

New Product Development

Building the future

William C. (Bill) Smith

INDUSTRIAL TEXTILE ASSOCIATES, LLC

110 Shady Creek Court

Greer, SC 29650

864-292-8121/800-292-0324/Fax 864-292-5333

Email: billsmith@intexa.com URL: www.intexa.com

New Product Development – Building the Future

From a typical catalog in the early 1900's, 75% of products listed are no longer being made, or have changed so much as to be recognizable only as “generic.”

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In the next 50 years:

- ***75%*** of today's products will be obsolete or radically different
- ***1/3*** of products that will be made will be copies of new products from someone else
- ***1/3 of products that will be made have not been thought of yet***

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In the next 5 years, 31% of the typical company's *profits* will come from new products!

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In the next 5 years, sales growth will be the result of:

- **New Products ----- 37%**
- **Acquisitions ----- 9%**
- **Existing Products ----- 54%**

Almost half a company's sales growth will be from products they do not now make!

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Only 1 in 20 new products will achieve a significant share of the market or make a worthwhile contribution to the bottom line!

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Of all new products:

- **60% lose money**
- **30% break even (or close)**
- **8% are somewhat profitable**
- **2% provide a good return**

The odds for success are *very* long

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Successful new-product companies do not spend more, as a percentage of sales, than the unsuccessful ones on R&D and promotion of new products!

The difference between success and failure is management!

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ANY product that does not:

- Achieve significant market penetration,
- Contribute an important share of the corporate sales volume, or
- Accomplish that which could be reasonably expected of it

is a **FAILURE!**

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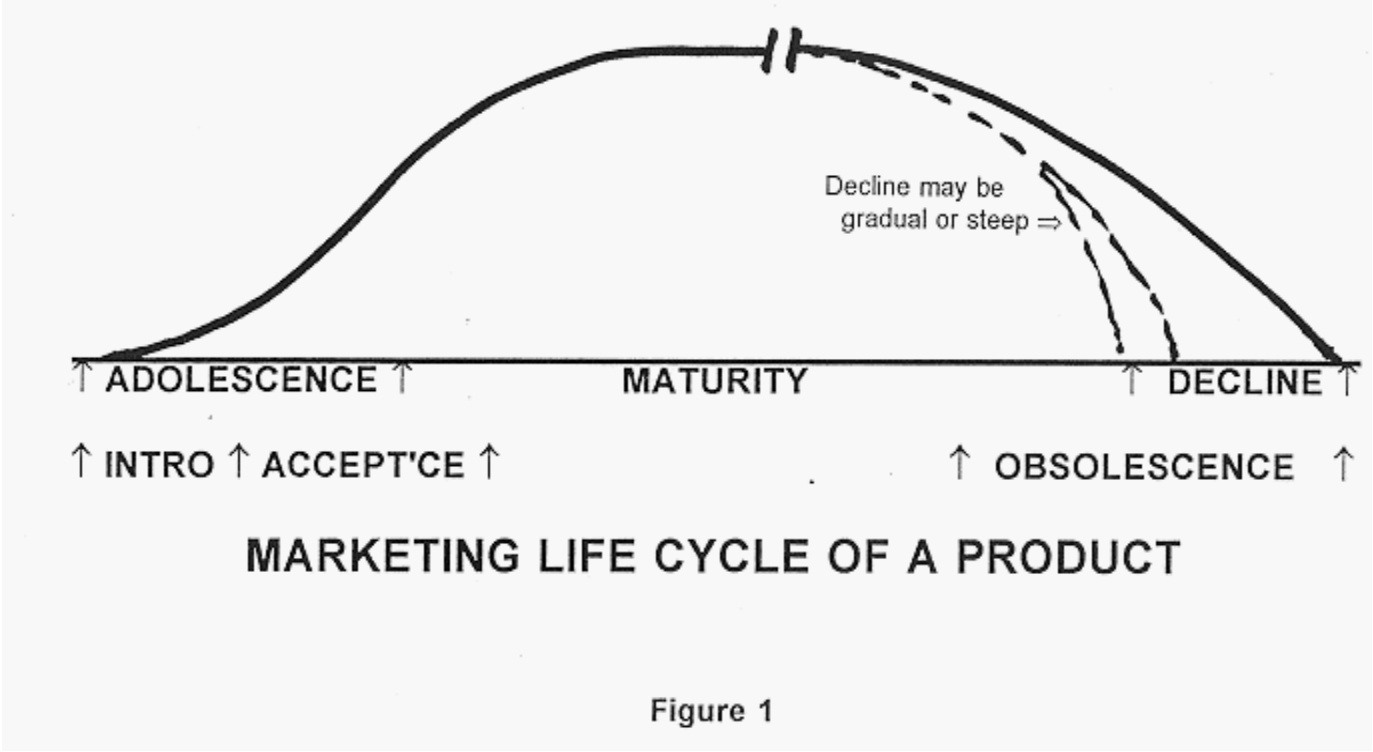


Figure 1

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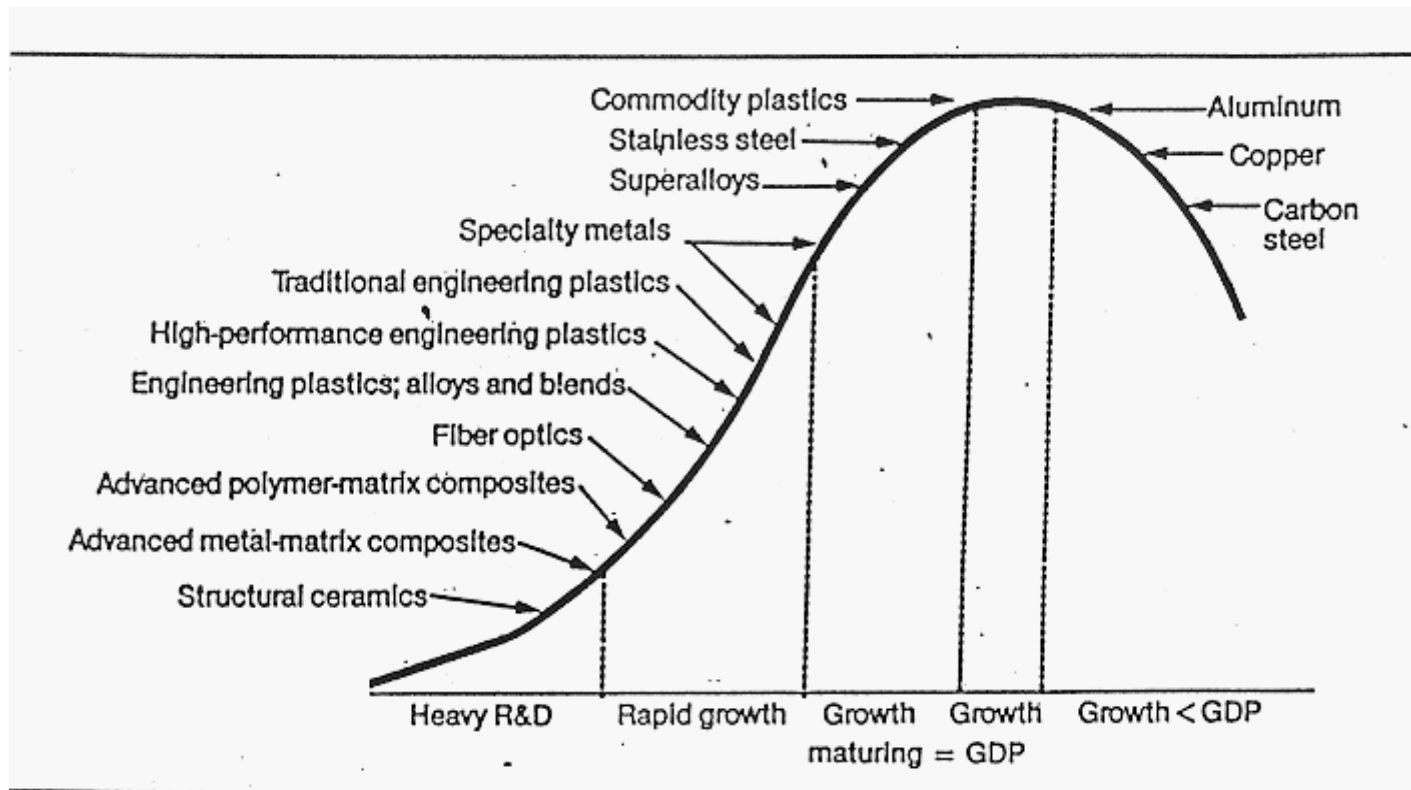


