

improved ballpoint pen altogether. Generally, nine sets of questions are used in attribute testing to generate new product ideas.

A sample of the attributes are as given below :

1. PUT TO OTHER USES :

(1) New ways to use as it ? (2) Other use if modified ?

2. ADAPT :

(1) What else is like this ? (2) What other idea does this suggest ? (3) Does past other parallel ?
(4) What could I copy ? (5) Whom could I emulate?

3. MODIFY :

(1) Change meaning, colour, motion, sound, odour, form, shape ? (2) Other changes?

4. MAGNIFY :

(1) What to add ? (2) More time ? (3) Greater frequency ? (4) Stronger ? (5) Higher ? (6) Longer ?
(7) Thicker ? (8) Extra value ? (9) Plus ingredients? (10) Duplicate? (11) Multiply ? (12) Exaggerate ?

5. MINIFY :

(1) What to subtract ? (2) Smaller ? (3) Condensed ? (4) Miniature ? (5) Lower ? (6) Shorter ? (7)
Lighter ? (8) Omit ? (9) Streamline ? (10) Split up ? (11) Understate?

6. SUBSTITUTE :

(1) Who else instead ? (2) What else instead ? (3) Other ingredient ? (4) Other process ? (5)
Other power ? (6) Other place ? (7) Other approach ? (8) Other tone of voice ?

7. REARRANGE :

(1) Interchange components ? (2) Other pattern ? (3) Other layout ? (4) Other sequence? (5)
Transpose cause and effect ? (6) Change pace ? (7) Change schedule ?

8. REVERSE :

(1) How about opposites ? (2) Turn back towards ? (3) Turn it up-side down ? (4) Reverse roles ?
(5) Transpose positive and negative ? (6) Change shoes ? (7) Turn labels? (8) Turn other check.

9. COMBINE :

(1) How about a blend ? (2) An alloy, an assortment, an ensemble ? (3) Combine units ? (4)
Combine processes ? (5) Combine appeals ? (6) Combine ideas ?

In spite of its use, this technique of attribute listing has one drawback and that is focus on the product at hand. In other words, this cannot be used in case of all products. It might even stifle imaginative thinking to some extent.

3. Forced Relationship : This is a method under which many new ideas are first listed. Then, as the name implies, the new product ideas are considered in pairs. By considering one idea in relation to every other, new ideas are often generated. Though this technique is not in wider use, it is really good a combination of existing products. These new products would then naturally fit into the existing product-line and management expertise.

4. Brain-storming : Brain-storming is a technique for the rapid generation of original though based on a meeting at which all present throw out as many ideas as possible on a selected subject. This brain-storming idea has evolved from the principle that people can be stimulated to greater creativity by meeting with others and participating in organised group experiences. Under this technique, a small group of people from top management ranging between six to ten meet frequently to generate new product ideas.

To get better results, four rules are to be honoured :

(1) No criticism : That is, negative judgements must be withheld until later.

(2) Free-wheeling is encouraged : That is, wilder the idea, the better, it is easier to tame it down that to think.

(3) Quantity is wanted : That is, greater the number of ideas, the more would be the likelihood of useful ideas.

(4) Combinations and improvements are sought : That is, the participants should suggest how ideas of others can be used to produce still another idea, in addition to the individual contribution.

5. Reverse Brain-storming : This technique suggests a modification over the earlier one. The objective of reverse brain-storming is to take a particular product at a time and generate a list of its short-comings. This list of negative attributes then provides the direction for discussion on new products and product improvements. This, in essence, involves a group of people in a relaxed, uninhibited environment being given the freedom to voice ideas spontaneously. Though it is a good exercise, it has one inherent limitation. It is based on the problems of a product as perceived by management. What is more important is that it should be based on problems of a product as perceived by the consumers, for product is meant for consumers than for the management.

6. Problem Inventory Analysis : This is a technique developed very recently to generate new product ideas. Under this technique, instead of asking the consumers to generate new product ideas themselves, consumers are provided with a list of problems from a general product category say, food. The consumers are then asked to state what products have the listed problems. This method is considered more effective than a focus group because, it is much easier for the consumers to relate known products to suggested problems and arrive at a new product idea with minimum of guidance. This method can act as an excellent way out to test a new product idea. However, the results from product inventory analysis must be interpreted with much caution because, some of the answers may not represent new product opportunities as one does not expect.

II. SCREENING NEW PRODUCT IDEAS :

The new product idea generation stage aims at increasing the number of good new product ideas; it encourages every one and every source to build a stock of such good many ideas. Conversely, all the succeeding stages of product development reduce the number of ideas. Evaluation and cut-off points now enter the picture. The first ideas pruning stage is screening. Screening is the stage of product development that eliminates the greatest number of ideas from further consideration. It is the critical part of the development activity. If a poor product idea is allowed to pass through, the screening stage, it wastes efforts, money and time in subsequent stages until it is later abandoned.

