

## 'Research Patterns' Continued PART 2 OF 3

Responding to Breakthroughs readership requests asking us to complete KVC's 'Research Pattern Series', we're devoting this June 2004 issue of Breakthroughs to the discussion of Research Patterns C, D and E and the July 2004 issue to the discussion of Research Patterns F, G and H.

All past issues, including Breakthroughs Vol. 2, No. 3, March 2004 (Introduction to Research Patterns, Part 1 of 3), can be downloaded from [www.kestingventures.com](http://www.kestingventures.com).

KVC's services utilize the methodologies we have developed during the past 20 years to harness the reasoning ability of people, who are working in the frontier of businesses, technologies and markets. The goal is to create new tangible blocks of knowledge that can be used by our clients to solve complex business, technology and market puzzles and forecast future market behavior.

KVC has helped its clients solve many hundreds of complex business, technology and market puzzles. Through this work, KVC has learned that there are eight (8) research patterns that describe most, if not all, business, market and scientific research.

### Research Pattern C

**RESEARCH PATTERN C** describes programs to increase profitability and/or market share based on cost reduction and/or pricing. Manufacturing cost competitive intelligence programs are included in this pattern.

#### Research Pattern C Form of Argument

Conditional Proposition: There is a direct correlation between being the low cost manufacturer of the highest market value products for markets X, Y and Z and market share. This is a known truth.

Conditional Proposition: There is a direct correlation between being the low cost manufacturer of the highest market value products for markets X, Y and Z and profitability. This is a known truth.

Conditional Proposition: There is a direct correlation between economic value pricing in markets X, Y and Z and profitability. This is a known truth.

Research Patterns describe the form of arguments for different business, market and scientific puzzles. Breakthroughs Vol. 2, No. 2, February 2004 pointed out that the first step to solve business, technology and market puzzles should be to formulate rational arguments to prove or falsify propositions. KVC's Research Patterns help people formulate their rational arguments.

The fact that there are only eight research patterns means that there are at most only eight argument forms that describe most business, market and scientific puzzles. Businesses, technologies and markets may differ but business, market and scientific research puzzles can be categorized into a much smaller number of argument forms.

Research Patterns are important because compound syllogisms (argument forms) that are developed for one business readily apply to other existing and new businesses. And knowledge block structures that have been designed for one business can readily be modified for other existing and new businesses.

Experiential modeling methodologies and the workbook can be used with minor editing. The TMP Value Glossary, ECORATIO Process Operations and Goals, and Influence Glossary must be rewritten for each Industry/Market. ■

Conditional Proposition: If a company is the low cost manufacturer of the highest market value products for markets X, Y and Z and bases pricing on economic value, then, the Company will have optimized its market share and profitability. This is a known truth.

Categorical Proposition: Company XYZ has become the low cost manufacturer of the highest market value products for markets X, Y and Z and bases pricing on economic value.

Logical Conclusion: Therefore, Company XYZ has optimized its current market share and profitability in markets, X, Y and Z.

#### Research Pattern C Guidelines

1. Research Pattern C should be aimed at ensuring that the Company develops optimum processes for its strategic products to become the low cost manufacturer.
2. Research Pattern C should create a managerial accounting/engineering knowledge block that is easily updatable on an ongoing basis.

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## The Eight Types of Research Patterns

**Pattern A:** Programs to enter or increase share of an existing market with new products that have cost and/or performance advantages.

**Pattern B:** Programs to create a completely new-to-the-company market or to revolutionize an existing market so that it becomes a new market.

**Pattern C:** Programs to increase profitability or market share based on cost reduction and/or pricing. Manufacturing cost competitive intelligence programs are included in this pattern.

**Pattern D:** Programs to develop a new material to replace an existing material, which is in short supply and/or increasing in cost. This pattern includes programs to satisfy needs created by legislation or some other external force.

**Pattern E:** Exploratory programs to develop fundamental knowledge. Knowledge management programs to create knowledge blocks are included in this pattern.

**Pattern F:** Short term programs for direct manufacturing support. Managerial accounting and/or engineering programs to enable plants to understand and optimize manufacturing costs are included in this pattern.

**Pattern G:** Programs based on a unique forecast of an emerging market and/or technology. Programs to create new-to-the-world markets are included in this pattern.

**Pattern H:** Programs based on developing a new material that has not been commercialized because an economic manufacturing process has never been developed. This pattern is a variant of Pattern B. ■

## Research Pattern C

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3. Process changes that produce product alterations that are observable by customers should be avoided unless these changes improve the product's market value.
4. Cost reductions that are not observable by customers result in improved long-term profitability. Resist the tendency to give success away for questionable market share objectives.
5. An audit should be conducted to determine whether a breakthrough is possible (See Breakthroughs, Vol. 2, No. 3, March 2004). This will determine whether a company can sustain its current market value position for the long-term.

