

C communicating your technology

When commercializing your technology, you will find that you need an accurate description of its features and benefits. In the business plan for example, it's important that you describe the benefits of the technology to your target market(s). You may find that you have a design or a prototype with "obvious" benefits. But to people not familiar with your technology, you have to specify what the features and benefits to the particular target market are.

Having proper technical documentation serves several purposes:

Scalability. Unless you have technical documentation, it can be difficult for you to append your product or service offerings. A software program, for example, may serve your current target market needs, but as your target market evolves over time, you may need to add to your offerings – something that can prove to be difficult and expensive if you lack the proper documentation.

Flexibility. If you have proper specifications, you have more flexibility in choosing whom to hire to develop your prototypes or products. Industry specifications are generally understood by professionals everywhere, so you can achieve considerable savings in terms of outsourcing.

Sales. Sophisticated customers may want technical details in addition to what you have described in your sales literature. So instead of relying on the technical expert that developed the solution in the first place to tag along with your sales people to potential customer presentations, sales engineers can quickly ascertain the features and

benefits of your offering by reviewing your technical documentation.

Business strategy. Technologies to be commercialized can emerge from pure research out of a lab – many of which do not have commercial applications at the time they are developed, or in response to specific industry needs. In either case, the company will end up with a technology that it's trying to commercialize. Proper documentation will allow people not involved in the development of the technology or not intimately familiar with the technology to ascertain other uses of the technology and how it fits in with related technologies. Finding additional uses for the technology and seeing how it fits with existing technologies in the marketplace are both crucial in developing the company's future direction and strategic planning, and options for competing and partnering in the marketplace.

Valuation. Customers typically want to know what they are buying, and the same

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goes for investors. If you cannot provide proper documentation about your technology, investors are going to be severely limited in their ability to do technical feasibility analysis and conduct technical due diligence, and your company will end up with a lower valuation than it otherwise might have had. When preparing for an exit strategy, you will have far more options with proper documentation.

So, what's the best way to put together the technical documentation?

While it's important your technical team compiles the information, it's also important that you involve non-technical people. After all, the information must make sense to readers with both technical and non-technical backgrounds. It's often useful to have several non-technical persons read the technology description and ask questions where descriptions are not clear.



A technical description should include a brief description of what it is in terms of what it does. Following this brief overview, you may want to describe where the technology comes from, so to say:

- Scientific principles (theory) behind your technology
- Platform technology (if applicable)
- Core technology (your company's main focus)
- Specific applications of the technology

- Features of the specific application

In this way, a reader can more easily place your technology among others in the marketplace and make comparisons where applicable.

The benefits of the technology should be developed together with your sales and marketing people or outside resources, to get the strongest sales arguments up front. Each feature should be matched with at least one benefit to the end user or buyer.

Now, the second part of the description should be a description of what it does and how it works. You should be prepared to produce a manual based on the description, so it's important that the information is organized in a meaningful way. The quickest way to get your point across is to create a drawing. For example, if you provide service via the web, you could make a workflow chart of your typical customer, and show where you fit it, and where you automate certain functions. Everyone will get it immediately. If you manufacture suspensions, show a mechanical drawing of current suspensions versus your suspension. Make sure that each feature of your application is included in the one or more graphics describing your technology, and have your technical people review it for accuracy and your non-technical people review it for understandability.

To these first two modules, you can attach blueprints, designs, and specifications as appropriate. These do not have to be legible by non-technical people, as long as the descriptions above are accurate.

Your technical documentation should of course not be public information, so whatever the sales people pull out of the documentation should be cleared with the technical team first, and your IP attorney, if appropriate.

Now that you have a technical description, should you produce a white paper?

The main differences between your internal technical documentation and a white paper

are the amount of information and confidentiality. While there may be few standards for white papers, you should limit the amount of information to what's relevant to the reader. You must also keep in mind that white papers are public information.

The purpose of a white paper is typically two-fold: 1) to educate and demonstrate that the company has in-dept knowledge about a technical issue or problem, and 2) to encourage debate about the technical issue. White papers that are written purely as advertising brochures are typically not well received.

The benefit of producing a well-written white paper is to achieve the visibility within the industry and to be able to provide potential customers and consultants with technical insights into your technology and your industry. There is always a trade-off between revealing too much information and revealing too little of interest to the reader. While revealing information is required to achieve the sought industry acclaim, revealing too much information can diminish your competitive advantages.

Some guidelines for producing white papers are:

- The author should ascribe to a full explanation of a technical issue or a solution instead of just focusing on how one specific product or technology works. Adding how this particular technology fits in and compares with other technologies is always a plus.
- While the white paper may be written for the benefit of industry experts, it's also important to keep in mind that it should be educational to others without industry background, so try to keep it simple.
- As with anything written to attract readers, make sure that the title and introductory paragraph are concise – otherwise its circulation will

decline. The title should contain some type of information that the reader will benefit from, but it cannot be too long. The introductory paragraph should be a summary of the white paper.

- Use graphics to illustrate your point when appropriate, but probably not more than two per page.
- 8-12 pages in length should be sufficient for a well-written white paper.
- In addition to providing a description of the technology at hand, the white paper should be well written. It's always a good idea to run a white paper by someone who is well versed in writing to ensure that the message comes across in a concise manner using proper grammar. You may also consider using a PR firm to do the writing.
- Make sure that you include the appropriate contact information so that the reader can cite the white paper and contact you for follow-up questions or proposals.

Getting started with prototyping, production, marketing and sales before a proper documentation effort has been undertaken means putting the cart before the horse. It may very well work out well, but at great risk. Technical documentation resulting in clear features and benefits for your target markets and perhaps a white paper will only increase your chances of success in commercializing your technology and maintaining and updating the documentation will serve you well throughout the process.