Figure 1A Materials Market Maturity Curve

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How quickly can things change?

- **When Michelin introduced radial tires, the market share for bias-ply tires plunged 60% in just 18 months!**

----New technology replacing the old

- **In March, 2000, Palm had 91.7% of the hand-held PDAs**

-- By September, 2000, Palm's share had dropped to 65.4%!

-- Handspring's share went from virtual zero to 21.6%

---- Same technology with new twist or new competitor

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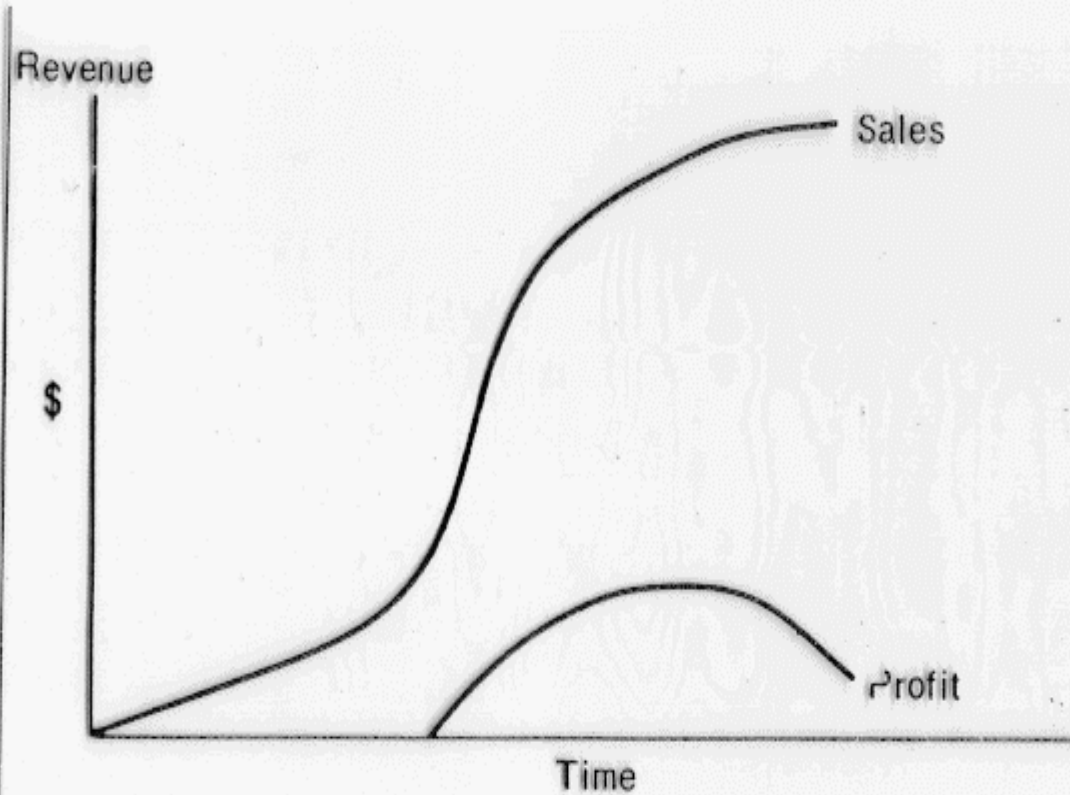


Figure 2. The product life cycle.

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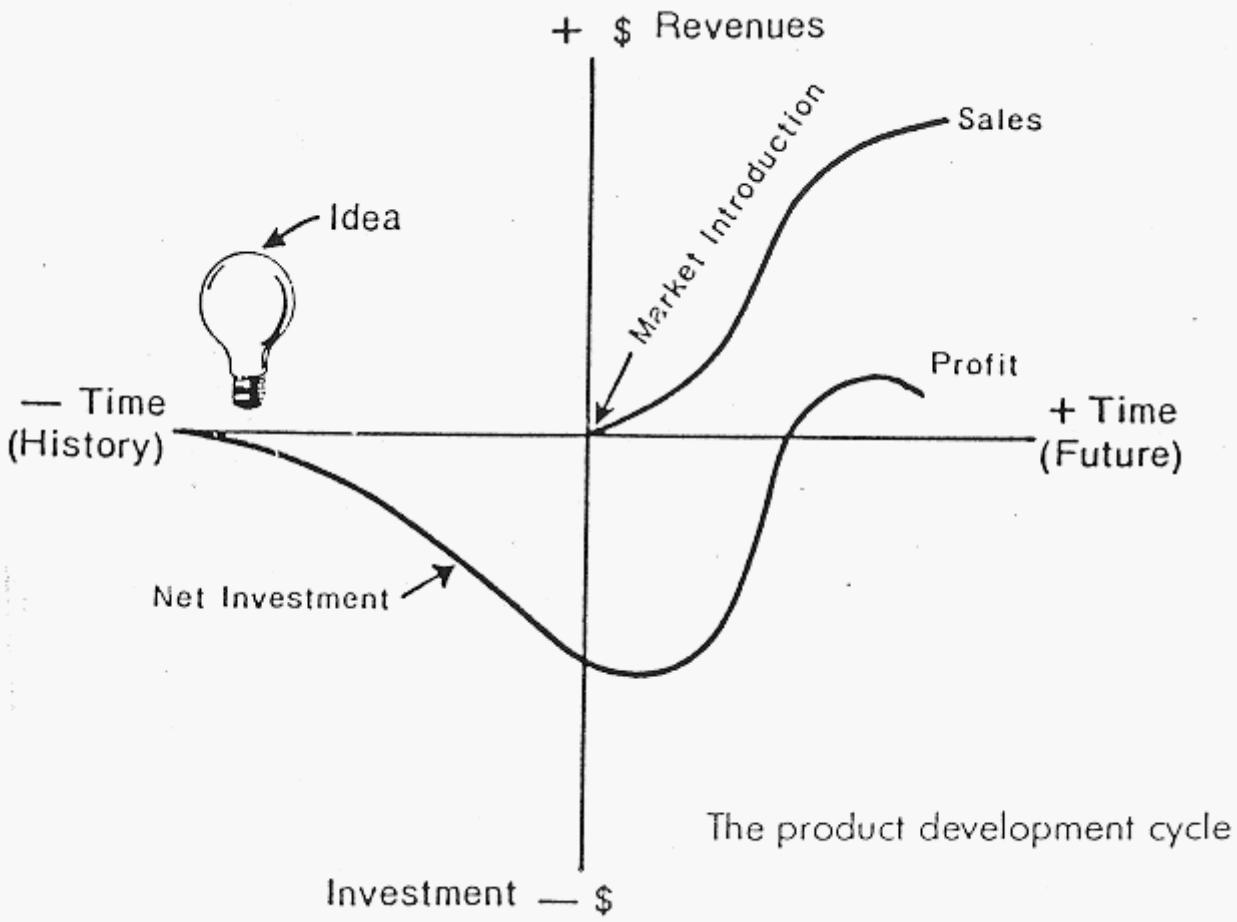


Figure 3

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The earlier you kill new products

destined to fail,

the more development time and
money you save!

