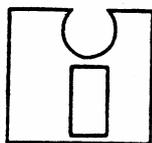


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ENTREPRENEURSHIPAND THECOMMERCIALIZATI ONOF
INVENTIONS AND RESEARCHRESULTS

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I. INTRODUCTION

1. There are a minimum of a hundred definitions to explain the concept of entrepreneur and entrepreneurship in general. Their meanings depend on when they were devised and on the society in which their various authors developed them. For instance, according to the French economist J.B. Say, "the entrepreneur shifts economic resources out of an area of lower into an area of higher productivity and greater yield." Other authors talk about the entrepreneur as the "one who starts his own, new, small business." This definition is definitely not correct if one considers that not every small business is entrepreneurial or represents an innovation: one need only think of all those small restaurants and shop owners, retailers and craftsmen who just repeat things done many times before by others.
2. Other definitions are more focused on the connections between the concepts of "management" and "entrepreneurship," saying that "entrepreneurship is the process which, by applying management concepts and techniques, standardizing the product, designing processes and tools, leads to an enhanced yield from resources and to the creation of new markets and new customers." This idea of Peter Drucker's is a reminder of the multidimensional character of entrepreneurship: "to be entrepreneurial an enterprise has to have special characteristics in addition to being new and small." Entrepreneurs always search for change, respond to it and exploit it as an opportunity.
3. And, finally, entrepreneurship is enormously risky; the entrepreneur therefore has to display some of the characteristics of the hunter: ¹ he must always be alert, always monitoring the environment, always flexible, ready to change his strategy quickly; he must be results-oriented and both a visual and a concrete thinker, clearly seeing a tangible goal even if there are no words to describe it. At the same time he is going to be independent and bored by mundane tasks, and to enjoy new ideas and excitement, willing and able to take risks and face danger.
4. The new wave of the global entrepreneurial companies is the best indicator that Drucker's insistence on "purposeful and systematic innovation" ² as the main attribute of the entrepreneur is completely justified. So entrepreneurs and innovators have to "understand the market, the clients, the technology and the perceived constraints of the problem in the field in which they will act, operate, observe real people in real life (what they like, what confuses them, what they hate, what they need), visualize new concepts and customers who will use them, evaluate and implement the new concept for commercialization." ³ And so the magic word was reached: commercialization.
5. Inventors are prone to overlook it, but now it is time for them and also for researchers to become innovators and entrepreneurs.

¹ Harrell, W., "Forentr epreneur only – success strategies for anyone starting or growing a business." Book -martpress, Hawthorne, NJ, 1994.

² Drucker, P., "Innovation and entrepreneurship – practice and principles." Harper Business, New York, 1986.

³ Kelley, T., Littman, J. "The art of innovation." HarperCollins Business, London, 2001.

II. PRACTISING INVENTION AND RESEARCH AS AN ENTREPRENEUR

6. As we already mentioned, the true inventor and entrepreneur is a hunter. In modern parlance he is engaged in the practice of monitoring sources for innovative opportunity. The sources he uses are:

- (a) inside the company or within the industry or services sector in which he works; or
- (b) outside his enterprise or industry.

7. The inside sources have to do with unexpected success or failure, with the difference between actual reality and assumed reality, with innovations based on process needs or with changes in industry or market structure that others are not aware of. These sources always have to do with the demographic change, with changes in perception, mood and meaning and with the new knowledge, both scientific, as a result of research, and non-scientific.

8. Because the entrepreneur is constantly monitoring developments, he looks at every unexpected result and asks: what would it mean if exploited it, where could it lead me, how could I convert it into an opportunity or just how do I go about it? He likewise looks on failures as "symptoms of opportunity." Failures are not to be forgiven, of course, being the result of greed, stupidity, bad company membership or incompetence in prediction or execution. For us it is enough to remember that the entrepreneur can turn failure as well as success into an opportunity for commercialization and development.

9. As far as differences are concerned, the commonest are those associated with the conflict between the economic realities of an industry and the assumptions about it and between the industry's effort and the values and expectations of its customers; sometimes there is internal discord within the rhythm and the logic of a process. A change in industry and market structure offers exceptional opportunities, that are very often, highly visible and quite predictable for all but those inside that industry or market, and the real innovator with entrepreneurial spirit can easily become a major factor in an important industry or area quite rapidly and at relatively low risk.

