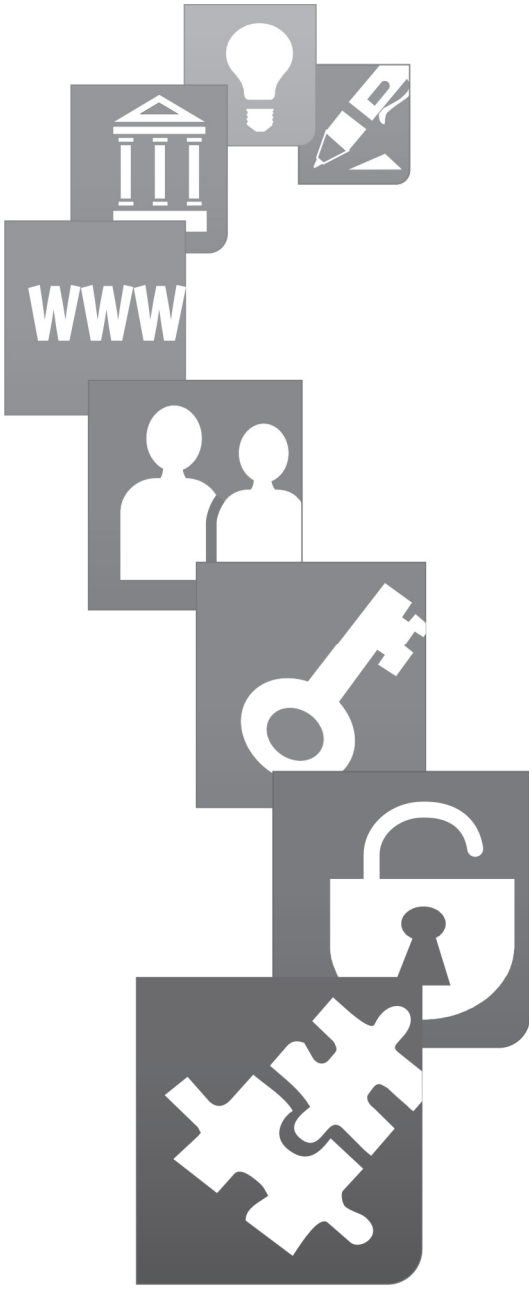
Module 4



A variety of concepts and tools exist which can assist in improving the performance of an organisation's value chain.

The Management Accountant plays a key role in providing information about internal value chain activities, suppliers and customers which allows management to identify opportunities for redesigning or fine-tuning activities to maintain the competitive position.

TECHNIQUES FOR CREATING AND MANAGING VALUE

Recognises that different activities drive (create) costs.

Cost per unit is more accurate, as different cost drivers are more realistic than assuming that costs are just driven by volume.

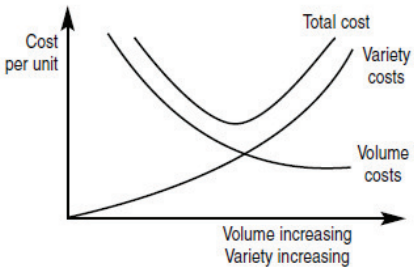
Volume versus variety

It can be easier to produce a small number of products in volume compared with producing a large variety of products in small runs.

The modern philosophy of manufacturing in variety leads to an increase in the costs of support services.

Cost control requires that costs of support activities are related to products via their causal factors.

The ABC approach is to relate the cost of support activities to cost drivers.



Volume costs are falling due to economies of scale.

Cost analysis in the modern business environment

- Short-term variable costs that vary with production volume.
- Long-term variable costs (often costs of support activities) that vary according to the range and complexity of production.

Cost drivers

Any factor which causes a change in the cost of an activity.

ABC and decision-making

ABC can assist with strategic decisions such as:

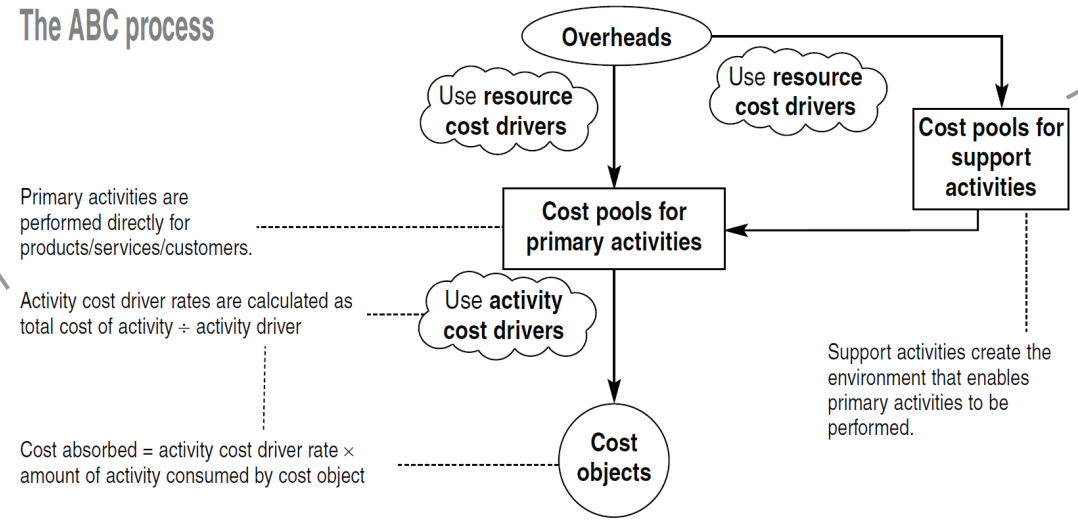
- Pricing strategy.
- Make or buy decisions.
- Promoting or discontinuing products or parts of the business.
- Developing and designing products.