Kill it Early!

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Evaluation must continue throughout
the ***entire life cycle*** of all products!

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**We must know how to read the curves,
--understand where products and technology
are on the product life cycle,
-- and *act on that information.*
Doing so will save considerable amount of
time and money.**

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**Innovation, and the proper application
of information, is the attackers advantage!**

- Richard Foster

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To be successful, a company ***must*** be committed to the concept of new products being the lifeblood of the company's future. They must:

- ***Organize*** for the work involved
- Establish clear ***criteria*** and ***goals***
- Set up the ***staff***
- Work out the ***procedures***
- Actively ***support*** the work

STAND BACK AND ALLOW THE PROCESS TO WORK!

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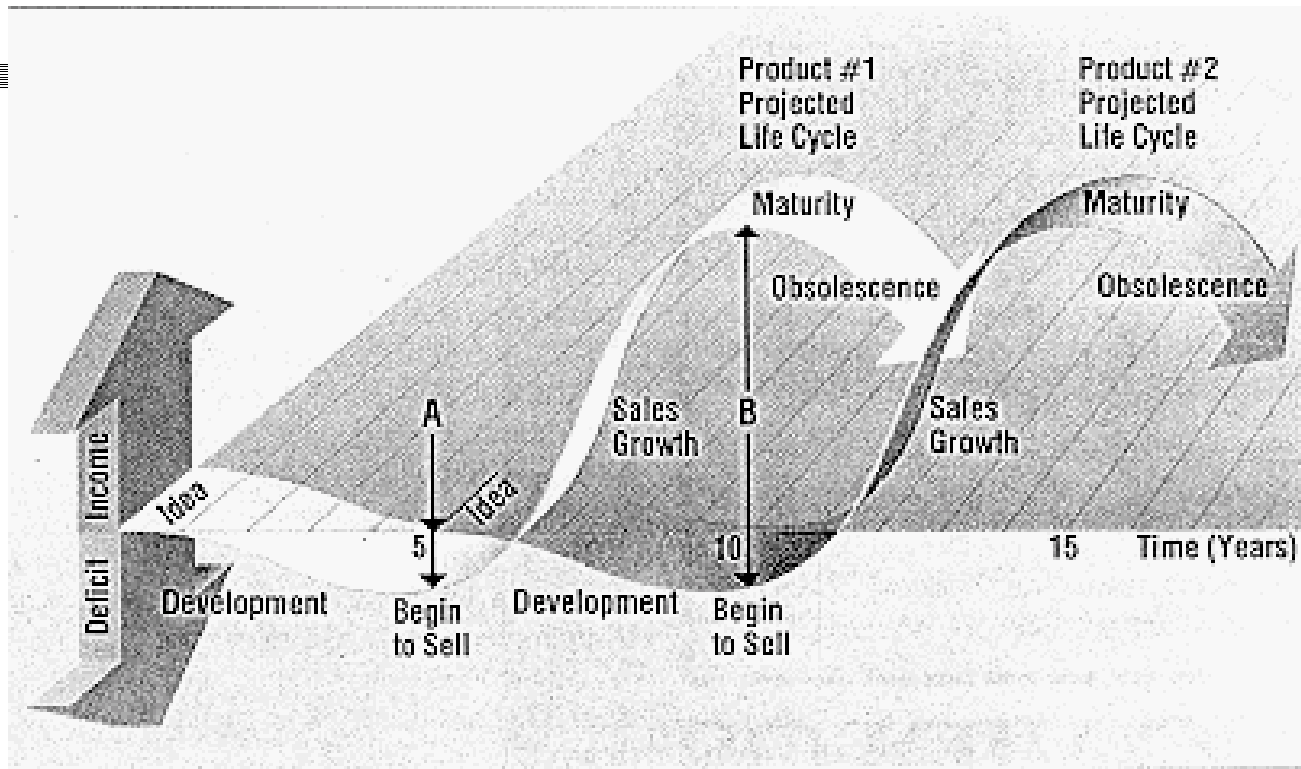


Evaluation must continue throughout
the ***entire life cycle*** of all products!

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“The *second* hardest thing to do is to get people to accept the concept of life cycles and getting them to think about developing new products to replace the existing line ...”

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Start work on new products before the old ones show their age.

The company knows that at “A” -- when five-year old product 1 is about to take off -- it must commit to product 2, so it will be ready when product 1 matures. The company will introduce 2 at “B”, when product 1, though selling well, is due for decline

Figure 3A

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The hardest thing?

Coming up with ideas for the next successful product!

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Classes of New Products:

- New to everybody
- New to your firm
- Not new to you but will be new to most who will use it

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Sources for New Product Ideas:

Outside-In Sources

K Customer Suggestions
K Competitors Suggestions
K Consultant/Mkt Research
K Fiber/Yarn/Chem Suppliers
K Trade Press/Media
K Equipment Suppliers

K Academic/Research Institutions
K Licensing
K Patent Literature
K Gov't Info and Needs
K Trade Shows/Seminars
K Technology Forecasts

Inside-Out Sources:

L Salesmen
L Other Employee Suggestions
L Internal Market Research
L Task Forces/Brain Storming

L Corp. R&D Departments
L Mkt'g & Product Management
L New Product/Fabric Departments