Perhaps, even more frightening is the prospect of screening out a worth-while idea. New product screening is the development and use of criteria to evaluate the potential of new product ideas. It is that process whereby ideas from the new product idea pool have to be screened to find those that are worthy of continued development and evaluation. That is, even though the concept may be considered very marketable, it may be viewed as inappropriate for a firm that is lacking specific resources needed to produce and market it successfully. New product screening is an evaluation that relies much heavily on managerial judgement and experience. Every practical manager knows that on occasions both events can occur. The ideal approach, therefore, is to minimise the possibility that either will happen and this is best done by using orderly and effective screening procedure.

Reasons for Cutting the Ideas :

Before we study the systematic approach or procedure to cut out the ideas that helps in improving the value judgements, let us know as to why we should cut these product ideas. The obvious reasons are :

1. All good ideas are not equally promising : One should never allow the poor suggestions to go any further in the development process. At times, there may be many really good ideas—but all good ideas are not of much significance. Even the seeded ideas can be further ranked in order of priority. What we want is not good ideas but sound ideas that promise commercial and technological opportunity.

2. Resource constraints : A company simply cannot handle more than a few new development projects simultaneously. The company is not likely to have the resources nor the inclination to develop all of the new product ideas even if they are good. Business analysis and technical and market development are time consuming and expensive. The cost of product development would be outrageously high if all new ideas were given the full treatment that they are to be given.

3. Product development is a continuous process : The cost performing the development function rises as the process continues. New product development as a creative process is a continuous activity. It is going to expand in the wake of the keen competition and technological improvements. The more you try, the more would be the cost in terms of talent, treasure and time. It is well known that the ratio of one successful idea that lasts is out of sixty ideas originally pooled. When the extent of success is so meagre, there is no point in encouraging too many ideas.

THE SCREENING PROCEDURE

As noted earlier, the primary purpose of screening is to eliminate the new product ideas from further consideration that is dissonant with either company **Objectives or Resources**.

The first task is to determine whether a given product idea is compatible with the company's objectives. Four major objectives may be taken for rating purpose say, profit—sales stability—sales growth and the company image. To these fundamental objectives, some more collateral objectives may be added. A strong negative answer to any one of these questions can disqualify the product idea from further consideration.

The second task is to determine whether the new product idea is compatible with the company's resources. These resources may be capital, technical knowhow, supply of materials, labour and other production facilities used. If any one of these resources is lacking, the question is asked whether it is obtainable at reasonable cost. Again, a strong negative answer to any of these questions will disqualify the new product idea from further consideration. Product ideas that pass all these tests move on to the third stage.

The screening methods. Dispassionate and impartial screening of new product ideas means savings for the company in terms of time, treasure and talent which can be used else where. Though there are alternative methods of screening developed by marketing experts, two methods are widely acclaimed which are described below.

These are

1. Check-list method and 2. Idea rating method.

1. Check list method. Product ideas are appraised best through checklist. A check-list enumerates desirable product characteristics on a scale providing guidance to the screener.

Following is the check-list developed by Professor H.R. Hamilton where nine significant factors are considered on five-point scale.

DESIRED POINT (Product characteristics)	SCALE OF VALUES				
	Very good 05	Good 04	Fair 03	Poor 02	Very poor 01
1. Sales volume/future growth					
2. Type and number of competitors					
3. Technical opportunity					
4. Patent protection					
5. Raw-material requirements					
6. Available manufacturing capacity					
7. Potential profitability					
8. Similarity ⁵ to existing business					
9. Effect on present products					
Total					

From the exhibit, it is clear that maximum scores can be 45 points and the minimum can be 9 points. The 'go ahead' signal may be given if the total points cross say 27 points. It may be any thing above 27 points.

Though check-lists do help in screening new product ideas, there arise two problems :

1. The difficulty of defining what is 'good' and 'poor'. The analyst's opinion is not enough. More definite criteria are necessary to rate product idea. It calls for more elaborate type by splitting these nine factors into further ramifications.

2. Determining with precision as to how good a new product idea actually is ? Even if it is good, the question remains "is it good enough to justify the time and expense of a thorough business analysis?"

2. Idea rating method : It is an improvement over the check-list method. This idea rating method takes into account the significant sphere of product performance on one hand and each such sphere is given due weightage on the other. In addition, the product compatibility is valued on 10 point value system. Here, the final value is taken equal to the total of multiplication of sphere factor and compatibility factor.

