

**Fig. 3.13** Integration of product commercialisation.

the benefits or the defects or the problems associated with the product (Legge, 1999).

### 3.3.4 Final integration

The final step in product commercialisation is to bring together the knowledge from the design and the testing and to decide if the product is feasible; if it is, how it should be launched on the market. Integration is vital at this stage so that the launch can be efficient and effective (Andreasen and Hein, 1987). Obviously good decision making by top management is also vital, but management can only make decisions with the knowledge provided. The integrated knowledge is shown in Fig. 3.13.

The strategic orientation and the organisational capability are detailed at this stage. It is useful to develop a method of problem solving which can be introduced to everyone before the launch. Problems nearly always do occur in a launch and it is necessary to have a method of solving them to reduce both the chances of failure and the time taken for problem solving.

#### **Think break**

1. For your product designed in the last Think break, identify the aims, constraints and outcomes for the product commercialisation.
2. According to your expertise and knowledge, design the production, distribution or marketing. Ask some colleagues with different expertise to design the areas outside your knowledge
3. Integrate the three design areas to give the total product/production/distribution/marketing of the product commercialisation.
4. Evaluate the integrated design for its effectiveness in achieving the project aims and for obeying the constraints on the project.

## 3.4 Product launch and evaluation

‘Effective product launch is a key driver of top performance, and launch is often the single costliest step in new product development. Despite its importance,

costs and risks, product launch has been relatively under-researched in the product literature' (Di Benedetto, 1999). How true this is. Much of the research has emphasised the 'fuzzy' front-end activities and there is little on the critical back-end activities; in fact many PD Process models show seven or nine steps but only one for product launch!

There are three important parts of the launch – strategy, activities and demand outcomes (Guiltinan, 1999). The demand outcomes sought from the launch of the new product set the basis for strategy and the activities, and of course in the actual launch the strategy and the activities determine the sales outcome! This interrelationship between strategy, activities and demand outcomes is the major basis for planning the launch. The other important factor to consider is the evaluation and control of the launch; no matter how extensive the predictions for a launch, the unexpected always happens and there is a need for an evaluation and control plan.

#### 3.4.1 Demand outcomes from the launch

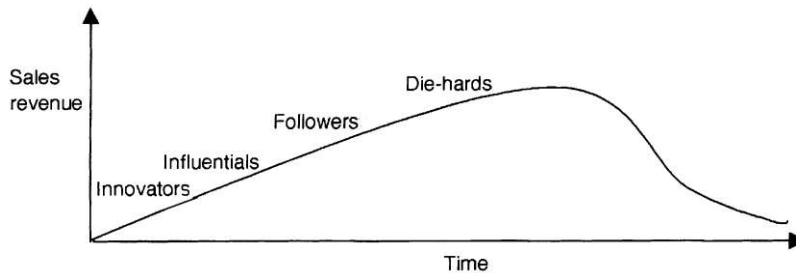
The general demand outcomes include trial and repurchase, customer migration, innovation adoption and diffusion. The choice of demand outcome depends on the relationship between the consumer and the new product. Trial and repurchase, if the product is acceptable, is usually the buyer behaviour with incremental food products where the risk of purchase and eating is perceived as small. Buyers recognise the product as related to other products, the price is small and there is no great loss to the consumer unless there is a problem with food safety. Customer migration, the movement of competitors' customers to the new product, is the desired demand outcome when the product represents a significant improvement or change. The new product has a greater value for the consumer than the competitor's product and the ability to replace the existing product. Some of the situations for selecting particular demand outcomes are shown in Table 3.4.

Innovation adoption and diffusion are chosen where the product is new to the market and the consumer. This follows the traditional innovation curve with the

**Table 3.4** Demand outcomes for product launch

Demand outcome	Product development project
Trial and repurchase	New product in existing market Line addition in existing market <i>Emphasis on selective demand</i>
Customer migration	Product improvement <i>Emphasis on replacement demand</i>
Innovation adoption and diffusion	New-to-the-world product <i>Emphasis on primary demand, adoption and diffusion</i>

Source: After Guiltinan, 1999.



**Fig. 3.14** The product diffusion cycle.

innovators, influentials, followers and die-hards as shown in Fig. 3.14. The diffusion curve can vary a great deal: the initial sales may be very slow and then there is a sharp rise, or there may be a fast initial rise and then a plateau. The shape of the curve is related to the product/consumer relationship but the launch tactics can affect it. The consumers may take some time to recognise and want the product so there is a slow uptake; or the product may fulfil an important need of the consumer, so they buy it immediately and sales increase rapidly. However, after the innovators have bought the product, the influentials and followers may take some time to buy and there is a plateau in the sales curve. Promotion and advertising can make consumers aware of the product more quickly than by word of mouth, and so they will buy earlier and the rate of sales growth will increase. Another marketing method to quicken the sales rate is to give consumers samples to taste in the supermarket; this gives them the opportunity to try the product at no cost, and if they accept the product they are encouraged to buy it. In launching, it is very important to understand the consumer/product reaction and how launch strategies and tactics affect it.