Figure 9

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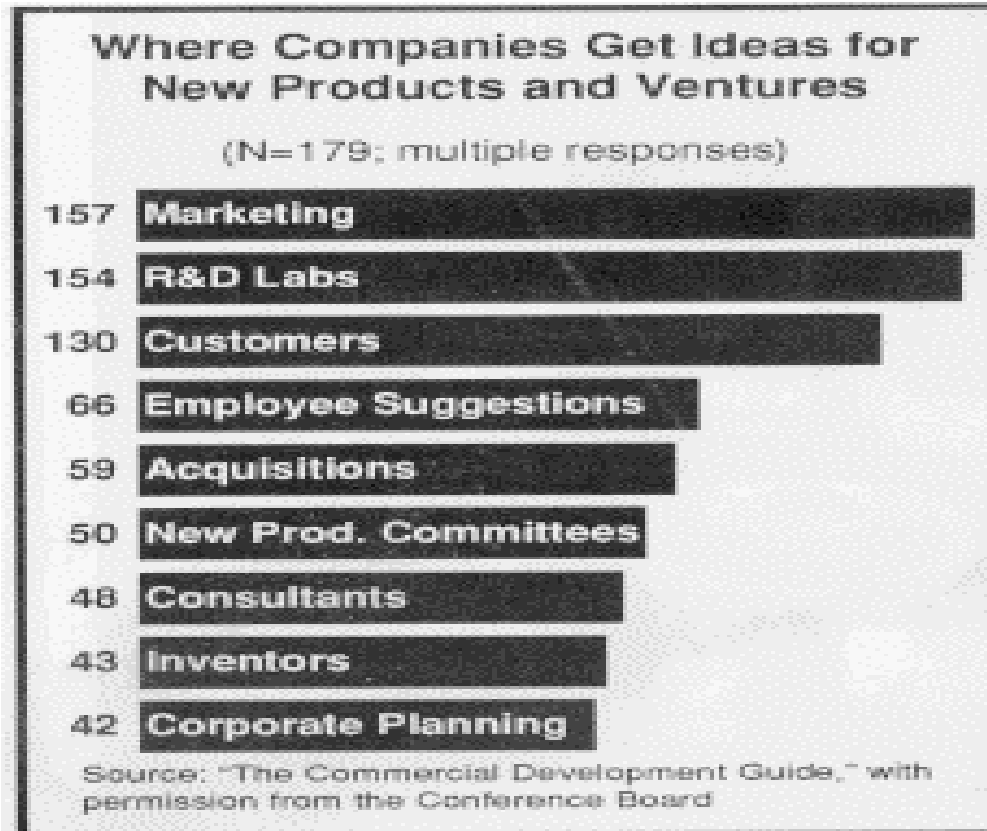


Figure 9-A

New Product Development – Building the Future

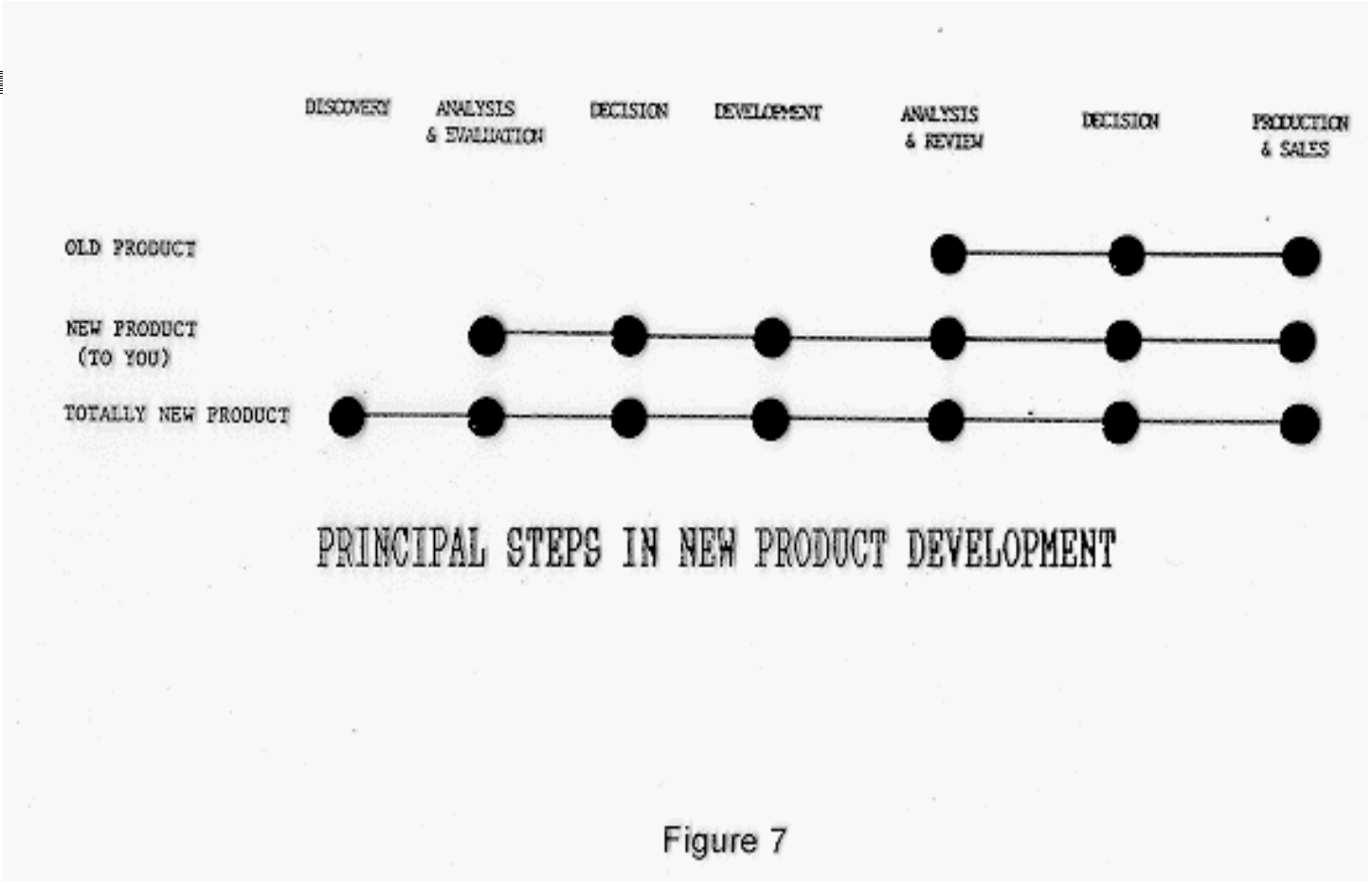
The diagram is a 2x2 matrix with 'Product' on the horizontal axis and 'Customer' on the vertical axis. A diagonal line runs from the top-left corner to the center of the matrix. An arrow points from the word 'Product' to the right, and another arrow points from the word 'Customer' downwards. The four quadrants are labeled with numbers 1, 2, 3, and 4, each underlined. The top-left quadrant is labeled '1', the top-right '3', the bottom-left '2', and the bottom-right '4'. The words 'Old' and 'New' are placed in the top and bottom rows of the matrix, and in the left and right columns.

Product \ Customer	<u>Old</u>	<u>New</u>
<u>Old</u>	<u>1</u>	<u>3</u>
<u>New</u>	<u>2</u>	<u>4</u>

