

ANATOMY OF A TECHNOLOGY

ASKING ALL THE RIGHT QUESTIONS

by

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In the process of both evaluating a new technology and attempting to determine the most logical potential for success, various factors are required to ascertain what the true opportunity may be. Part of the process is to have the right questions to ask of the inventor or principal investigator. That is the purpose of this article.

I have personally used this series of questions for many years, with independent, corporate and federal laboratory inventors. Being a scientist, engineer or researcher puts the inventor in a specific category, which rarely provides them with the ability and experience to see a broad perspective as to the market and licensing potentials.

So often they will say, when asked; "There is no competition!" which as we all know is extremely rare. Inventions and technologies are most often improvements upon something that already exists. So based upon my almost fifty years in the field of looking at and evaluating inventions, plus creating new companies around it, has provided me with enough examples to know that the following questions do work:

1. How can the invention/technology be described in the words of a layman?
2. Is the invention/technology a total system, or a component of a system?
3. Is the invention/technology a "state-of-the-art breakthrough" or a variation on existing technology?
4. How, where, when and by whom, is the end-product expected to be used?
5. Why is the invention/technology needed?
6. What is the status of the invention/technology?
Example: concept, design/engineering, prototype working model, test market sample, in commercial use, etc.?
7. If the invention/technology is in the prototype or working model stage, can it be seen or demonstrated?
8. What written information (including sketches, drawings, flow sheets, notebook papers, etc.) is available to provide a better understanding of the concept and performance of the invention/technology?

9. Which, if any, of this pertinent information, could be shown to potential "customers" for the invention/technology?
10. Has a patent application been filed, or a patent issued? If so, is a copy of the patent or application available for review?
11. In the event that an application has not been filed, has a patent search been conducted to determine what competitive technologies may already exist? If a patent is filed, but not granted, what is the policy on protecting the intellectual property rights?
12. Have any personnel published any articles or presented any papers to any technical societies that describes the invention/technology? If so, are copies available, and how does this pertain to the intellectual property rights, because of the limited filing time after public exposure?
13. Has research been conducted to provide lists of articles or books published by others on this invention/technology? When and where?
14. What is the history of the technical, economic and/or market analysis work done on this invention/technology?
15. What has been the internal justification for the work done to date? Is a copy of any justifications available for review?
16. What additional technical research, design, engineering, modeling, etc., needs to be done before the invention/technology can be considered technically and economically feasible? Have any time and cost estimates been made for these future activities?
17. Is the primary objective for this invention/technology:
 - (a) To find funding for further internal research?
 - (b) To enter a joint-research effort or strategic alliance?
 - (c) To license the invention/technology to one or more firms already in the business or interested in entering the business?
 - (d) To create a new business venture to exploit the invention/technology?
18. Is this considered a "Priority Technology" and why?
19. What specific questions would qualified parties like to have answered and in what order of priority?
20. Is there a primary contact for further information?

Are there other people at the facility, or possibly elsewhere, who can be contacted regarding information on this invention/technology?

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If the primary contact becomes unavailable, is there a backup person available?

What is the availability of the various contacts, and what restrictions are there on contacting them?

What are the addresses, phone/fax/email numbers of the personnel to be contacted?

21. What outside contacts regarding the invention/technology has been made? Were these contacts made to obtain technical and/or market information to promote the invention/technology, or for other reasons?

May others contact any of these people if it appears they might be helpful to research efforts?

Are all the contact numbers available?

Are there other people or companies who have been identified but not yet contacted?

Should they be, and when?

22. Have any previous commitments been made to outside firms who know about the invention/technology?

Is there any person or company collaborating on the development, who expects to have some form of preferred position?

Are there any potential claims against the invention/technology?

23. What information has been developed on the potential application(s), plus advantages, disadvantages, market size, competitive technologies and suppliers, sales potential, economics, etc., for the invention/technology?

24. Has any work been done to estimate the economic advantages of the invention/technology?

If so, has there been any estimate made of the "price" (i.e., licensing fee, royalty, joint-venture, equity contribution, etc.) which the owner wants to charge?

25. Are there any plans for the technical or other personnel involved, to be made available to licensees or users of the resulting product, as consultants, employees, equity participants, etc?

26. Do the owners or principal investigator have any suggestions of companies, industry associations, technical organizations, government agencies, or foreign entities, who should be contacted to develop the information that is needed for this invention/technology?

27. Has any information been developed on the costs of engineering, manufacturing, marketing, delivering or using the end product?

Are there any "critical" materials, components, process steps, handling, shipping, storage, etc., which could cause major problems because of costs or shortages?

28. What are the health, safety and environmental considerations for the invention/technology?
29. What would be the attitude of the owners or U. S. Government agencies toward foreign companies who might have an interest in the specific invention/technology? Are foreign partners or customers "off limits?"
30. How long is the potential "life cycle" for the product; e.g., is it subject to early obsolescence?
Does the owner have a position on developing future improvements and modifications?
31. What is the position on providing warranties that the finished product will perform as represented?
32. Can the owner provide information on manufacturing procedures, installation instructions, operating techniques, etc.?
33. Is the owner prepared to train personnel from licensees and/or end users of the finished product?
34. What will happen to the owner's R&D program for this invention/technology, if the specific study indicates that the potential market does not appear to be as attractive as originally believed?
35. If the inventor is a corporate employee, has there been assignment rights transferred?

If you would like additional information, please contact: : :

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