addition, the regular and systematic assessment of employees provides founders with an opportunity to make informed decisions about salary increases, the awarding of one-time bonuses (at the same time, remunerating the best performing employees has a motivating effect on their colleagues), promotions, and dismissals. The advantages obtained by the organization using the performance review system are most fully realized when the evaluation is objective, the assessment criteria are open, the confidentiality of the results is strictly respected, and the staff members undergoing review are actively involved in the process.

Compliance with these principles should be achieved by making the performance review system universal. The human resources department should develop a single system of indicators for assessing employees in the entire organization and ensuring that they have a uniform understanding and are able to apply this system to all company departments. To establish uniform standards and assessment norms at an organization, it is necessary to identify what critical factors make an employee successful in this position. Quantitative indicators (time, productivity, costs, etc.) as well as such qualitative descriptors given by the evaluator as "good," "bad," "above average," etc. can be used as evaluations. In addition, when reviewing the

performance of engineers and scientists at an innovative organization, the company should not only evaluate the effectiveness and quality of their work and their personal contributions to the development of the organization, but they should also take into account their achievements in science and innovation, including patents, applications, publications, participation at scientific seminars conferences, etc.

In summing up the results of our study of how the founders and staff of young innovative companies receive training, we highlight the following key points.

1. The programs that are currently available to founders vary widely. However, in order to be effective and to ensure the survival of the company, these programs should help address goals that are relevant to the specific developmental stage of a young innovative organization. Founders should choose training programs that suit the development stage of their company.
2. Staff at a young company should primarily receive training that helps them achieve the business goals that are vital for the organization at its current stage of development. In addition, young innovative companies should encourage their employees to learn as many skills as possible.
3. The main distinguishing feature of successful training programs is that they are taught by professionals with practical experience in their fields (venture investors, innovative company managers, consultants, etc.).
4. When teaching staff the knowledge, abilities, and skills necessary to overcome professional challenges, it is important that they achieve a level of competence that enables them to act in situations of uncertainty while taking into account the development strategy and corporate values of established high-tech organizations.
5. Group training is important for newly hired staff at a young company. This kind of training helps employees learn how to reach an agreement with others when setting goals and prioritizing interests, to achieve a unified corporate ideology and culture, and consequently to enable streamlined and effective operations at the innovative enterprise.
6. As the startup grows and the company gains more resources, the company must establish a comprehensive system of training and evaluation procedures.

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