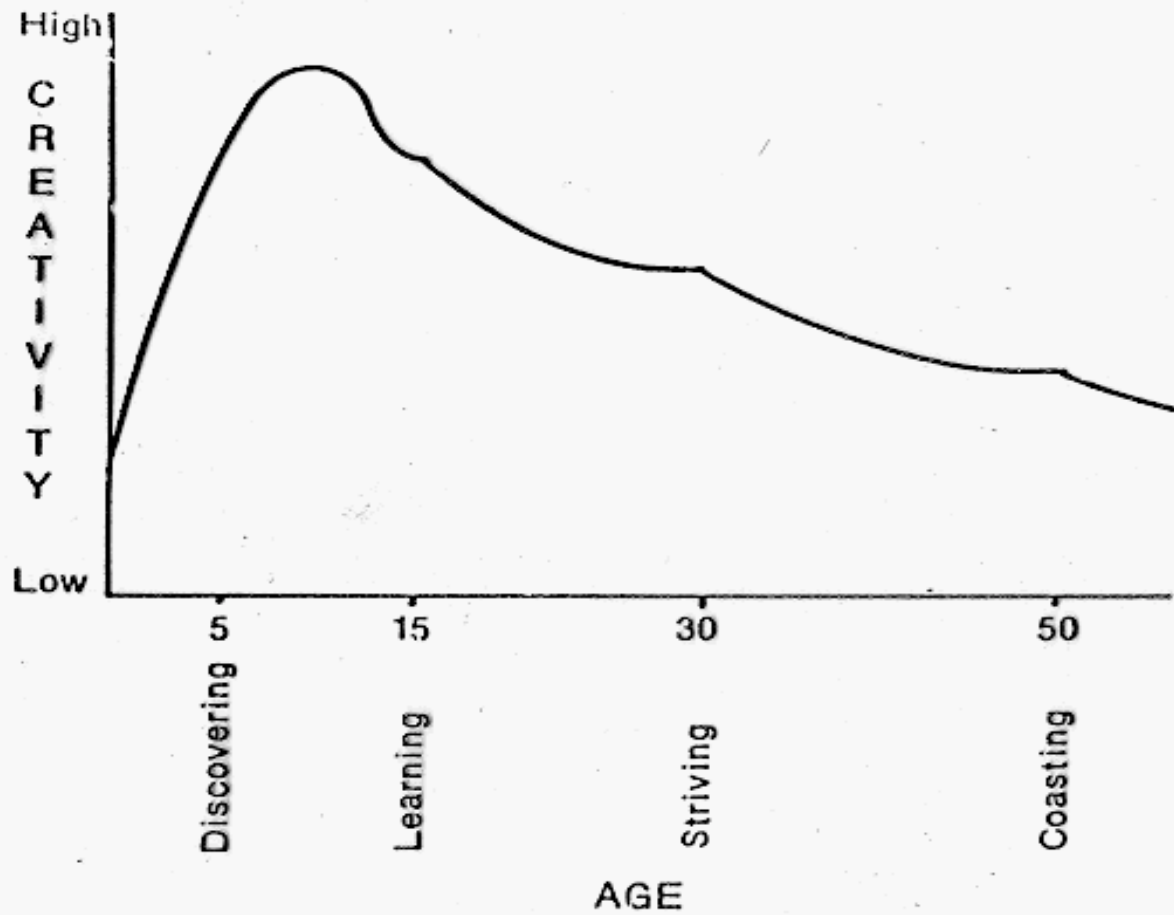
Marketing Matrix

- 1) Cheapest way to increase sales – sell an Old customer more of an Old product
- 2) Next cheapest is to sell an Old product to a New customer
- 3) Next is to sell a New product to Old customers
- 4) the most expensive way is to sell a New product to New customers

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Creativity versus age.
Figure 4

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Acumen:

The ability to make quick accurate judgements

Creativity:

The ability to generate new options

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Acumen:

- ***Taught*** -- in business schools
 - ***Practiced*** -- in business
 - ***Rewarded*** -- by the company

Creativity:

- ***Generally not taught, practiced, or rewarded***

Only 5% of companies pay NPD executives a bonus tied to performance of new product entries

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INNOVATE

OR

DETERIORATE

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NPD is an *innovative* process and carried out in the arenas of:

- **Engineering (can we design it)**
- **Production (can we make it)**
- **Marketing (can we sell it)**

And, to some degree, Finance (can we afford it)

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NPD is a cross-functional process --- BUT ...

Responsibility for NPD ***should not*** be in the hands of a

COMMITTEE!

- Responsibility spread too thin as to be burdensome
- Enjoyable opportunity, for many, without doing homework
- Too easily dominated by one or a group

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Committees are involved in the majority of most company's NPD efforts:

yet

75% are unhappy with the NPD results!

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Before discussing who *should* have NPD responsibility, we should look at

Who *should not* have responsibility for NPD:

- **Research Manager** - Too attached to project
- **Production Manager** - Don't disrupt flow
- **Sales Manager** - Concerned with quick order
- **Controller** - Husbands resources

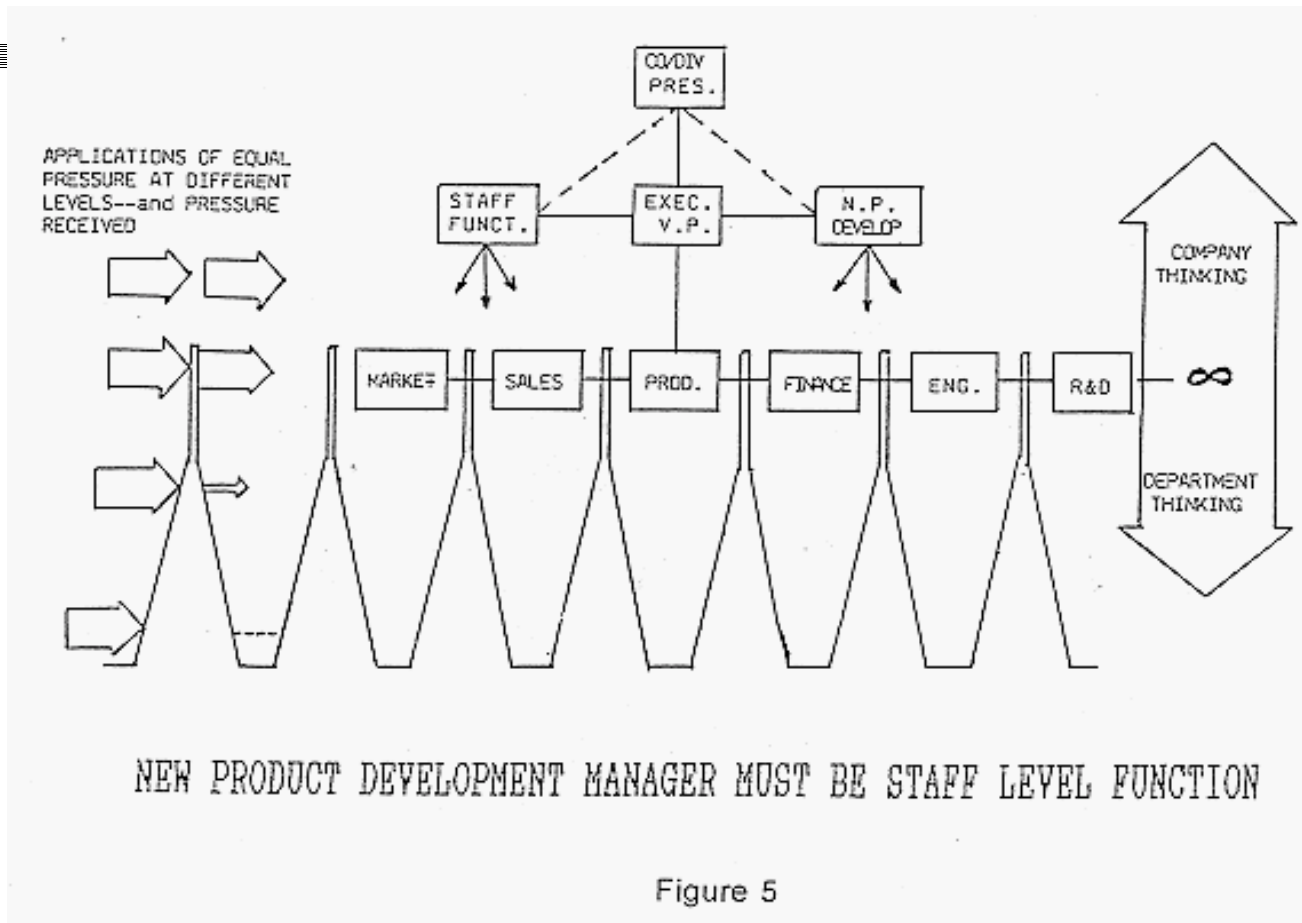
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Who should handle NPD?