This would be more clear from the following Evaluation Matrix Product Fit :

EVALUATION MATRIX PRODUCT FIT

Sphere of performance	A Relative Weight	B										C (A×B)
		.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
1. Company personality and goodwill	0.20								x			.140
2. Marketing	0.20									x		.180
3. Research & development	0.20							x				.140
4. Personnel	0.15						x					.075
5. Finance	0.10										x	.090
6. Production	0.05								x			.035
7. Purchasing and supply	0.05				x						x	.020
8. Public policy	0.05										x	.045
Total	1.00											.725

NOTE : Rating scale : 0.00 to 0.40 poor, 0.41 to 0.75 fair, 0.76 to 1.00 good. PRESENT MINIMUM ACCEPTABLE RATE 0.70.

The total value comes to 0.725 as against the standard set of 0.70. Thus, the new product idea goes to the next stage of business analysis.

AVOID MISTAKES IN SCREENING

Though screening of new product ideas holds a key position in product development, two types of mistakes are likely to creep in. That is why, Professor Philip Kotler warns the screeners to avoid these mistakes which would cost a lot.

These mistakes he calls them as 'Drop' and 'Go' errors.

A. 'drop' error : A drop error occurs when the company dismisses an otherwise good idea because of lack of vision of its potentialities. Mr. Henry Ford recognised the promise of automobile but he did not realise the need to segment the automobile market into 'price' and 'performance' categories which was fully capitalised by General Motors of America. Similarly, Marshall Field understood the unique market development—the possibility of instalment buying—which Mr. Endicat Johnson did not so he had to go with wind. If a company makes too many 'drop' errors, its standards are obviously too conservative and severe.

A 'go' error : A 'go' error occurs when the company lets a poor idea to proceed to development and commercialisation stages. According to Professor Philip Kotler, when we distinguish at least three types of product failures that ensure out of such 'go' errors. An **Absolute Failure**—resulting in loss of money and its sales do not cover even variable costs; a **Partial Product Failure**—that results in loss of money but its sales cover all the variable costs and some of the fixed costs; a **Relative Product Failure**—that yields a profit that is less than the company's normal rate. Though screening cannot be held responsible for all product failures, an over-lax screening procedure results in by letting too many poor ideas to go through.

III. BUSINESS ANALYSIS :

The third major step in the process of new product development is that of business analysis. It is an in-depth study of the estimated economic feasibility of new product ideas. It is an attempt to predict the economic consequences of the product for the company as a whole. It is assessing the profitability of a new product idea that helps management in deciding whether to introduce the new product, continue the development and the evaluation further or to drop the idea. It is the evaluation of the product idea in depth to determine its financial, competitive, manufacturing and marketing viability in an accepted business environment. It is more rigid, critical and expensive exercise carried out at the brass-tacks points so as to dismiss those ideas that do not conform to the conditions of business analysis.

This mental exercise covers projection of future demand, sales, costs, investments and revenues. The purpose is to determine the long-term contribution of the proposed product by projecting future sales, profits and profitability of the proposed new product so as to see whether it fits in company's frame of objectives. If it does so, the company goes ahead with development of new product; otherwise new product idea is dropped. The focus of business analysis is primarily on expected profit performance. However, other considerations such as social responsibilities do figure in the analysis.

Steps in Business Analysis :

Three major steps are involved in business analysis, **demand-cost and profitability analysis**. Let us see as to what they stand for.

1. Demand Analysis : The first step in the threadbare business analysis of new product is the study of product demand. Initially an estimate of total demand must be made. Ideally a demand function is formulated on which projection of future sales can be based. Estimates of market and sales potential may also be necessary especially in case where market segmentation is followed.

Another very important aspect is technological forecasts of likely subsequent developments in the fields related to the proposed product. It is going to help in anticipating the probable time of entry of competitive products and that of product obsolescence. All these will affect the appraisal of the product idea from a demand point of view. Demand is the function of needs—income—sales of substitutes and price. Therefore, it can be presented in an equation as $D = f(N I S P)$.

2. Cost Analysis : A complete cost appraisal is necessary as a part of the business analysis. It is rather difficult to anticipate all the costs that will be involved in a product, since the product idea has not yet entered the development stage. However, it is generally possible to project a range of costs that will be incurred. Both manufacturing and marketing costs are to be included. An estimate of capital investment required usually can be made as well as a projection of the direct and indirect costs. Marketing costs are determined by the marketing programme anticipated. It takes into account advertising expenses—distribution costs—dealer margins—concessions to consumers and so on.

3. Profitability Analysis : Profitability analysis is done through four types of analysis namely, Break even—Rate of return—Pay out and Discounted cash—flow. It is worth noting these in brief.

1. Break Even Analysis : A break even analysis does not help in estimating the future profits as it does not work on estimate of actual sales. All that is known is that if the break even volume is surpassed, profits will result and that greater the volume, large will be profits.

Thus, Break Even Point will be :

$$\frac{FC}{S-V} = \frac{FC}{P/V} = \frac{FC \times S}{C}$$

where FC = Fixed costs

S = Sales

V = Variable costs

C = Contribution.

