

The Strategic Decisions For Product Development

Product Development Failures

Since so many product development projects fail, this article will consider early stage feasibility decisions for project selection and definition. Many projects are not successful because the company fails or the product does not meet market requirements. Some say this is because they do not do any market research or strategic planning. Project team leadership in early decision making is also a reason for project failure. If everyone is doing their own thing in their own way, it is going to be difficult to focus well enough to develop the right product for the market opportunities.

Initial Feasibility Study

Initially there must be a solid vision for new products or services. Often there will be a single a product idea one is focused on and has not examined the bigger picture. This must be the right product to align with target markets. To determine the right product one must look at the big picture. This must include, at least, the total international market, international competition, the business model, cost of product development, product cost, and the cost of marketing. Here one must develop a R&D plan to carry out product development, apply creative development methodology to new products using knowledge of the market, and then use current tools to develop the product.

A preliminary specification should be prepared for the initial market study. This involves doing research on existing products, services, etc. For new products this involves doing objective market research and exploratory patent searches to find the state of the technology in competitive organizations that have similar ideas. This is an area where it is good to have a team with a variety of disciplines participating. At this point one should think broadly with respect to multiple applications and have the ability to persist to take advantage of the highest priority opportunities.

If there are a number of patents surrounding an idea, the development is going to cost a considerable amount and it may be difficult to obtain funding. This has to be taken into account in the overall strategies and business plan. On the other hand, if there is little or no competition for a radically new product, the marketing or production process efforts could be huge investments. Here the secondary funding requirements could be so excessive that it is difficult to obtain funding for marketing and manufacturing. In any case, one must do some technology forecasting to predict what might be developed in the near term by other companies. New or disruptive technologies need to be considered very carefully. Sometimes there are hidden costs in

being the original developer of a technology. This can either be in the manufacturing process area or in the marketing area.

One has to be careful in defining the market size relative to existing products, their cost, and life cycle. Even though a new product may offer some benefits, the benefits may not adequately justify the new investment.

Count the Cost before Product Design

As has been said for the past 2000 years, one must “count the cost” before taking action that involves use of new resources or financing. In counting the cost one must consider competition and product requirements in some detail. Is there really an opportunity or is the development and marketing of this new product just an ego trip or an “also ran”? Assuming one has a solid product or service idea, a plan for marketing, designing, producing the product, and serving markets should be developed. Then there needs to be strategic decisions involving the resources and activities required for product development and market penetration. During or after the initial prototype development there may be functional or economic obstacles. The way one deals with obstacles can be as important as talent and/or funding. Often it is the driven or persistent one in a small organization, rather than some academic or corporate genius who will achieve a successful product development

Second Opinions

Sometimes it is helpful for an outside organization to evaluate the new product concept. This is much like getting a second opinion before making any large investment. It is better to have an early indication of an unsuccessful product than to raise a large amount of money and be disappointed in the market response. There is much discussion about lean product development. This is where an outside critique could be helpful. This could be in the form of an early feasibility study, progressive review, or a series of design reviews as the development progresses. For example, by doing a creative feasibility study early in the development process, one can save a huge amount of money and readjust initial designs.

We have found that there are often multiple applications to most products. Sometimes secondary applications and the potential of international markets will make the difference in achieving funding for a successful product development and marketing. Many times only minimal design changes are needed to serve multiple markets.

Consider going outside for Product Development

One should consider going outside for product design, purchase of new technologies, and evaluation of new technologies. For example, this can be for purchasing of a license agreement on an existing patent or having a product development company do the design and/or initial development on the product. Product development may be accelerated by going outside. Here there may be a higher price to pay, but sometimes it is worth it. This will depend greatly upon ones internal resources and available funding. It will also depend on the technology available on the outside relative to what is needed to meet the market target need.

While doing a patent search is wise to consider licensing opportunities with companies where technology has not been fully utilized. This can shortcut the development time and create a new strategic partner. Before acquiring technology one must consider the overall value over the duration of the product life cycle.

Often there are new technologies available from academic institutions. Here one has to be careful in evaluation of the amount of work needed to convert a technology into a marketable product. Scheduling is another issue that needs to be considered. Often the scheduling of academic research is not consistent with that required for commercial development.

With respect to outside design companies, there are a number of different approaches that can be used. One can use an outside company for design, development of prototype for marketing and fund raising purposes, or a full product development for production can be contracted along with an outside manufacturing partner. In any case, one must consider the available internal team before going outside for R.&D. help. They must be able to work together. Here one must consider the chemistries of the cooperating organizations. They must be compatible. Capabilities must be matched to the product and the product needs to be well defined with respect to the market before an agreement is reached.

Develop a R&D Plan

In order to have a successful project development, there are many requirements beyond having a good idea. There needs to be a central focus on the core business, markets, competition, and the type of organization needed. One must do a development plan or proposal rather than proceed without direction. For small projects persistence is required to get funding and keep a team focused. It takes hard work and external help to develop the prototype. There must be adequate financing, appropriate vendors, and other resources. Currently almost every business is going to need outside strategic partners. This could be for materials, product development, fabrication, assembly, or even marketing. Practically every product development requires an extensive team effort. This requires putting an internal team together at the right time with adequate resources. An external consultant could help with the process and provide a second opinion, but it is important that all major players are a part of the planning and that all buy into the resultant plan. This will require well balanced decisions based on market research, product specifications, and product development experience.

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