

# T. H. E. Solution LLC

Taming the development of intelligent products

## Is offshore outsourcing right for your business?

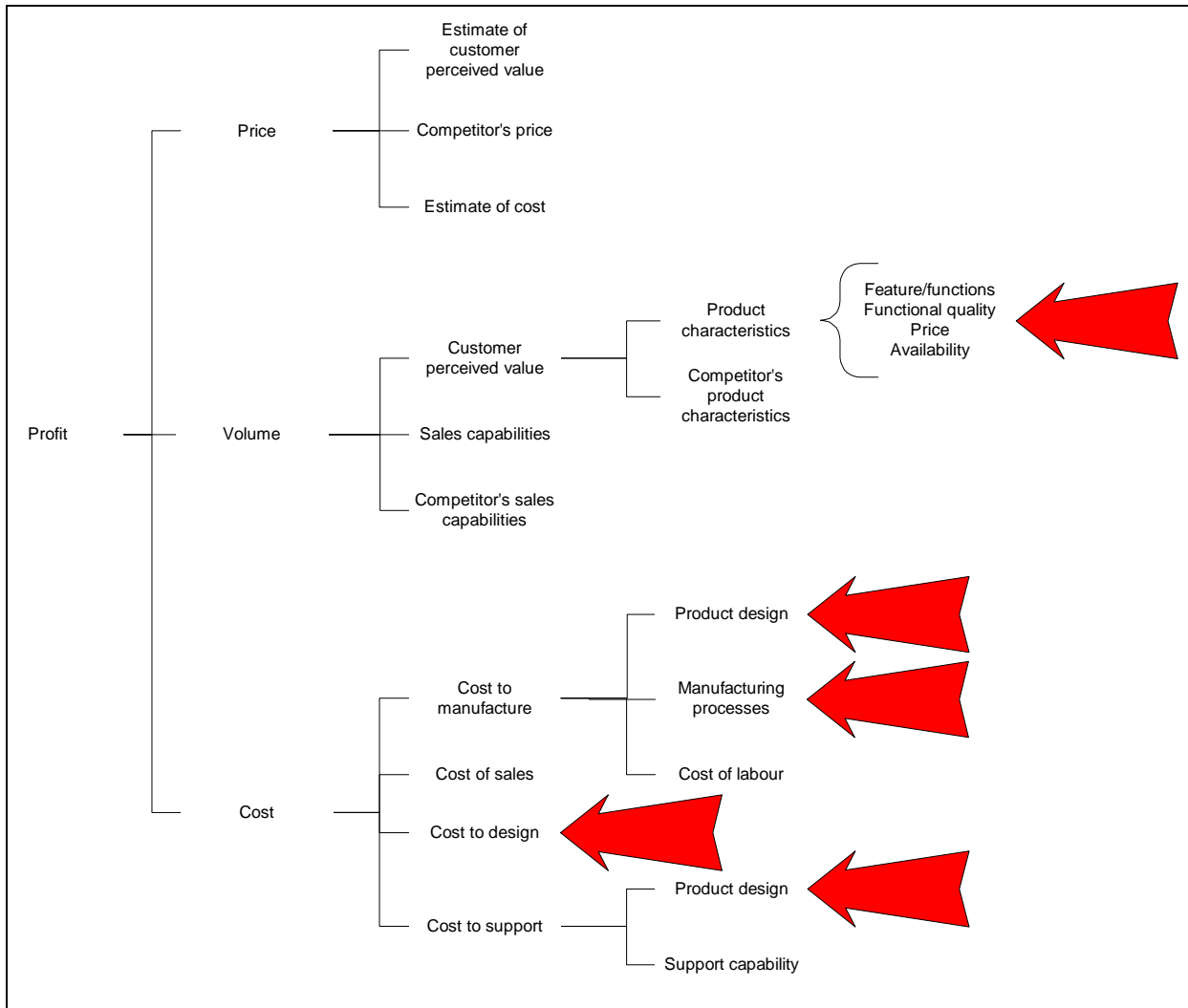
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For a typical US product developer, the wage and benefits per delivered development hour is around \$60. So when you see offshore rates that may be a fifth of this it looks like a really good deal. Is it? The “big guys” are doing it. Does this mean it is safe for the small to medium sized manufacture? As indicated in Figure 1, the product development chain impacts profitability at a number of pressure points. Some key observations are:

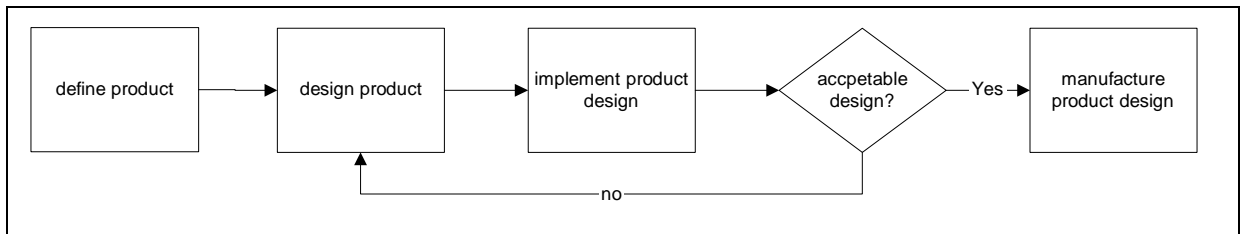
1. Customer perceived value is probably the most important determinant of volume in your direct control. It is highly impacted by “ability to design” and “quality of design”.
2. Costs are significantly impacted by ability to design and quality of design. Except for very small volume or where cost to manufacture is near zero, e.g. software only products, cost to design is not a primary impacter.
3. In most cases the ability to design and quality of design are the most important product development qualities.
4. Unless you can maintain or improve the ability to design and the quality of design, dropping the costs of design may be counter productive.

Does this mean that it makes no economic sense to use lower cost product development resources? Of course not. But it does mean that you should not just ship off a development project (or department) without a serious look at how you will control the results. At its simplest a product development project appears similar to Figure 2. The most basic problem in these steps is communications between the parts of the product development chain. Keeping this along with the earlier profit observations in mind, some key guidelines become apparent:

1. A company must keep the product definition under its control. Where ambiguities are possible in understanding the definition (the typical case for sophisticated products), a company’s must make sure that its processes and tools reduce the risk of misunderstandings.
2. A company must not depend on the outsourcer to decide if a design is acceptable. It must make that determination itself.



**Figure 1, Manufactures profit tree**



**Figure 2, Basic Product Development Steps**

In short, you cannot just jettison significant portions of your product development chain. You must have the appropriate people, process and tools in house to make sure that you only develop the right products and that they are profitable in both the short and long term. Beyond the core development requirements there are additional issues that will need to be addressed. These are outlined below:

1. For small to medium sized manufactures the size of an outsourcing deal, at least if done on a project basis, may be too small to be of interest to any of the outsourcers with a significant US presence. This leaves you having to deal with a great deal of detail.
2. The protection of intellectual property becomes an important issue.
3. The details of offshore outsourcing are significant. Some of the issues that will need to be resolved when dealing with outsourcers that have not developed a significant US presence include:
  - a. The nature and enforcement of contracts.
  - b. The means of payment and resulting currency exchange impacts.
  - c. The handling of significant cultural differences with language being the most obvious.

All of these issues can, and have, been dealt with satisfactorily. None of them are insurmountable by any manufacturer of reasonable size. If you put into place the right people, process and tools, then you will have a successful long-term relationship with the selected outsourcer.

However, before running out to find your offshore development outsourcer you might want to take a look at one other development strategy. For small to medium sized manufactures, the applicability of its products, its application domain, is often relatively constrained. When this is the case, there is another way to skin the profitability cat, automation.

With outsourcing you are replacing your in-house personnel with people some place else that are not directly employed by you. The actual work is more or less the same no matter who does it. Automation replaces personnel with tools. In this case, design elements are organized into basic building blocks and the coupling between these blocks are well defined. In today's software world this would be termed an object-oriented framework. A new version of something involves the selection of existing blocks to include and possibly the definition of a new block that follows the defined coupling rules. This process can be completely (or nearly so) automated. An example of such a framework and the automation tools that support it can be downloaded from this site.

In the final analysis the question becomes which strategy is most likely to fulfill the following requirements:

1. Develop the "right" products:
  - a. Customers want it.
  - b. You can make and sell it.
  - c. It is profitable.
2. Make the products as profitably as possible. In terms of what the product development chain impacts, this translates to the highest possible customer perceived value with the lowest lifetime direct costs.