***The New Product Development
Manager or Director -***

with staff status!

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Is there a role for a NPD committee?

YES ...

To review, evaluate, and give input!

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Typical New Product Development Plan

- 1) Market Research**
 - 2) ANALYSIS**
 - 3) Product Development Process**
 - 4) MORE ANALYSIS**
 - 5) Forecasting**
 - 6) Planning for Production**
 - 7) MORE ANALYSIS**
 - 8) Production**
 - 9) Market Introduction**
 - 10) Accelerated Sales Growth**
- = *SUCCESS***

Figure 10

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Go with what you have going for you!

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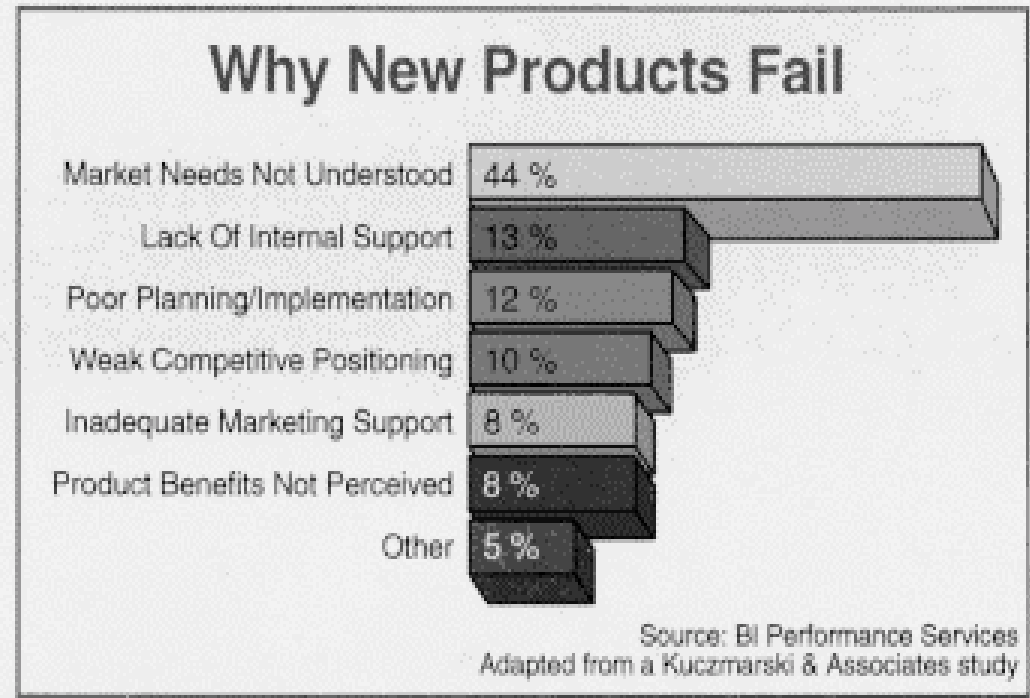


Figure 8-1

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Reasons for Market Research:

- To get information for decision making
- To prove or confirm something already known (or you think you know)

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**Conduct Market Research
at Appropriate Time and Level:
Avoid “Analysis Paralysis”**

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Initial Market Research may be needed to determine certain information for planning and proceeding ... But

Level of detail needed will vary with circumstances and may not be needed until much later in the process, if at all!

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Three Signals of Market Opportunity:

- Market growing faster than leader can maintain
- New technology available -- new firms using it but not most existing firms
- Long delivery times

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New Product Opportunity:

A combination of

market needs and capabilities!

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Go with what you have going for you!

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**If you want to make money
Make conservative moves -
in a flamboyant manner!**

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**Avoid the “NIH” Syndrome
(Not Invented Here)**

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Find an a need and fill it?

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Go with what you have going for you!

Find Problems for your Solutions!

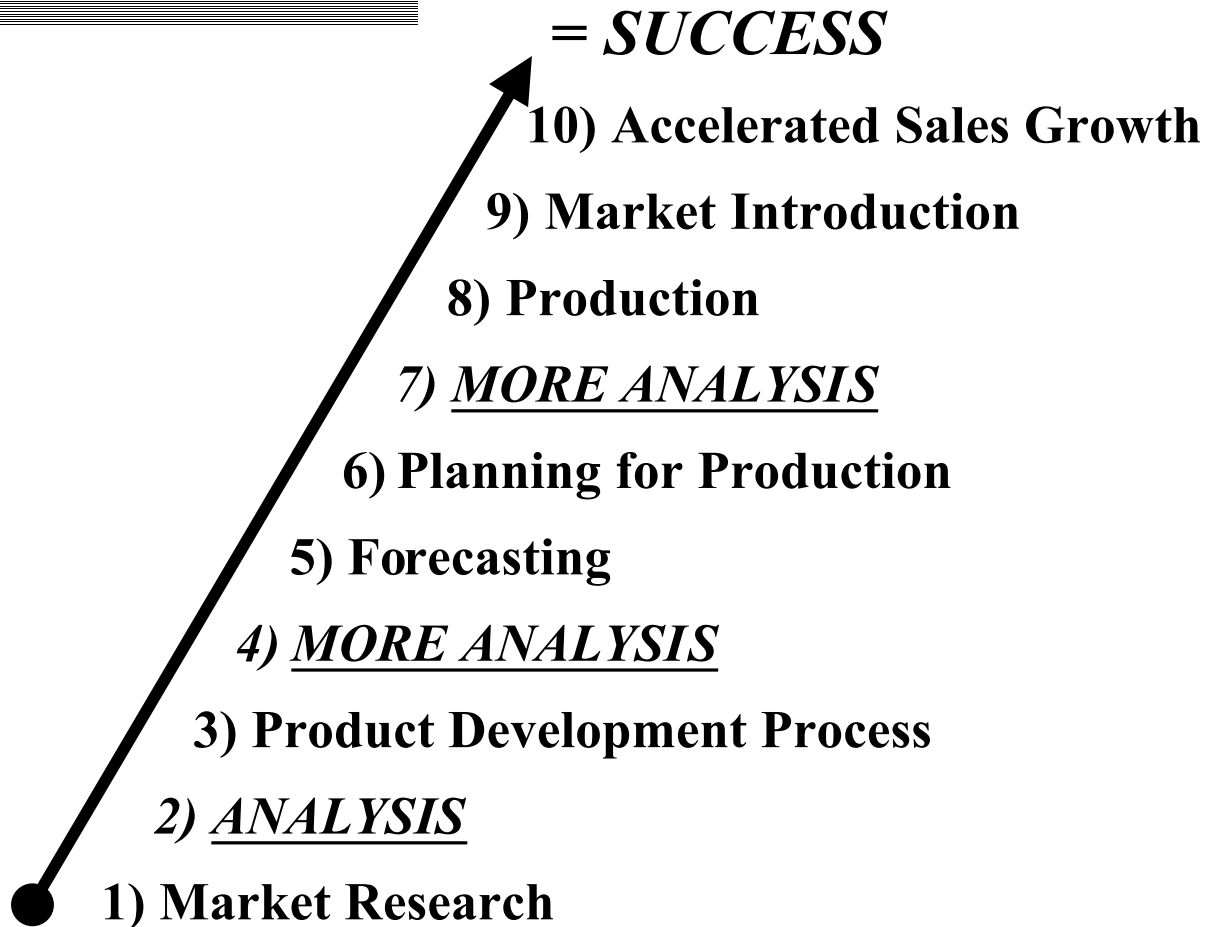
Everyone has strengths - use them to solve problems!

