

The New Product Process

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Overall Strategy Formulation

⌘ Audit of Firm's Capabilities & Environment

- ☒ What are we good at?
- ☒ Where are we vulnerable?
- ☒ What point in the PLC are our major products?
- ☒ What can we expect from our competitors?

⌘ This Leads to the Underlying Issues of:

- ☆ What business are we in?
- ⌚ What are our goals?
 - ⌚ These need to be:
 - ⌚ Reflective of the Org.
 - ⌚ Realistic

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Example 1

⌘ The large firm targets:

- ☒ 10% growth in earnings/share
- ☒ Plus 20% growth in sales
- Plus constraint =
- ☒ Revenues (NP) > \$4 * 10⁶
- ☒ and > 5% market share.

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Example 2

⌘ Not-for-Profit Organizations

⌘ Mass transportation

- ☒ Reverse decline in ridership over 3-5 year period.
- ☒ Reduce deficit by 5%, etc.
- ⌘ It is important to set these goals and, especially, try to quantify them.
 - ☒ Provides a measure for achievement
 - ☒ Helps direct the organization

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Example 3

⌘ Gillette stopped efforts to introduce pocket calculators.

- ☒ Met Sales Growth Target (in 1974) but
- ☒ NOT the profitability criteria

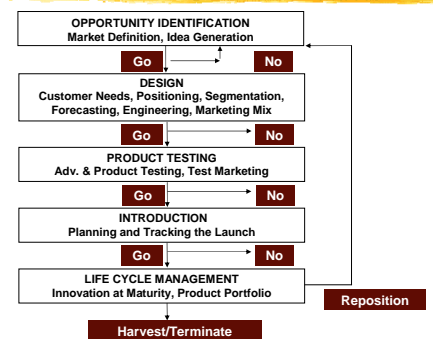
⌘ Once Goals are set Decide whether to be:

- 1 **Reactive-** strategy is based on dealing with initiating pressures as they occur
- 2 **Proactive-** strategy: would explicitly allocate resources to preempt undesirable future events and to achieve goals

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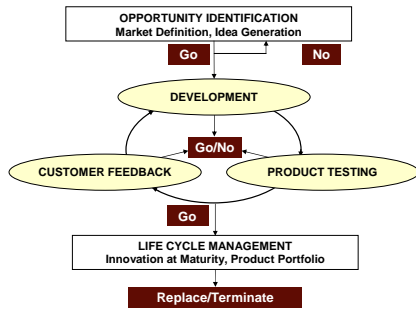
Classic Stage-Gate Approach



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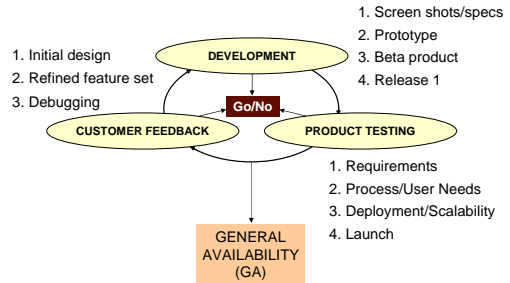
High Tech's Iterative Approach



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At Least Three Times Through



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Why an Iterative Cycle?

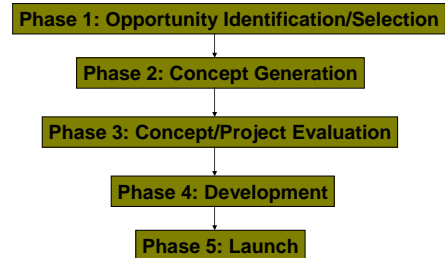
- ⌘ Product complexity
 - ☒ Size
 - ☒ Newness of technology
- ⌘ Risk to user
- ⌘ Speed of change

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The Basic New Product Process

Figure 2-1

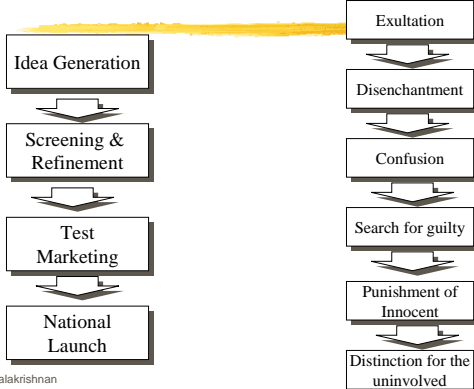


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New Products Management, Sixth Edition Crawford & Benedetto

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New Product Development - Plan Vs. Reality



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Rate of Use of NPD Steps among PDMA Members

Concept searching	90%
Concept screening	76%
Concept testing	80%
Business analysis	89%
Product development (technical)	99%
Use testing/market testing	87%

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Phase 1: Opportunity Identification/Selection

- ⌘ Active and passive generation of new product opportunities as spinouts of the ongoing business operation, new product suggestions, changes in marketing plan, resource changes, and new needs/wants in the marketplace.
- ⌘ Research, evaluate, validate, and rank them (as opportunities, not specific product concepts).
- ⌘ Give major ones a preliminary strategic statement to guide further work on it.