Thus, break even analysis does provide some help in reaching an eventual 'go' or 'no go' decision. However, it does not possess the precision necessary to choose among alternative projects. It only establishes cost, volume, profit relationship.

2. Rate of Return Analysis : Rate of return can be determined for a year or years together. This calls for the sales estimate for several years with changing price levels cost and, hence, margins.

$$\%ROI = \frac{\text{Margin}}{\text{Investment}} \times 100$$

When the margin is projected, it can be compared with company's minimum expectations. Before having a decision, a critical study is essential of factors for profits and risks. There should be a balance between the risk involved and profitability which may be very much encouraging.

3. Pay-out Analysis : The company is supposed to make financial commitments in the production capacity of the new product. It is interested in the early recovery of such an investment. Under this method, the firm calculates the number of years it takes to recover the total financial commitment made out of annual cash-flows. Cash-flow does not include the depreciation charged. Accordingly the one which gives the earliest pay-out is preferred. It works on the principle that it is wiser to recover earlier.

$$\text{Pay-out period} = \frac{\text{Original investment}}{\text{Annual cash-flow}}$$

Though it is a rough and ready guide to rank the investment commitments, the results are not always reliable. It is very crude method of measuring the profitability. However, it pays to check profitability by alternative tests to have more reliable guide.

4. Discounted Cash-flow analysis : A discounted cash-flow analysis recognises that both revenues and costs are sure to change over a period of time. The time value of money is incorporated by discounting the future revenues and costs by opportunity cost of the company's capital.

$$PV = \sum_{i=1}^n \frac{(R_i - C_i)}{(1-k)^i}$$

where PV = Present value of new product decision.

R_i = Expected new product revenue in the ith period.

C_i = Expected new product costs in the ith period.

k = Company's opportunity cost of capital.

n = Number of time periods over which the new product costs and revenue forecasts are made.

Here, the management must decide the number of time periods over which to evaluate a new product. Similarly, strategies must be designed for the time periods, costs must be estimated including demand forecast. With these estimates and the company's opportunity cost of capital, the present value of profits expected from the new product can be calculated. Then the present value of the expected future profits can be compared with required investment to determine whether or not to introduce the new product under consideration.

Finally, the findings are presented in the form of a Business analysis chart—popularly known as 'New product profile chart'. Any product idea that meets company objectives and resources will move on to the next stage of product development. Following is the specimen of the above said chart.

BUSINESS ANALYSIS CHART

Product
 Estimated annual sales ₹
 Annual earning before Tax ₹
 Total capital investment ₹

Aspects	relative	expected	value	evaluation
	1 Weight	2 Rating	3 Profitability	4 (2×3)

A. FINANCIAL

1. Return on investment
2. Estimated annual sales
3. Time to reach estimated sales volume
4. New fixed capital payout time
5. Others

6. TOTAL

B. PRODUCTION AND ENGINEERING

1. Required corporate size
2. Raw materials
3. Equipment
4. Process familiarity
5. Others

6. TOTAL

C. RESEARCH AND DEVELOPMENT

1. Research and development pay-out time
2. Research know-how
3. Patents status
4. Others

5. TOTAL

D. MARKETING

1. Product similarity
2. Effect on present products
3. Marketing to present customers
4. Number of potential customers
5. Suitability of present salesforce
6. Market stability
7. Market trend
8. Technical service requirements
9. Market development requirements
10. Promotional requirements
11. Others

12. TOTAL

Technical development involves two basic steps namely, the applied engineering research and manufacturing methods research.

1. Applied Engineering Research : The applied engineering research is one that is needed to develop exact product specifications. The goal of this research is to construct a prototype model of the product that is subject to further acid test of cold facts. This is purely an engineering aspect that warrants development of appropriate product drawings and designs or laboratory compounds, checking and rechecking them with consumer specifications and building up a prototype that works efficiently and economically. This creative work is carried out in company work-shop of laboratory by engineering and research development personnel.

2. Manufacturing Methods Research : Once the prototype has been created, manufacturing methods research can be undertaken to plan the best way of making the product in commercially acceptable quantities, under normal manufacturing conditions. This is an extremely, important step because, there is significant distinction between what an engineer can assemble in a lab and what a factory worker can produce. Realistic testing of manufacturing methods, is therefore, an essential part of technical product development aspect.

B. Market Development Aspect :

While the laboratory experts or technicians are working hard on the prototype, the marketing department should test the new product with its intended consumers and developing other elements of marketing-mix.

Like the technical development aspect, market development aspect has two steps namely, product concept testing and developing other elements of marketing mix.