### 3.4.2 Launch strategies

The launch strategy can be described as the marketing, production and distribution decisions to introduce the product to the market and to start to generate sales. The launch strategies include the targeting strategy, the timing strategy and the product's innovation level. The perceived innovation level depends on the target market and also the competing products in the market. The target market can be a mass market or a niche market; the choice often governed by the size and resources of the company. New products may be aimed at a market segment, which is likely to be attracted to the new product, and then may be expanded to other market segments. Mass customisation in which the product is modified for specific groups of consumers is also another possibility. So there must be a strategy for reaching the target market segments.

Another launching strategy is to lead or to follow the competitors. This is an important timing strategy. With an innovation, the costs of being the pioneer can be high and if sales growth is slow then it takes some time to recover these costs.

But of course if there is a reasonably fast sales growth, then the product can win the major share of the market for a long time. With the incremental product, it is important to do this continuously with the succeeding products, so that the market share is either held or grows. To increase the market share, people of course make a product change so the new product must have their desired benefits and also needs marketing tactics to encourage them to make the change.

Hultink and Robben (1999) grouped the launch strategy decisions as:

- strategic product/market decisions – relative product innovativeness, targeting, introduction objectives and product newness;
- timing-related decisions – timing of market entry, speed to market.

These decisions have to fit into the company environment, its capabilities and resources, and the working environment of technology, market and competitors, as well as the surrounding societal environment. Successful launches were found to be related to perceived superior skills in marketing research, sales, distribution, promotion, R&D and engineering (Di Benedetto, 1999). Having cross-functional teams making key marketing and manufacturing decisions, and getting logistics involved in early planning, were strategic activities that were strongly related to successful launches.

### **3.4.3 Launch activities**

There are two important decision areas for activities:

1. Marketing-mix decisions – relative distribution and promotion expenditures, relative breadth of product assortment, distribution channels used, marketing communications channels used, branding and pricing.
2. Production and distribution decisions – raw materials quality and quantity, production outputs, product quality, inventories, logistical times and quantities for delivery.

There are many activities in these two areas as shown in Table 3.5 and the problem is to choose the activities and integrate them. Very often there is emphasis on marketing tactics in the launch (Guiltinan, 1999) but the production and the logistic tactics can often make or break a launch. The launch strategy integrates the launch; and the launch tactics need to integrate the production, distribution and marketing activities so that they are focused on the same desired demand outcomes. Common pricing tactics are market skimming with a high price, and market penetration with a lower price. In choosing one of these, there needs to be consideration not only by marketing of the demand but also by production and distribution on the capability of producing the volumes and the costs of inventory in storage. Good launch management with control of activities and in particular of their timing and costs is the basis for a successful launch. The timing of the launch is all-important and sometimes activities have to be shortened to achieve this timing; this may cause problems for staff but it usually results in a successful launch unless everything falls apart!

**Table 3.5** Activities in product launch and evaluation Marketing

organisation	Production organisation
<b>Organising for the launch</b>	
Finalise promotion	Design, build, commission plant
Media advertising contracted	Quality assurance finalised
In-store material prepared	Raw materials contracts
Sales presentation to staff	Physical distribution contracts
First introduction to retailers	Production finalised
	Market channel/physical distribution organisation
<b>Product launch</b>	
	Launch targets finalised
Complete selling to retailer	Produce the product
In-store material distributed	Distribute the product
Merchandising in supermarket	Check product quality in supermarket
Release advertising	Check product safety
Release product for sale	
<b>Product launch evaluation</b>	
Merchandising	Improving production efficiency
Advertising	Reducing product quality variation
Sales recording	Checking product in distribution
Buyers' surveys	Checking product in retailers
Competition study	Improving distribution efficiency
Marketing costing	Production and distribution costing
	Financial analysis of costs, revenues
	Analysis of production, distribution, marketing
	Comparison of actual results with targets
<b>Adoption of product into the company</b>	
New phase of advertising	Standardising production
New phase of in-store promotion	Total quality management in place
Pricing revamping	Raw material procurement revised
Sales recording	Output increased
Future costing	Costs reviewed
Sales analysis	Logistics optimised
Buyers' studies	Retailers' handling optimised
	Future developments of product, production, marketing
	Financial analysis of investment, costs, revenues and profits
	Future returns on investment predicted

Source: After Earle and Earle, 1999.

A very important aspect of launching is logistics; the aim is to have sufficient product on the shelves but not for too long. In the past, there was the practice of filling up with product the pipeline from the factory to the retailers' shelves, according to the predicted sales demand. This meant having a large inventory, which was costly, and in the case of introducing product lines did not allow for different rates of uptake of the individual products. A lean launch

strategy based on logistics and supply chain collaboration can greatly reduce the costs and the risks of the product launch (Bowersox *et al.*, 1999). The lean launch strategy is based on response-based logistics, a flexible and responsive system with agile supply and manufacturing which can react quickly to real-time information from point-of-sale data transmitted via electronic data interchange (EDI) and Internet communications. The aim is to plan for lean inventory and to focus on in-stock position to support product successes, reduce stock of product failures and manage stock for niche markets. This gives better management of start-up costs, as sales will more rapidly balance costs and make a profit more quickly.