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Phase 2: Concept Generation

- ⌘ Select a high potential/urgency opportunity, and begin customer involvement.
- ⌘ Collect available new product concepts that fit the opportunity and generate new ones as well.

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Phase 3: Concept/Project Evaluation

- ⌘ Evaluate new product concepts (as they begin to come in) on technical, marketing, and financial criteria. Rank them and select the best two or three.
- ⌘ Request project proposal authorization when have product definition, team, budget, skeleton of development plan, and final PIC.

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Phase 4: Development

- ⌘ **A. Technical Tasks**
 - ⌘ Specify the full development process, and its deliverables. Undertake to design prototypes, test and validate prototypes against protocol, design and validate production process for the best prototype, slowly scale up production as necessary for product and market testing.
- ⌘ **B. Marketing Tasks**
 - ⌘ Prepare strategy, tactics, and launch details for marketing plan, prepare proposed business plan and get approval for it, stipulate product augmentation (service, packaging, branding, etc.) and prepare for it.

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Phase 5: Launch

- ⌘ Commercialize the plans and prototypes from development phase, begin distribution and sale of the new product (maybe on a limited basis) and manage the launch program to achieve the goals and objectives set in the PIC (as modified in the final business plan).

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Strategic Planning for New Products

Phase 1: Opportunity Identification and Selection

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What is PIC? Product Innovation Charter

- ⌘ It is the new product team's strategy.
- ⌘ It is for Products (not processes).
- ⌘ It is for Innovation (think of the definition of new product).
- ⌘ It is a Charter (a document specifying the conditions under which a firm will operate).

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Charters Have a History

- ⌘ Gerber had one for babies.
 - ☐ (Note: charter can be for entire firm, or any part of one.)
- ⌘ Wrigley was in the "gum" business.
- ⌘ Loctite built a business on one adhesive (a technology) that GE didn't want.
- ⌘ Sony, Honda, Rubbermaid and (for many years) P&G competed through product proliferation.
- ⌘ Braun competed through design.
- ⌘ 3M and Philips simply said they would compete through innovation.

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Contents of a PIC

Figure 3-1

- ⌘ **Background:** Key ideas from the situation analysis; management dicta
- ⌘ **Focus:** A clear technology dimension and a clear market dimension that match and have good potential.
- ⌘ **Goals/Objectives:** What the project will accomplish.
- ⌘ **Guidelines:** Rules, requirements, time/quality/cost, etc.

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A Sample PIC

Figure 3-1
(cont'd.)

- This is a PIC for an intangible business-business product.
- ⌘ **Background/Focus:** A major growth opportunity the Smaller offices have bought new computer systems, pose unique service opportunity which we will address using (1) our system analysis skills and (2) our field service capabilities.
 - ⌘ **Goals/Objectives:** (1) To overcome all reasonable objections about service levels by this group, (2) increase net operating revenues from this service by \$18 million per year.
 - ⌘ **Guidelines:** Create unique service approaches based on current field service resources; protect from quick competitive emulation; low development expenditures; minimum development time required.

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A Closer Look at the PIC

- ⌘ **Background:** Answers the question "why did we develop this strategy?"
- ⌘ **Focus:**
 - ☐ Technology drivers (laboratory, marketing technology, product specialization)
 - ☐ Market drivers (customer group problems, end use or activity)
 - ☐ Dual-drive firms (putting a technology and market driver together to yield a precise focus)

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A Closer Look at the PIC

- ⌘ **Goals/Objectives:** profit, growth, market status, miscellaneous.
- ⌘ **Special Guidelines:**
 - ☐ Degree of Innovativeness (pioneer, second but better, or imitator?)
 - ☐ Timing (first, early entrant, later entrant)
 - ☐ Miscellaneous (brand equity, patentability)

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Technology Drivers

- ⌘ *Materials* -- Corning's glass.
- ⌘ *Processes* -- Deloitte & Touche's financial information analytical capabilities.
- ⌘ *People* -- A scientist, an engineering group, even a product management group.
- ⌘ *Facilities* -- Kimberly-Clark's paper-making lines, White Consolidated's assembly lines.
- ⌘ *Other* -- Any strong competency -- e.g., industry knowledge in the beer business.