1. Product concept testing. A product concept testing has two aspects namely, concept testing and consumer testing.

Concept testing. Concept test is a test under which consumers are asked to respond to a picture or description of the product, using as a comparison their experiences with similar items. Potential customers are asked to evaluate a product concept rather than the actual product. Respondents usually a small sample, are shown a pictoral and verbal description of the product concept and are encouraged to visualise the attributes, performance characteristics and the actual use of the product. It is conducted early in the process of product development. Basically, the product concept is a synthesis or a description of a product idea embodied in the proposed new product. It may be a very simple, straight forward objective statement.

Thus, a company proposing to manufacture a milk powder for cats, may state the product concept as :

"KITTY KREME—an evaporised milk, with cream-like consistency and flavour for use as supplemental cat food".

OR

"Treat your cat to KITTY KREME. A wholesome and delicious treat for your favourite pet. She will love the flavour and love you. And at less than half the price of dairy cream".

Generally motivation research methods are used in concept testing such as focussed group interviews or indepth interviews where the consumers are emulated to express their views about the existing and the new products. Concept testing helps managers in estimating customer reaction to a proposed product early in the decision process.

Consumer preference testing. The second aspect of product testing is consumer preference testing. This activity is usually done after the construction of a prototype or preferably limited-run production models. Various kinds of consumer preference tests are conducted. These model products are exposed to the consumer tests. Very often straight-use tests are administered. That is, the consumers are asked to use a new product and give an opinion for it. Comparison tests are also conducted to get ranking of old products and this new one so that consumers acceptability can be established and the competitive merits and limits can be decided.

2. Developing other elements of marketing-mix. In addition to the product engineering and consumer testing as noted earlier, the product development is to do with development of other vital elements of marketing-mix such as product branding—product packing—product labelling—product patenting and product communication. Here, only a brief description is given of these for the sake of continued reference as these aspects are discussed at length in later chapters.

Product Branding : At some point the company has to find an effective brand name for the proposed product. Brand, though is a name, a symbol, a mark, works more than mere name. It is a means of communication to bring about an identity of a given product. Brand is a product image—a quality—a value—a personality. Branding is the process of finding and fixing the means of identification. It is naming or symbolising the product. A brand which has legal sanction becomes the trade-mark. Brand is a massive asset for the firm. It is a promotional tool. Brand protects the market for producers. Brand is a means of identification. Brand is an antidote for survival of middlemen. Therefore, a good brand is one which is easy to pronounce and remember; short and sweet; points out producer; legally protectable and is original.

Product Packaging : ‘Packing’ stands for the company’s ability to contain economically man-made or natural products for shipment, storage, sale or final use. It is to do with warpping or creating the product, for performing the marketing functions more easily and economically. ‘Packaging’ deals with the activities of planning and designing of different means of packing the product. Packaging is the general group of activities in designing the containers or wrappers for products; package design is the unique combination of colours, graphics and symbols to distinguish the products. Packaging has its constructive role in the product development and marketing because, it protects products, promotes product, increase the product density, provides product-mix, facilitates product use. In the light of these plus points, a good packaging is one which protects the contents, which attracts the attention, which provides convenience, which guarantees economy which assures adjustability and which encourages reusability.

Product Labelling : Labelling is the act of attaching the labels. A label is any thing, may be a piece of paper, printed statement, imprinted metal, leather which is either a part of package or attached to it—indicating value of the contents, price of product and name and place of producers. It carries a verbal information about product, producer or such other useful information preferred by consumers. The purposes of labelling are to bring home the product features and to simplify exchange process.

Product Patenting : Many a times, patenting of a product becomes almost inescapable. Patenting confers exclusive legal rights to the company developing the product for a period of time to make use of the technology developed so as to manufacture the product. In our country a product enjoys a product life of 16 years at a time and thereafter subject to renewal under the Patents Act 1970. The Act provides for the penalties for the infringement of the patents rights so conferred. It is the responsibility of the marketing management people to complete the formalities to obtain the patent rights or copyrights.

Product Communication Programme : Equally important is formulation of initial communication programme. The formation of effective communication programme involves identification of sales-force, advertising and sales promotion needs in relation to the new product and the company resource position and the requirements to meet these needs. This also warrants subsequent sequencing and relay of communication efforts in the defined market segments to create the necessary spade-work for sowing the seeds of new product arrival so that rich harvesting would be possible in the long-run.

V. TEST MARKETING :

During the phase of product development, only we had concept or the product testing in which the prototype or model product was placed in the hands of potential users for their evaluations. That is, up to this time, the relation of potential buyers to the new product has not been tested under normal or actual market conditions. Potential customers may have been asked to react to one or more product features and uses and to comment on the packaging and advertising appeals and so on. However, this is

essentially all artificial. It is because, these efforts do not involve actual buying and hence they can not be used to predict what will happen in the slow-down of the real market place.

Hence, there is need for test-marketing.

What is Test-marketing ?