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**New Product Development
Must Have a Plan
to Succeed!**

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Typical New Product Development Plan



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**Master plans need not be complicated
to succeed!**

But you must have a plan --- and follow it!

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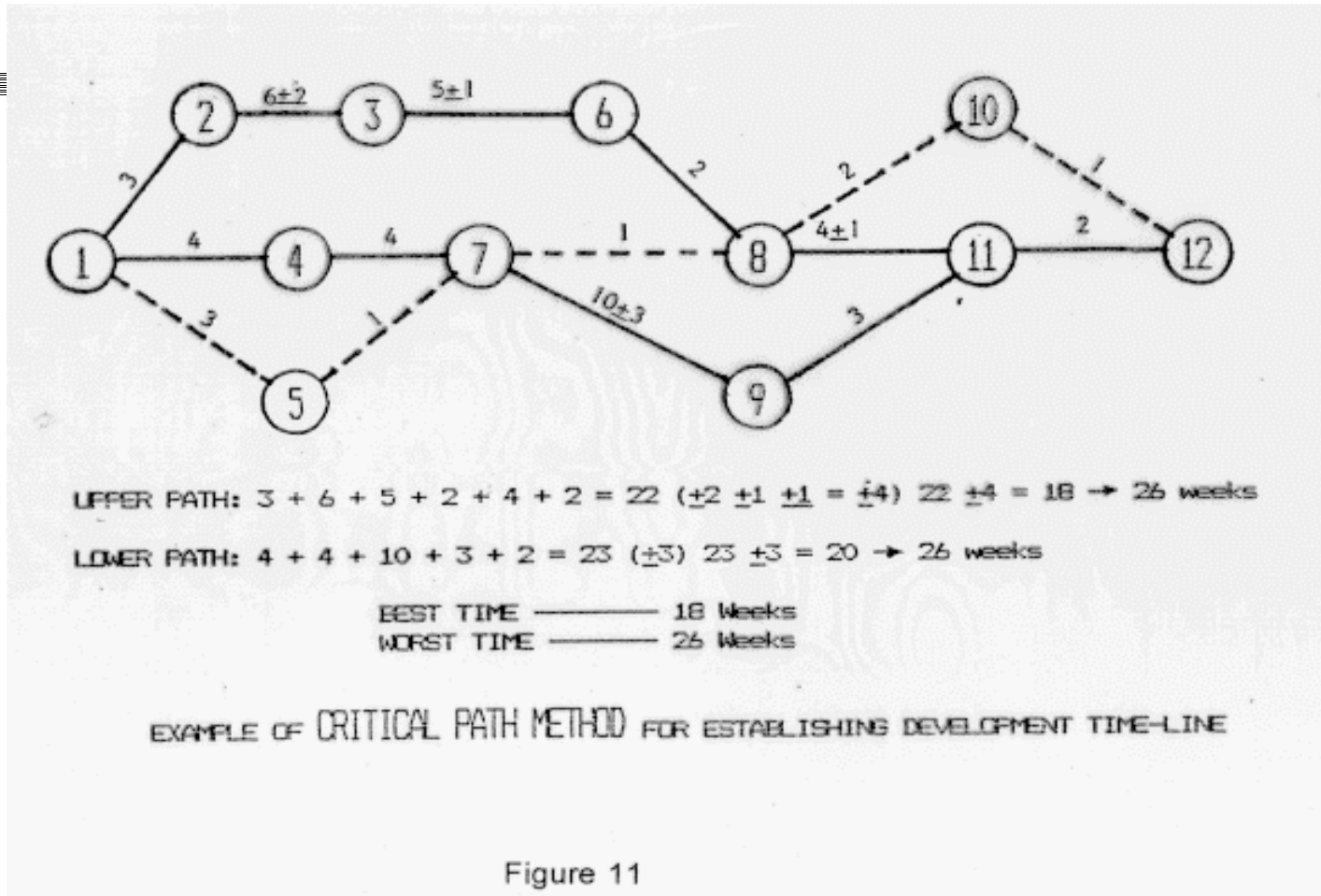


Figure 11

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The various positions of market entry:

- First to market -- “We think we have a winner”
- Early Entrant -- “Later but better”
- Late to Market -- “Better late than never”

Kay Crippen, PhD, University of Singapore

There are advantages for both **pioneers** and **followers!**

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The Market Development Path

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It is vital to success to:

- **Establish timelines**
- **Assign responsibilities - and properly staff it**
- **Follow-up to be sure timing being met**

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NPD is a
DELIBERATE
process!

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Constant communications and review
Imperative!

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Debug the new product *before*
introduction!

First production - on the market -
should work!

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Debugging in the field - *during the first few months of production* -
is suicidal!
(for most companies)

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The “me-too” approach is the most common form of NPD -

But not for highly successful companies!

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To be successful, a company ***must*** be committed to the concept of new products being the lifeblood of the company's future. They must:

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- Actively ***support*** the work

STAND BACK AND ALLOW THE PROCESS TO WORK!

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Haphazard efforts will yield

Disappointing results ---

and Drain company resources

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Critical Questions: Will Management Support NPD?

- 1) Has product been in development for a year?
- 2) Does your company now make a similar product?
- 3) Does your company now sell to a related customer market?
- 4) Is R&D budget sufficient to fully develop the product?
- 5) Will the product be thoroughly field tested for at least six months?
- 6) Does the person in charge have a personal assistant?
- 7) Will the product be actively promoted at trade shows and magazines?
- 8) Is a recognized similar product or brand name already on the market?
- 9) Would the company take a loss on it for at least a year?
- 10) Does the company “need” the product more than it “wants” it?

10 of 20

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Critical Questions: Will Management Support NPD?

- 11) Is there a plan to promote or advertise the product?
- 12) Is the product really new as opposed to improved?
- 13) Can the decision to buy it be made by only one person?
- 14) Is the product to be made in fewer than five versions?
- 15) Will the product not need aftermarket technical service?
- 16) Does the development team have a working code name?
- 17) Will the company president see the project leader w/o appointment?
- 18) Did the project leader make a “GO” of at least two products?
- 19) Will the product be on the market for more than 10 years?
- 20) Would project leader quit and take project with him/her if company says it won't back the project?

15+ = success assured; 11-14 = probable; 8-10 = “coin toss,” under 8 = drop and go elsewhere.