#### **3.4.4 Evaluating and controlling the product launch**

Evaluating and controlling the product launch is critical to success. The launch involves people and functions from all parts of the company, and the organisation of these people and their actions is complex. A well-planned organisational structure plans the activities, and can also quickly respond to problems caused by product quality, competitors' reactions and non-predicted consumer behaviour. Changes to activities or their timing can be made during the launch to counteract any problems arising.

Companies tend to build a 'launch' structure and use this for successive launches. For example in the food industry, it used to be a big TV campaign, backed by in-store promotions and simultaneous wide distribution in supermarkets. With changes occurring in the food system, there is a need to be more adaptable so that the organisation system is permanent but the activities and techniques are selected for each project. In other words, the adaptability of the earlier stages of the PD Process is transferred to the launch. It is the most expensive stage and therefore requires the greatest knowledge from past experience. It also creates a great deal of knowledge, which should be captured for future launches.

Targets will have been set for the launch: short-term targets of sales volumes, sales revenue and market share, and long-term targets of a certain profit and return on investment and a time to recover the development and launch costs. Quantitative recording and analysis systems are set up to continuously analyse the sales and to improve the sales predictions. As the launch proceeds, the evaluation will become more definitive as more accurate data accumulate, and more realistic predictions of future cash flows can be made. The data necessary for the evaluation include production costs, prices, unit sales, sales revenues, marketing costs, company costs and finance costs. This is not just a recording system, it is also the basis for action during the launch.

One of the most difficult decisions is to change/not change the activities and the timing. If one reacts to every out-of-target result, then the whole system may get out of control; if a decision is delayed, the opportunity for success may be lost. It is important to follow trends and make decisions on these trends, not on spot data. The raw materials and direct processing costs are continuously

**Table 3.6** Costs, finance and market monitoring during launch

<b>Costs data</b>		
<i>Finances</i>		<i>Analysis</i>
Raw material costs		Cost trends
Production costs		Costs breakdown
Distribution costs		Production efficiency
Advertising and promotion costs		Distribution efficiency
Product losses costs		Marketing efficiency
Wastes costs		Additional operational costs
Company costs		
<b>Financial data</b>		
<i>Finances</i>	<i>Revenues</i>	<i>Analysis</i>
Total costs of launching	Total sales revenues	Gross profit/loss
Cost of financing		Profit margin
Capital investment		Pay-back time project
Working capital		Pay-back time launch
Financial condition of the company		Return on investment
		Additional capital investment
		Additional working capital
<b>Market data</b>		
<i>Sales, marketing</i>		<i>Analysis</i>
Sales total volume		Market share overall
Prices, range, specials		Market share in individual retailers
Sales individual retailers		Per capita sales rate
Buyers' purchasing patterns		Purchase/repurchase pattern
Competitors' sales		Ratio of sales against competitive products
		Predicted future sales

checked to see if they are improving and are within or better than target. The distribution costs, delivery times and product losses during distribution (which also are an important cost) need to be recorded regularly. There needs to be systematic monitoring during the launch in costs, finance and market as shown in Table 3.6.

Following sales is only one of the outcomes that need to be monitored and controlled during the launch. It is necessary to check how the product is performing in distribution, storage and retail outlets – is the quality correct, is the product becoming unsafe, are there many product rejects in the system? The retailers' and the consumers' attitudes to the product are monitored – how has the retailer placed and promoted the product? How much are the consumers buying and rebuying? What do consumers like/dislike about the product? The answers to these questions are crucial to the future of the product and need to be found in retailer and consumer surveys during the launch. Some important factors to follow are summarised in Table 3.7.

**Table 3.7** Monitoring of production, distribution and marketing

<b>Production</b>		<b>Distribution</b>
Raw material quality		Delivery times
Raw material availability		Delivery quantities
Process variations		Product losses
Yields		Quality of product on delivery
Waste – processing material, product, packaging		Quality of product on sale
Quality of product		Inventory in company stores
Equipment breakdowns		Inventory in customers' stores
Response of staff		Breakdowns in delivery
<b>Marketing</b>		
<i>Retailers</i>	<i>Consumers</i>	<i>Prices</i>
Reaction to delivery times	Consumer awareness	Price range
Product returns	Consumer reaction	Specials prices
Shelf space	Consumer buying	Price/demand relationship
Promotion	initial	
Prices	re-buy	
Orders	Consumer segments	
	Relationship to other products	
<b>Advertising and promotion</b>		
Coverage	Effectiveness	Communication
Impact	Precision	Focus
Reinforcement	Relevance	Emphasis
Retention	Acceptance	

**Think break**

Using the knowledge from your product commercialisation in the last Think break

1. Outline the demand outcomes wanted from the launch of your product.
2. Develop for your product launching
  - (a) relative product innovation level strategy,
  - (b) targeting strategy,
  - (c) timing strategy.
3. Outline the critical monitoring points in the launch and describe the information you would collect at these points.
4. Discuss how you would analyse this information and use it to make decisions on the launch

**3.5 Service in product development**

The previous sections discussed new product development in general, but sometimes new services have to be developed as well as the physical product. In