'Test-marketing' or 'Market-testing' is the controlled experiment done in a limited but carefully selected part of the market place, whose aim is to predict the sales or profit consequences, either in absolute or relative terms of one or more proposed marketing actions. It is essentially the use of the market place as a laboratory and of a direct sales measurement which differentiates this test from other types of marketing research. Test marketing is an ultimate test to experience and experiment with actual selling and purchase of the product. Test marketing is the actual conduct of a marketing campaign within a limited market, for a period that is hoped to be long enough to indicate its probable success on a large scale and indefinite basis. Test marketing is the stage where the entire product and marketing programme is tried out for the first time in a small number of well chosen and authentic sales environment. Test marketing is normally the last step in the development process before a new product is launched either on regional or on national level. Test marketing or market testing is to validate the results obtained from prototype testing and early consumer research by extending these results to a representative sample or actual markets. Obviously, test marketing is a means of minimising the risk of national or regional launch.

"A research technique in which the product under study is placed on a sale in one or more selected localities or areas, and its reception by consumer and trade is observed, recorded and analysed".

—**Mr. Gold J.A.**

A good test marketing operation is a marketing plan carried out in a miniature and scaled in every detail as to its relationship to the total intended market. It confirms the management's expectations about the product by testing those variables in the marketing planning or plan other than the product. Of course, product modifications might be recommended as a result of test marketing effort; but this is not the principal reason as to why market testing is undertaken.

Why Test-marketing ?

Market testing is a managerial control tool because, a market test can serve as a pilot operation for the large-scale marketing activity. This is particularly true for marketing new products and new brands.

Further, test marketing is a predictive research tool because, it is employed in two, broad and dissimilar situations namely,

1. the introduction of new product or brand and
2. the evaluation of alternative marketing variables.

Though market testing brings home good many benefits, the most significant one are outlined below :

1. To improve the knowledge of potential product sales : Those firms that do undertake test marketing of new products seek essentially to try out the product in miniature to hedge against the potential disaster of an ill-considered product introduced prematurely. Their concern in testing with gaining an insight into the product market potential as well as with ascertaining what supporting promotional, pricing and distributional strategies are likely to work best. If a product sales fall below break even expectations, in the test markets, then the company is wiser. It is because, the results are only a part of the total results.

2. To pretest alternative marketing plans (Product-mixes) : To achieve a given target, alternative marketing programmes can be possible. However, the question is one of the best or most suitable alternative.

For instance, marketing appeals may be tried out say, by Colgate Palmolive—in four cosmopolies of India as :

- (a) average amount of advertising with heavy samples.

- (b) heavy advertising with limited samples.
- (c) average amount of advertising with offers and
- (d) average amount of advertising with special introductory offers.

It may so happen that after a trial, the company may find the third alternative as most effective. Thus, test marketing helps in assessing the worth of alternative marketing programmes.

3. To predict product faults : Some times the company may discover a product fault that escaped its attention in the product development stage. As a prototype or a model product is pretested and retested that gives improved perception of market segments should enable the company to bring about various aspects of marketing programme into finer focus. The product testing done earlier gives a partial solution to the problem, while test marketing puts the product to acid test of cold facts and determines its real standing—as its true nature is made known.

4. To know reactions of competitors : Whenever the new product is introduced in the market, it is quite natural that the competitors have a fear of reduction in market share that they are already enjoying. In the light of this jerk, competitors change their marketing strategy in an attempt to reposition their product as something stronger to counter the impact of new product so launched. These reactions of competitors can be exploited and encashed on by gathering, analysing and interpreting for company's benefit. Thus, the company can neutralise the competitive combat and this build-up is the outcome of market testing.

Problems in Test-Marketing :

Not all companies believe in the test-marketing. That is, test- marketing, by no means meets with universal approval ; even from in those industries where it is used a great deal. There are certain problems that arise conducting test marketing that have reduced its importance.

The basic problems which one can not forget are :

1. Inaccurate results : Many of the new products that have achieved favourable test marketing results are not commercial success. Even though test marketing is used extensively, the results are often neither useful nor accurate, especially as a predictive device. Many studies conducted on the predictive value of test marketing have indicated very large margins of error. This makes it mandatory to be very careful to ensure greater congruity between the results of a test marketing and final product launch in the national market.

2. It is an expensive exercise : The unreliability of market test results is not only the problem ; the cost of this technique is also another problem. Test marketing a new product not only requires huge investments in the procedure itself, but also in the remuneration and expenses of the members of the company, outside agency and the distribution net-work. That is why, test marketing is skipped off easily on the ground of high cost. This is undoubtedly so as to why so many companies now use test marketing as the first phase of national distribution.