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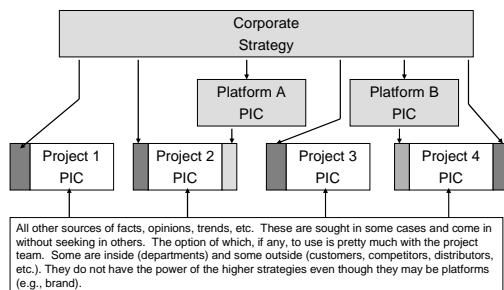
Market Drivers

- ⌘ *Customer group or resellers* -- ski shops, European importers, Ford Motor Co., etc.
- ⌘ *End users* -- All skiers, beginning skiers, professional skiers.
- ⌘ *End use, activity* -- skiing, food manufacturing, etc.
- ⌘ *Others* -- mass customizing (focusing on everyone individually, such as Courtyard, and *Dow Jones Personal Journal*), a competitor's customers, etc.

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The Flow That Produces PICs



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Tips for PIC Development

- ⌘ Note where you are starting -- what decisions have already been made?
- ⌘ Watch for any and all opportunities.
- ⌘ Confirm interesting opportunities.
- ⌘ Keep balance between focus and freedom -- wildcatting can pay off too.
- ⌘ Speed usually assumed a well-established, close-to-home PIC.
- ⌘ PICs less useful in cases where personal tastes rule (art, games, foods) or where the biggest task is developing a new technology (wait till you have it).

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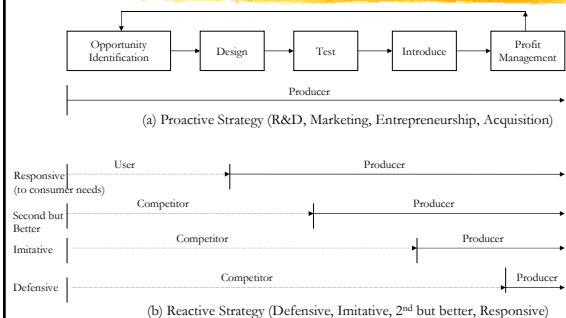
More Tips

- ⌘ Poor implementation will still ruin a good PIC (e.g., Bic perfume in lighter fluid package).
- ⌘ Watch for PIC conflicts -- e.g., a "flood the market" line extension strategy may hurt real innovation. Some charters dictate separate organizations.
- ⌘ Once in place, live by it. Use at all stages -- organization, concept generation, concept evaluation, technical, and, yes, marketing!
- ⌘ Change it only when necessary, or when you get information you have been waiting for.

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Product Innovation Charter: Strategic Implication for Processes and Resources



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Clues to New Product Success

- ⌘ Does your company now make a similar product?
- ⌘ Will the product be tested for at least six months?
- ⌘ Has your product been in development for a year?
- ⌘ Does the development team have a code name?

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Factors Influencing NPD Success

1. Product superiority,
2. A strong market orientation,
3. Solid up-front homework,
4. Early and sharp product definition,
5. A cross-functional team approach,
6. Focus and project prioritization,
7. Quality of execution, and
8. A systematic stage-and-gate new product process

Cooper (based on 1000 launches in medium-high technology industrial firms in US and Europe)

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Factors Influencing NPD Success

High Performance Companies

- ⌘ Set the NPD agenda, managing the portfolio of projects and process in aggregate
- ⌘ Use a commonly agreed to, customer-centered, disciplined approach for executing NPD projects
- ⌘ Cultivate a supportive organization and infrastructure for new product development
- ⌘ Top management committed
- ⌘ Teams and champions
- ⌘ Human resource linkages for teams
- ⌘ Enabling tools, culture and partnerships
- ⌘ Follow a structured process more consistently To make key NPD decisions more quickly
- ⌘ No time lost reinventing approaches, and they have a common language for communication
- ⌘ Have a vehicle for capturing, learning, training new participants and fueling continuous improvement

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Factors Influencing NPD Failure

Reasons For New Product Failures

1. Market too small
2. Poor match for company
3. Not new / Not different
4. No real benefit
5. Poor positioning
6. Forecasting error
7. Competitive response
8. Changes in environment

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5 different strategy types

- ⌘ Type A : the technologically driven strategy, the most popular
- ⌘ Type B : the balanced strategy
- ⌘ Type C : the technologically deficient strategy
- ⌘ Type D : the low-budget conservative strategy
- ⌘ Type E : the high-budget diverse strategy

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Summary conclusions cont.

- ⊕ One strategy-Type B, a balanced strategy-yielded exceptional performance results.
- ⊕ Adopting some, but not all, of the elements of the winning strategy is not sufficient.
- ⊕ A low-budget conservative strategy (Type-D) yields fairly positive results, especially for some types of firms and industries.

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