### Research Pattern C Knowledge Blocks

- Market Value knowledge blocks that prove that there are no significant market value gaps remaining in the Company's target markets and/or cost improvements made possible by new technologies that hinder the Company's long-term market value leadership position.
- Competitive intelligence (CI) knowledge blocks that prove the Company is the cost and economic value leader of its target markets. ■

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Kesting Ventures Corp.  
26 Edith Ct., Wayne, NJ 07470  
Tel 973-694-0671  
Fax 973-628-8278  
www.kestingventures.com  
info@kestingventures.com



### About Kesting Ventures

Since 1984, the mission of Kesting Ventures Corp. has been to develop, improve, record and facilitate the problem-solving methodology required by R&D, marketing and commercial development specialists.

The powerful problem-solving methodology of Experiential Modeling embodied in KVC's Extend® and Start® Programs enable your organization to form specific operational plans for entire businesses, envision and then invent new products and technologies – even renew the growth of existing businesses.

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## Research Pattern D

**RESEARCH PATTERN D** describes programs to develop new materials to replace existing materials that are in short supply and/or increasing in cost. This pattern includes programs to satisfy needs created by legislation or some other external force.

### Research Pattern D Form of Argument

Conditional Proposition: There is a direct correlation between market value and market share in all markets. This is a known truth. It is very important that companies develop metrics that are proven leading indicators of market value leadership.

Conditional Proposition: The laws of supply and demand apply to markets X, Y and Z.

Conditional Proposition: Market value leadership is required to change market behavior in markets X, Y and Z. This is a known truth.

Conditional Proposition: Changes to Market Value Chains that are caused by external forces are time dependent. This is a known truth.

Categorical Proposition: The cost/supply of new products for markets X, Y and Z has changed such that markets X, Y and Z will switch to new materials. This can be proven by means of market value knowledge blocks.

Categorical Proposition: The Company has the technology to be the market value leader of its product portfolio for markets X, Y and Z. This can be proven by means of market value knowledge blocks.

Logical Conclusion: Therefore, there is high probability that the Company can become the market value leader of its product

portfolio for markets X, Y and Z at market equilibrium.

### Research Pattern D Guidelines

1. A fundamental conditional proposition is that the timing of the change is known. When the timing is known, the program switches to pattern A or B.
2. The initial objective should be to have the preferred solution developed and on the shelf.
3. Research Pattern D usually only succeeds if new materials can replace current materials based on increased market value independent of availability.
4. The economic principles of supply/demand equilibria are applicable.
5. Avoid Research Pattern D programs that are initiated because of customer requests.

### Research Pattern D Knowledge Blocks

- Market Value knowledge blocks that prove that advances made possible by the new materials correlate with market share for the Company's target markets.
- Technomarket Performance (TMP) Value knowledge block to prove that the new materials enable companies to overcome a high percentage of the target markets' TMP Value gap.
- Economic Value knowledge block to prove that the new materials provides target markets with the best economic value of all known alternatives.
- Influence knowledge blocks to prove that the Company has the influence to be the market value leader in its target markets.
- Market Value knowledge blocks that spell out the Company's financial plan. ■

## Research Pattern E

**RESEARCH PATTERN E** describes exploratory programs to develop fundamental knowledge. Knowledge management (KM) programs to create knowledge blocks are included in this pattern.

Technology is defined as technical levers to produce product/service properties and/or to achieve improved product costs and/or to create tangible knowledge blocks.

### Research Pattern E Form of Argument

Conditional Proposition: For optimum utility, corporate knowledge should be in the form of tangible knowledge blocks that can be used to solve complex business, technology and market puzzles for strategic businesses. This is a known truth.

Conditional Proposition: A company has identified its strategic industries, businesses and markets.

Conditional Proposition: The Company has the technology to create tangible knowledge blocks.

Conditional Proposition: If the Company has tangible knowledge blocks that support its strategic industries, businesses and markets, then the Company will be better able to achieve the goals and objectives of its long-term strategic plan.

Categorical Proposition: The Company, has identified its strategic industries, businesses and markets, has technology to create tangible knowledge blocks, and has tangible knowledge blocks that support its strategic industries, businesses and markets.

Logical Conclusion: Therefore, there is a high probability that the Company will be better able to achieve the goals and objectives of its long-term strategic plan.

### Research Pattern E Guidelines

1. 25% of a company's R&D investment should be directed at fundamental knowledge that supports the Company's strategic interests.
2. Exploratory programs should be directed at market value.
3. Creating tangible knowledge blocks that can be used to grow existing businesses should be the first consideration.
4. Continuity is essential. Companies should only invest in programs that will be maintained and can be afforded during economic downturns.
5. Exploratory research should result in new businesses. Start® Program targets should be developed.

### Research Pattern E Knowledge Blocks

- Market Value knowledge blocks that identify breakthrough opportunities in the Company's target markets. ■