3. It is time consuming affair : An all-encompassing problem in test marketing is time. The time problem in test-marketing is indeed a paradox. If the test market period is too short, national distribution strategy may be based on inaccurate, incomplete or inconclusive data. If a new product is tested for too long a time, competitors may be able to respond with substitute product. Normal period for test-marketing is six months and these six months are more than enough for dangerous developments to occur. Thus, the distinctiveness of the product innovation can decay drastically so much so that the so-called new product so test marketed will remain no longer 'new product' when it enters national market after its launching.

4. It lets the tips to competitors : A test-marketing efforts is very visible and any good marketing intelligence system will report its existence to a competitor's management almost immediately. Competition can be a problem in test-marketing a new product by distorting the test results with heavy, abnormal promotional expenditures in the test area or by actually purchasing very large quantities of the product. In case strong competitive activities are implemented in the test area, the new product test

results are of little value. The least that can happen is that competitors will be ready to meet the threat of new product when it enters the national market.

Essentials of sound test-marketing :

The foregoing discussion of merits and problems of test marketing as a predictive device in new product development process, makes it all the more important to take certain steps to make test marketing effective one.

Following are the factors to be given due weightage to, get the best out of this test marketing.

1. Representative test market : The test market to be selected must be such a geographical area that represents the national market. In our national market, the places that have congregation of people coming from every nook and corner can be best chosen as test markets. These can be Mumbai, Delhi, Chennai, Kolkata, Bangalore and the like. Normally two to four places are selected to assess the consumer reactions.

2. Perfect projection of results : The marketing reactions in the form of achievements in these test markets should be properly recorded and scientifically projected on nationwide base. If a test-marketing is conducted over a period of six months and in a particular month the sales account for say ₹ 25,000 for a particular product, and if it works out 4 per cent of national sales volume, then the monthly national sales will be of the order of ₹ 6,50,000. Later on these projections can be for one year and so on that can be projected.

3. Demographic validation : The test market area should be large enough to accommodate divergent demographic features such as number of people—sex—age group—special class—caste—religion—rural and urban classification—level of education and so on. Such a unity in diversity makes the data more representative and meaningful.

4. Competitive validation : As the strength of competition has its upper hand in invalidating the test marketing results, the area selected for test marketing should be such that there is existence of competitors who are more or less of equal strength. Even if the competitors are strong, the test marketing company should be prepared to face the same with strength and vitality.

5. Behavioural validation : The test market area selected must be one that provides for the large scale use of close similar products and substitutes to the new product to be tested. The real life reactions of consumers are known only when the market releases not only the new product but the existing close and substitute products. It gives a clue to find out consumer behavioural change in the market place.

6. Strategy validation : Successful test marketing also takes into account the strategies applied in each component of marketing mix. The company should be sure of what strategy it wants to follow in test-marketing and how far it is going to refine them in commercialisation stage. It is of top importance because, change in strategy and change in situation will distort the possible results.

How test marketing is conducted ?

Test marketing is rapidly approaching the stage of science or at least highly developed art. Some companies develop their own plans for test marketing and some others depend largely on advertising agencies and specialised consultancy houses. Test-marketing plan design covers the points—number of cities to be selected—length of test run—the information to be collected and the action to be taken. **Selection Of Cities** is influenced by the factors of representativeness and cost. **The Length Of Test-run** is decided by the factors of average repurchase period, competition and cost. **What Information Is To Be Collected** is relating to two points namely, sales and profitability in case of alternative plans. **The Action To Be Taken** is either to go in for commercialisation or abandon the case.

ALTERNATIVES TO TEST-MARKETING

A test-marketing is best with at least four insurmountable problems one is to think of alternatives to test marketing as a predictive technique in the area of new product development. Experts in this sphere have come out with certain alternatives to serve the purposes of test-marketing.

These are :

1. Markov chain analysis : One can use the data from consumer panels to measure a test product's staying power. Here, Markov chain analysis can give the test-marketers an insight into the dynamics of competition and the forces influencing consumer brand switching. This method can be used to determine a new product's share of the market for the total product category at a future time by tracing its market share through the successive stages in a function of transitional probabilities ; that is, the sum of the probabilities of switching from one brand to another is the square of the number of brands in the product category.

2. Model test-marketing : Another alternative to test- marketing is to implement research that is a via media between concept testing and test-marketing. That is, a model test marketing can be employed under which the total market place is modelled, but both the time and costs of a full market-test are reduced. This step is of particular use in case of products not having conclusive concept test results, new products of small firms who can not afford a full scale market-testing and new products requiring huge capital investment to test market. Under the plan, a panel of house-wives is provided with sales literature on products to be tested including established brands in the product category and they are encouraged to shop at the firm's shops or earmarked outlets.

3. Market simulation model : Another development to aid and refine test-marketing new products is to simulate market reality with a computer. One such simulation model is *Demon*. The purpose of this system is to ensure a viable national new product introduction by assuming the best possible marketing plan in least amount of time efficiently balanced in relation to maximum profit, risk and pay-out period. *Demon* has the merits of reducing risk and consequently the rate of new product failure, reducing the time required for new product introduction, reducing or possibility of eliminating test marketing, lowering the costs of new product introduction and ensuring maximum profits on a new product.

