

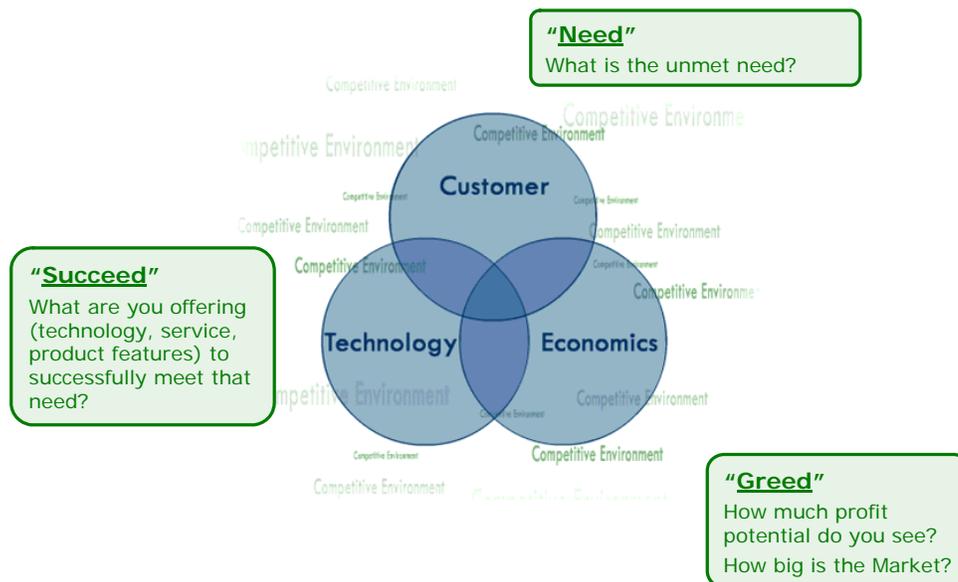
## Picking Winners in New Product Development

### Use of Opportunity Analysis in Commercialization

Lynne M. Galligan

Companies deciding how to allocate resources across various commercialization activities need a set of rational tools for ranking opportunities and deciding where to invest their money. These tools should allow the decision maker to determine that an unmet NEED exists, that the customer or consumer will actually buy the product. The tools should also assess the funded firm's ability to SUCCEED in meeting the need and sustaining a competitive advantage. Finally, the tools should help to determine whether the economics are viable, or satisfy the GREED requirements of both the funded firm and the investor group. Figure 1 shows the relationship of these elements.

**Figure 1: The Opportunity Analysis Model**



The **Opportunity Analysis Toolkit**™ includes a number of tools that work effectively toward this exact purpose. This "kit" includes the idea selection worksheet, selection criteria, and the tools used for conducting a pre-development study to *confirm* Need, Succeed, and Greed.

## Idea Selection

When choosing ideas for commercialization, a company needs a set of Selection Criteria. These criteria should take into account internal and external information such as the competitive environment and the company's competitive advantage. Opportunities can be compared to the set of criteria and ranked high/medium/low; or a 1, 4, 9 scale can be used to score the projects.

In order to effectively compare opportunities, the same set of questions need to be answered for each idea or concept. At the early stage, keep the set of questions simple, for example:

- How is the basic need (function) being met now and at what cost?
- What improvements are needed?
- What is impacting the need for a change?
- Why is our solution now possible?
- What is our competitive advantage?
- Why us? What strengths and capabilities are we using?
- What is the market size, and what share can we attain?
- What resources are available and what will this cost?

### Elements to consider when developing Selection Criteria

#### Company Fit

- Fit with business and strategy
- Competitive advantage
- Market need

#### Risk Assessment

- Go-To-Market risk
- Technology/manufacturing risk

#### Financials

- 5 year revenue potential
- Time to revenue
- Market growth
- Cumulative investment before first revenue
- Return

## Confirming the Opportunity (pre-development)

Many companies mistakenly skip the confirmation step and move directly to product development once an idea has been clearly defined and screened. They do this because everything sounds good. There is usually some secondary research to back up their position, they are anxious to get to market, or they have a committed customer who is pushing them for the product.

But there are many problems with this approach. First, information available in the literature (secondary research) is not always correct. For example, one client firm developed a new labeling system for the medical industry based on recent FDA regulations only to learn that the regulations did not apply to most pharmaceutical firms because they sell through distribution rather than directly to the hospitals. Also, keep in mind that your customers may not be representative of the industry. They may have their own unique problem due to some internal

constraints, or perhaps they really don't understand the market (i.e. **they** skipped the confirmation step!).

During the confirmation step, we focus on identifying potentially fatal flaws and determining if they are real. If they are real, we figure out ways to resolve them, or we shelve the opportunity. This is a lot easier to do **before** you have started product development, and a lot less expensive.

When doing the market confirmation phase, it is important to understand the unmet need. This is done by addressing these questions:

- How is it done now?
- What does it cost now?
- What's wrong with current solutions?
- What would be the value of improvements?

Use of these open-ended questions will allow you to get at unspoken needs and figure out the value of your potential solution. These questions can be used at a high level to define and understand a market place (e.g. How is the use for portable energy being met today?) or at a specific level (e.g. What is the size of the metal oxide particles used in rechargeable lithium batteries?). The level you should use depends on what information you need for determining whether your solution will meet the need and if you can make money with it.

