

## **ESTIMATING THE VALUE OF YOUR INVENTION**

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There are a number of methods and approaches to estimating the value of an idea for a product. There are also a number of perspectives depending on whether one is an inventor looking to start a business, an investor looking to make a good return, a company looking to extend an existing market or open a new business area; or, an inventor looking to license the invention. This workshop will show how those different perspectives might value an invention very differently and the importance of understanding each perspective.

Valuation will be looked at from the macro view which is attempting to compute a return on investment over the life of the product and from the micro view which is attempting to determine value in the hands of the user/customer. The former looks at the investment costs and profit potential. The latter looks at pricing strategies which will produce a profit and still be competitive in the marketplace.

The discussion of viability will center on seven major categories of information.

- Patentability
- Protectability
- Marketability
- Manufacturability
- Profitability
- Appropriate use of Resources
- Strategic Issues

Patentability is covered in depth in another workshop. We will instead address the investment aspects of patenting and alternative forms of protection including:

- Market Dominance through Public Relations, Advertising, etc.
- Technological Leadership
- Manufacturing/Process Dominance
- High entry costs

Under Marketability the following issues will be addressed:

- Defined prospect base - can be reached cost effectively
- Geographic coverage
- Meets basic wants and/or needs
- Consistency with Megatrends
- Competitive niche
- Favorable Value/Price
- Resources Available
- Distribution Available
- Distributors/Buyers willing to commit

Under Manufacturability the following issues will be addressed:

- Material availability
- Labor availability
- Processes defined
- Innovations required or not in manufacturing

Under Profitability the following issues will be addressed:

- High Price/cost ratios
- Cost effective access to prospects
- Cost effective distribution
- High Returns/Investment
- High Response to Advertising/promotion
- Risk relative to other Opportunities

Appropriate use of Resources

- Existing Distribution
- Same Buyers?
- Sustainable cash flow
- Available labor, expertise

Strategic Issues

- How to capture market share
- How to broaden market base/product line
- How to extend the Product Life Cycle
- How to defend against competition
- How to exit gracefully

How does one pull all of the preceding together to make a decision as to whether to proceed?

Decision-making strategies and processes will be discussed including qualitative and quantitative approaches.

Valuation of a product from a buyers perspective invokes a lot of additional issues. If it is a commercial or industrial product, many of the same criteria will be applied as discussed above; namely, does the product produce a savings in operating or material costs which exceeds the cost of the product by an attractive margin. However, for many products, and especially consumer products, other factors come into play. For these products, the value may be based on social, environmental or psychological concerns. Pricing strategies in these cases should be based upon feedback from prospective customers and from those in the distribution channel, and take into account competitive considerations. These principles will be illustrated through interaction with workshop participants.

## **Estimating Investment Requirements**

### Estimating Returns

Market potential - top down, bottom up analyses

Market share of the competition is important – it indicates market fragmentation

Product Share – may be an indicator of shelf space allocations in the retail arena

Product Life Cycle – Fads (e.g. pet rocks, hula hoops) often have a short product life of only a few years; so, one has to be profitable early on to recoup one's investment.

Sales forecast - 5 year. Important to plan for inventory build rates as well as to estimate recovery of investment.

### Determine Selling Price

Competitive analysis – what do customers pay for alternate “solutions” to the problem

Market Need/Want - see chart – “Wants” are more motivating than “Needs”

Perceived Value vs Actual Value

Industrial/Commercial – Payback / ROI

Consumer Paybacks (as on energy savings/fuel savings), but more likely filling a desire rather than a need; such as “bragging rights” or “lifestyle”

Building “Value” is the task of marketing and sales which includes advertising

Distribution Needs 2-4x (may be nearly double for each level)

### Determining Profit Margin: Selling Price – TMC (Total Manufacturing Cost)

Be sure to include the amortized cost of tooling and set-up charges as well as per piece costs.

### Determining Net Profits: Gross Margin - Overhead/Selling Expense - 10% more or less

See industry ratios for guidelines. Remember that marketing costs, all your R&D expenses, manufacturing start-up costs (including tooling) and distribution mark-ups all have to come out of your revenue received. Often each link in the distribution chain wants to double the price.

### Calculating ROI – Return on Investment

Realistic returns should be in line with the risks taken. In other words the investor would look for a multiple of what they could get by buying bonds or savings certificates. For example, if bonds were yielding 5%, the your and/or the investor might be looking for a 25-40% return (a multiple of 5-8).

Price/Earnings Multiples (price of stock / profit from business)

What is reasonable for the industry and for the economy? 10x (typical) or 50x (in your dreams)

Negotiating Strategies

If licensing - 30-40% of profit - wholesale price out the door (less returns)

If venturing - 4-5x the amount invested in 5 years for investors, 20%/yr for debt

Developing the Business Financials

5 year forecasts for Cash Flow

3 year Pro Forma for Income Statements and Balance sheets