4. Roll out method : Another method to solve the basic problems of conventional test marketing is a mixture of test marketing and national introduction known as 'roll-out' method. In this method, a firm selects a best area for distribution, such as sales territory and markets the new product using the same marketing mix variables as will be used for national distribution. When sales are substantial in the selected market, the company 'rolls-out' to the next sales territory and eventually to the national distribution. However, this method requires extensive pre-test market activity in the idea—concept and product development stages.

VI. COMMERCIALISATION :

As noted in this chapter of new product development, only a handful of product ideas originating at the idea generating stage survive the successive stages of screening, business analysis, and market testing and are poised for or are on the brink of market introduction. Each product that does is ripe for—commercialisation—the last phase. By now, the company has apparently gained the necessary confidence in the product's future. The product's profit outlook looks good in relation to, the risks and costs involved. Now the product is born in real sense to undergo the stages of life-cycle namely introduction—growth, maturity and decline. It is this life-cycle span that decides the eventual success of the product that entered the cycle.

What is Commercialisation ?

Commercialisation is the actual introduction of the product into the market place, with all of the related decisions and resource commitments. Commercialisation is to implement the decision taken at earlier stage and committing to the resources to implement new product strategy. In other words, raw-materials and component parts contracts are to be made with the suppliers; channels of distribution are to be selected; manufacturing facilities —equipment, processes must be set in operation; sales people to be hired and trained; advertising programme is to be okayed. Thus, it is a commitment in terms of finance and people.

All these steps involve huge expenditure which amount to 60 to 75 per cent of the sales revenue. In view of the investment and risk, the actual experience is that nearly 30 to 35 per cent of the companies fall flat during first year and rises during successive years to 40 to 45 per cent. Even the giant companies have to think hard about risks and uncertainties involved. Thus, success in new product development is an exception than a rule. That is why, launching a new product has several dimensions of choice open to the marketeer.

Two important decisions are to be made by those who are interested in successful commercialisation. These are :

1. Entire Market Versus Selected Segment : This decision must be made on the basis of potential sales in various segments and on the relative profitability of developing a separate strategies for each such segment. If true segment exists and if the cost of preparing individualised programmes can be justified, a segmented approach usually is desirable. In its absence, undifferentiated technique works better.

2. Crash Versus Roll-out Introduction : A crash introduction is the full-scale commercialisation of new product as quickly as possible. The resources needed to move into target markets are immediately committed. That is, competitors are given little time to prepare their responses to the product. It is very often selected when competitors can counter quickly and maximum lead time is needed to establish market position. However, crash introduction tends to maximise other risks because, substantial resources are committed quickly. On the other hand, for a roll-out introduction, target markets are decided geographically and initially the new product is introduced only in one or a few areas. If the new product is successful in these areas, the process continues until all geographic target markets are being served. Such a roll-out introduction has the merit of giving management time to monitor and adjust the new product strategy before all resources are committed. This is not the same as continuing the test market stage because, an introduction decision has been made, much larger market areas are entered and less elaborate monitoring of performance is conducted.

The choice between a crash and roll-out programme rests on the number of factors. If new distribution net-work is to be established, crash introduction can not be achieved quickly. On the other hand, market potential may dictate such crash introduction. If the total amount of business to be had is spread very thinly, it may not be worth the effort to try to cultivate any particular market area intensively. Another factor that influences the decision to crash introduction programme is the threat of potential competition. It should be noted that roll-out programme takes a long period of time of 18 to 24 months to cover the entire area—the time gap long enough for the competitors to enter and distort the picture to their advantage. Finally, if the marketing programme is to rely on national advertising media heavily, the waste of going through series of local markets will be substantial.

In conclusion, it can be said a new product launched into the market is brought with uncertainties and pit-falls. The product may fail or succeed. If it finds consumer acceptance, it moves from introduction to growth stage of the product life-cycle, profits result and the fortunate company boasts of its success in the area of marketing where failure is a rule than on exception.

4.16.2 WHY NEW PRODUCT FAILS ?

The riskiest part of marketing management today is the development and distribution of new products. It is safe to say that most of the new products are sure to fail. New product failure is more a rule than exception. Here, ‘failure’ is a relative term. It is one applicable to that product which has not lived up to the expectations of marketers or the makers of it. The symptoms of product failure can be declining sales volume—declining profit margin—higher running costs—than expected—higher investment costs than expected, among other things. Very often a question crops up why so many new products fail inspite of idea screening, analysing, developing and test-marketing ?

At least five reasons are given by Professor Maurice. I. Mandell and Professor Larry J. Rosenberg. These are outlined below :