SOURCE: Adaptation of Greunwald: *New Product Development*, Crain Books, 1985

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“In going in one direction, you are automatically not going in any other direction ... *BUT* You must make a choice if *progress is to be made!*”

Source: Fredrick D. Buggie, NEW PRODUCT DEVELOPMENT STRATEGIES, AMACON

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Thank You

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Pioneer's Advantage

- Establishing a position in the industry mind
- Setting cost/experience barriers for later entrants
- Gaining long term market share advantages
- Entrenching the firm's image and reputation

SOURCE: Doug Jackson, LMRA, Weaverville, NC

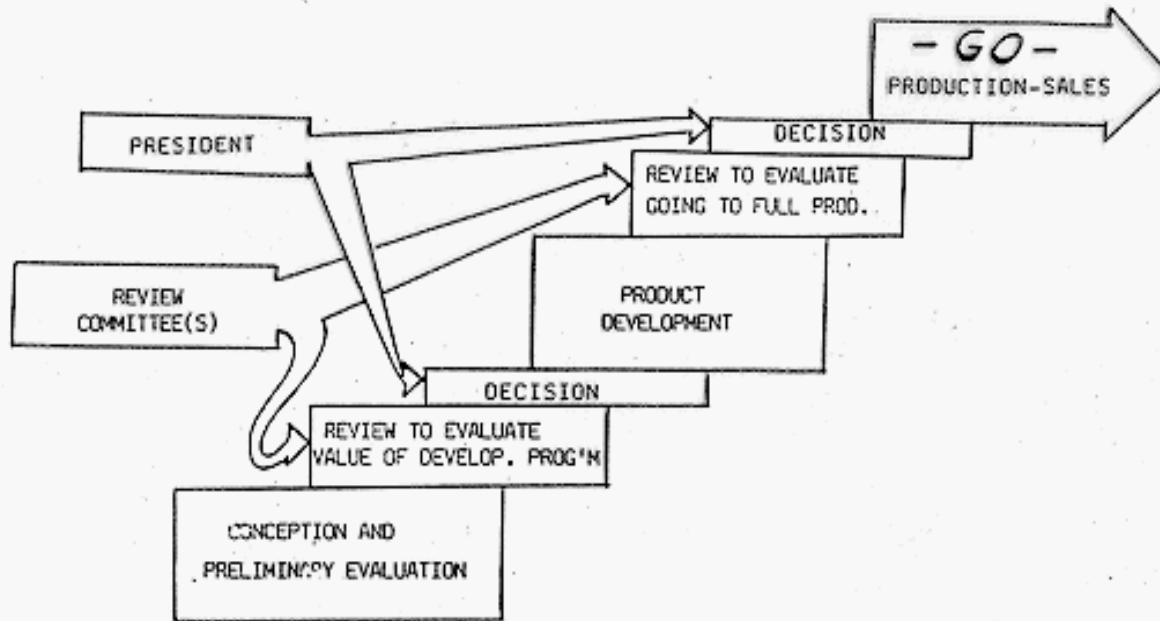
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Follower's Advantages

- Verification that the market is really there
- Benefiting from the pioneer's experience
- Assessing the situation and introducing better design and technology
- Selecting the best micro niche

SOURCE: Doug Jackson, LMRA, Weaverville, NC

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REVIEW/DECISION RELATIONSHIP IN NPD

Figure 6

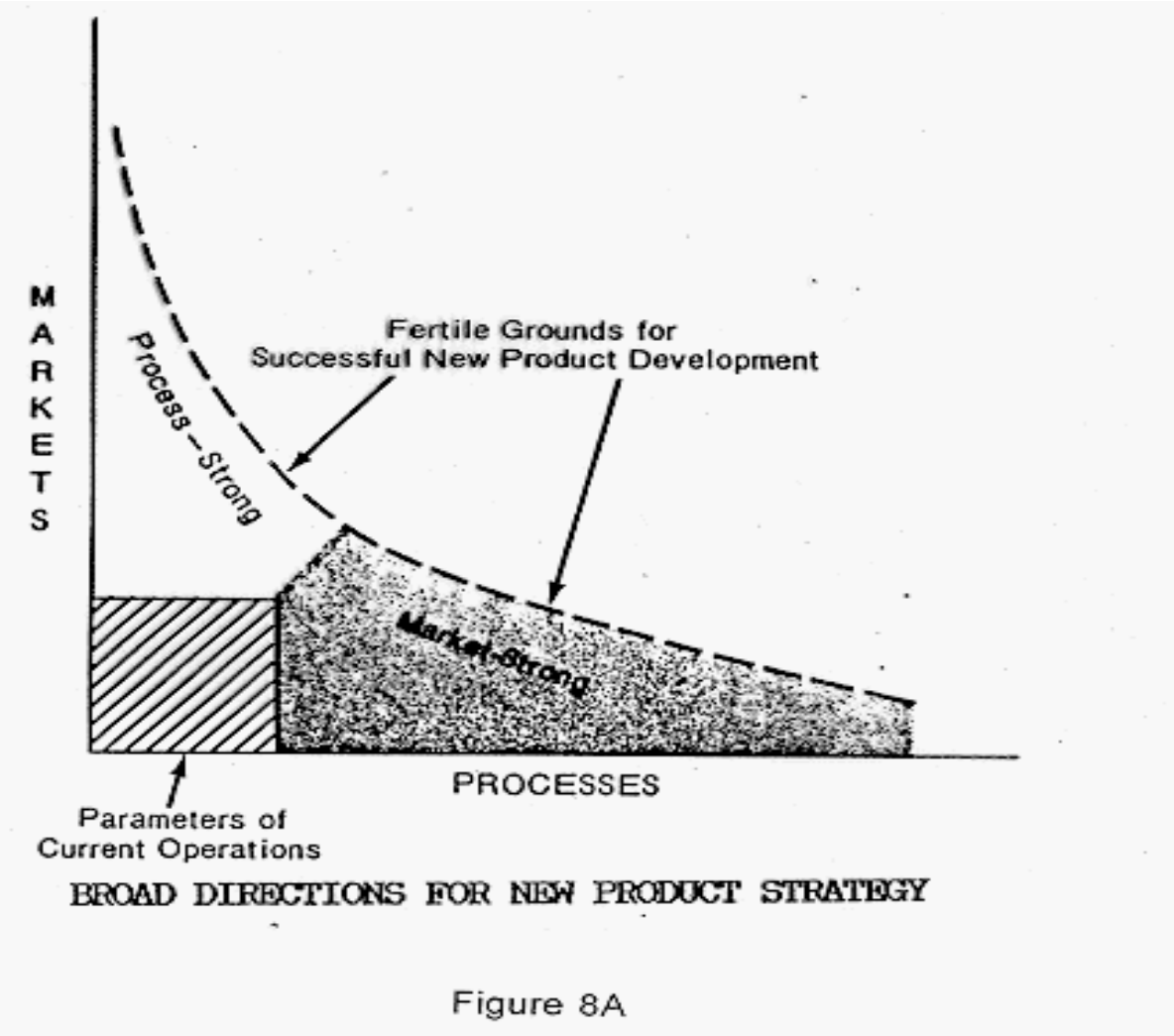
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How to wreck a new product:

- Don't introduce it at all
- Introduce it too early
- Hold up introduction to a
“more convenient time”

Timing is crucial!

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Of all the new product failures, the most common is where production and sales begin at the same time
(or sales are made before)