A confirmation study needs to address all three elements of the Opportunity Analysis model – Need, Succeed, and Greed. We usually focus first on unmet need because without that you have nothing. In doing the needs analysis, it is important to determine the strength of the need for **your** solution, or hypothesized solution. It is at this point in the study that firms may need to get creative in terms of what their product offering actually will be. This is where you leverage your technology platform into solutions for the customer. In order to determine if you have something to actually develop, you must have a working prototype at the end of the confirmation phase.

The Succeed portion of confirmation can be tricky because many companies are delusional about their competitive advantage. The key to a true analysis is to determine why your company is going to succeed and how is it going to sustain the business long term. This takes a true understanding of what customers expect from suppliers and how what you bring is unique. Customers won't buy from you **JUST** because you wear a white hat.

The financial portion of a confirmation study is always a challenge because we are attempting to demonstrate that we think we can make money without having a fully developed product, frequently without having determined exactly where we are going to manufacture the product. The key is to focus on the things you can know at this stage: How large is the market for your solution? How many customers do there appear to be based on your prototype? How much do

you believe it is going to cost to produce (including required capital costs)? Using the questions aimed at defining unmet need, we ask questions about value to figure out whether we can make money. At this point, use your best estimates and the opinion of experts in the field. A complete financial model will be developed as part of the next stage in the commercialization process. You only want enough financial data now to support a recommendation to spend the money to run the plant trials, etc., needed to fully develop the model.

Individual firms will need to determine how much financial information they require at this stage, but I have seen many companies spend too much time and money prior to moving to product development. What usually happens is that things begin to look positive, so the team “slides” into product development without making the conscious decision to move to this next stage. This frequently results in teams being under-resourced, and that slows down the development process.

Sometimes when you get to this part of the process, you discover your technology will not meet the need. It may not perform as required, or it may cost too much to produce. Good companies, with creative R&D people, don't let this stop them. They go in search of new technologies that can meet the needs. This is where rapid prototyping can come in – rapid development of alternatives that can be tested to determine if they will work.

One company undertook a confirmation study after a start-up firm brought them some low-cost technology that changed color when exposed to a high temperature for a set period of time. The company felt this product could be developed into a time/temperature indicator for foods to compete with an existing product on the market. However, when they completed their OA interviews, they had learned that the opportunity was not on the final consumer package but on shipping containers. This meant that a more robust solution was needed, but the value was also higher since the indicator would protect an entire box of food, not just the individual packages. Once the company had completed the market need portion of its study, it went in search of technology that would meet the need, developing several dozen prototypes over the next few months. When the company had one that met the need, it developed a manufacturing process that would meet the cost targets. Only then did the company recommend the project move to development. With all this ground work, the product was commercialized in a few months.

You don't have to have all the answers to recommend moving to development, just enough answers to increase the likelihood of success and provide direction. We press for work in the confirmation stage to be completed in a maximum of three months in order to prevent “scope creep” and to keep things moving along. At the end of this period of time, the analysis team is in a position to make a recommendation to shelve or continue forward. Sometimes they have identified key pieces of missing information that should be filled in before moving to development, or they may recommend shelving the opportunity until the R&D team can figure out how to lower costs. Each opportunity is different.

### Portfolio Management

Whether a firm is managing a portfolio of companies or a portfolio of projects, having a systematic method of evaluating the opportunities will make portfolio management easier. Having fact-based information on each opportunity presented in a similar format means you can compare it to the selection criteria and prioritize the opportunities for funding. While gathering this type of data, it becomes clear when the opportunity doesn't really exist, thus allowing the portfolio manager to quickly weed out the lower priority projects and focus on the ones with a higher likelihood of success. In addition, the opportunity analysis data provides valuable direction to the development team, clarifying the target market and providing information for designing the voice of the customer tools used in this stage.

### Keys to Success

It is important that firms wanting to use the **Opportunity Analysis Toolkit** recognize the amount of work involved and provide their analysis teams with training, coaching, and the time to undertake the studies. Our goal is to help make such teams successful and to provide analysts with the necessary tools. We have developed detailed workflows, which include forms for organizing the work, documenting the findings, and making recommendations to the management team. Training materials include modules on effective secondary research, open-ended interviewing skills, and data analysis. We find that once people have participated in conducting two, well-coached Confirmation studies, they are able to lead a team and coach others.

Experienced marketing or business-development professionals will recognize the process and the tools as items they have found successful in the past. Our experience is that we can make a real difference by getting everyone in the company using the same tools, talking the same language, and working on the same page, knowing what needs to be done and who is going to do it.

Companies who have adopted our methodologies have found that they can sustain a 12-15% compound growth rate on internally funded ideas while maintaining a full pipeline of next-generation ideas. Venture firms can quickly sort out projects that aren't worth funding and get their resources focused on ideas with a higher likelihood of success. Working through this process also improves the strategic and customer assessment skills of key team members, thus training future leaders in these companies to be alert to high quality ideas and have the know how to successfully commercialize them.

2305-C ASHLAND STREET, #428 • ASHLAND, OR • 97520  
PHONE: (541) 488-9290 • MOBILE: (541) 941-8087 • FAX: (541) 482-2203

[www.hilltopinnovaton.com](http://www.hilltopinnovaton.com)