10. The external changes, like demographics, changes in perception, meaning, mood and new knowledge, have to do with changes in the social, philosophical, political, and internal environment. From the entrepreneurial view, these changes are a highly productive and reliable opportunity for the commercialization of inventions and research results. Of course, nothing is more dangerous than to exploit the change in perception prematurely. It is the same with knowledge-based inventions: first they entail careful analysis of all the necessary factors; after the analysis the inventor-entrepreneur has to decide whether the commercialization process should start or preferably be postponed as not yet feasible or premature. Failure to make such an analysis is an almost sure recipe for disaster.

11. The second requirement for the commercialization of knowledge-based inventions is a clear focus on strategic position in the market.

12. The third is the entrepreneurial approach, a matter of crucial importance in the commercialization of knowledge-based inventions. That is because of risks—both financial and managerial—are very high, and because the rapid pace of change leaves little time and space for action.

13. There are too many obstacles in front of the door to this business, and inventors have less chance of survival in this process. To be successfully commercialized, a knowledge-based invention has to be “ripe” or in it there has to be some receptiveness to it. The risks are highest in inventions based on new knowledge, in science and technology, particularly in the currently “hot” areas of computers, information telecommunications and biotechnology. The only hope of success in commercializing these inventions and research results lies in using managerial methods of entrepreneurs.

III. INDIVIDUAL INVENTOR AND ENTREPRENEURIAL STRATEGIES

14. To become an entrepreneur it is not enough to have original thought; an individual inventor must recognize, evaluate and put into practice a knowledge-based invention. That said, the organization that sponsors new ideas never fails to reap the benefits.

15. Individual inventors – who are more often than not the ones who “ignite” the creative process by spotting or evolving the idea, creating the vision or defining the need – have to have in mind the four other roles that are involved in the innovation process, namely those of sponsor, shaper, sounding board and specialist.⁴

16. The sponsor is someone who promotes the idea, invention or project inside the organization or society, ensuring that it is not ignored. He also sustains interest during difficult or lean times. Usually we will find him in senior management, or on the board as a non-executive director or in a similar position.

17. The shaper is someone who makes the idea, invention or project “real,” using his own creativity to flesh out the premise and/or to find practical means of achieving the objective. He could be one of the members of the project team appointed to implement the invention, or one of the process consultants, research and development staff from principal suppliers, cooperating or business partners.

18. The sounding board is someone outside the project whose objectivity and broader knowledge can be used to inform and validate the premise or to comment on the practicalities. He is very often an informal or formal member of the personal or professional network, or one of the colleagues or company mentors in whom the inventor has faith. Strategy consultants or appointed academics or researchers in the field can usually be recommended for this role, too.

19. The specialist is the one who draws on his specialized skills to shape the idea, invention or project from a specific standpoint in order to break new ground in his own field.

20. With the help of these four “angels” the inventor – entrepreneur can develop and implement a good strategy for marketing and commercializing his invention. Of course, before the realization, there is a process of convincing, mediating and negotiating with each one of them.

⁴ Syrett, M., Lammiman, J. “Successful innovation – how to encourage and shape profitable ideas.” *The Economist*, London, 2002.

IV. CONCLUSION

21. Entrepreneurship is the process of applying management concepts and techniques, standardizing the product, designing processes and tools with a view to improving the yield from resources, conquering new markets and winning new customers. This process is risky, which is why the entrepreneur has to be always alert and constantly monitoring the environment. He must always be flexible and ready to change his strategy quickly; he must be results-oriented and both a visionary and a concrete thinker, clearly seeing a tangible goal even if there are no words to describe it. At the same time he is going to be independent and bored by mundane tasks, and to enjoy new ideas and excitement, willing and able to take risks and face danger.

22. Entrepreneurs and innovators have to understand the market, the clients, the technology and the perceived constraints of the problem in the field in which they will operate, observe real people in real life, visualize new concepts and customers who will use them and evaluate and implement the new concept for commercialization. If their inventions are to be commercialized, the time has come for inventors and researchers to become innovators and entrepreneurs. To attain his goal of commercialization in this area, the inventor-entrepreneur uses resources either inside the company or the industry or service sector in which he is working or outside his enterprise or industry.

23. Individual inventor-entrepreneurs will “ignite” the creative process by grasping the idea and creating the vision. They should not forget the four “angels” involved in the innovation and commercialization process namely, the sponsor, shaper, sounding board and specialist, who will assist the inventor-entrepreneur in developing and implementing a good strategy for marketing and commercializing his invention.

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