ABC is extensively used in the services sector, not just in manufacturing.

An alternative is time-driven ABC (TDABC) – resource activity is measured in terms of the total potential usable/available time – so cost of idle time can be ascertained.

Such as inspection costs, maintenance costs.

The ABC process



Merits of ABC

- Absorption costing tends to allocate too great a proportion of overheads to high-volume products (which cause relatively little diversity) and too small a proportion to low-volume products (which cause greater diversity and use more support services), whereas ABC traces a more appropriate amount. This has implications for pricing.
- Ideally suited to customer profitability analysis (CPA) and can be used in service organisations.
- Helps with cost reduction.
- Takes product costing beyond traditional factory floor boundaries and considers overhead functions, such as product design and quality control.
- Can use TDABC if the total cost of idle time is needed; this gets lost with normal ABC

Criticisms of ABC

- More complex than absorption costing.
- Tends to burden low-volume (new) products so threatens innovation.
- Can one cost driver explain the behaviour of all the items in a cost pool?
- Arbitrary cost apportionment needed for eg rent and rates.
- Identifying cost/benefits of implementing ABC is problematic

Factors affecting of design and adoption of ABC

- Operational diversity/complexity.
- Strategic/tactical importance of cost.
- Intensity of competition.
- Unused capacity.
- Implementation of ABC can be viewed as a project. Evaluate the costs/benefits using an appropriate discount rate.

Takes all overheads into account, including non-production overheads such as customer services.

Time-driven activity-based costing (TDABC)

Kaplan and Anderson (2007) – less complex and costly system than ABC

Step 1 – Identify all organisational resources

– Calculate total cost and capacity of each resources

– Capacity cost rate (CCR) :

$$\frac{\text{Total resource cost (\$)}}{\text{Total available capacity (minutes) (not including training time etc)}}$$

Step 2 – Estimate time taken for each unique activity carried or by the resource and multiply by CCR

– Each additional element of task complexity attracts an incremental cost based on additional time taken.

A simplification of ABC with a single focus on 'time

Looks at practical capacity, not theoretical capacity.

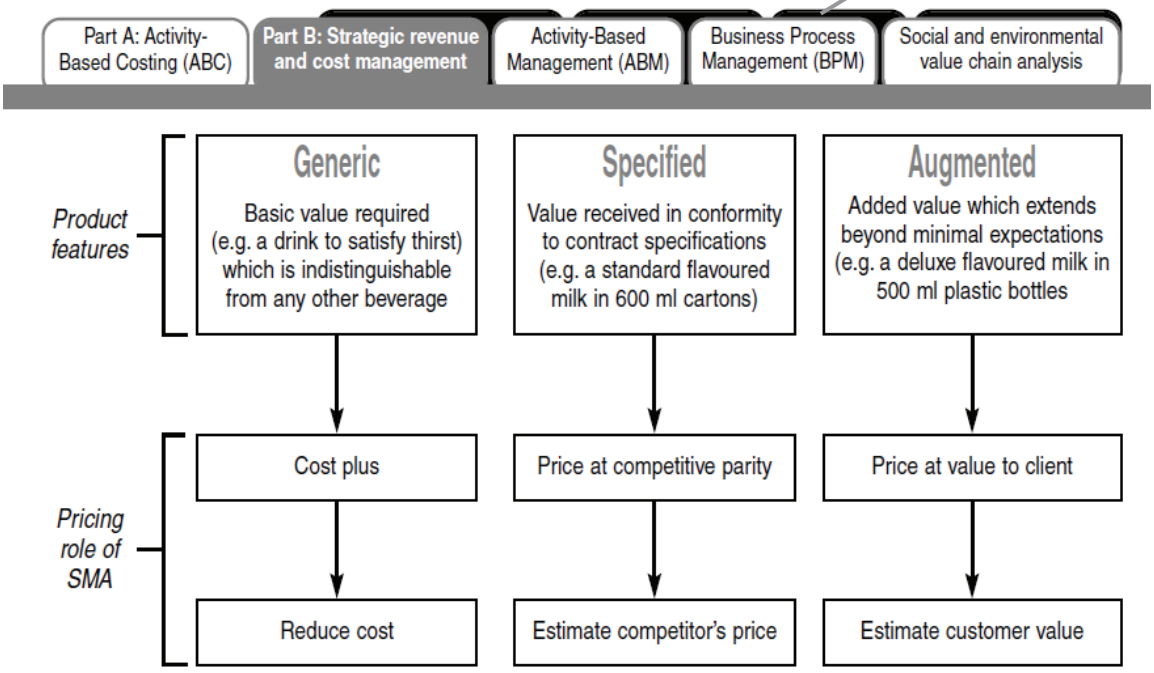
Key inputs:

- cost per time Unit of capacity
- the time units taken for an activity.

ABC v TDABC

- ABC allocates all costs of a resource to products
- TDABC only allocates costs of available time to products
- TDABC therefore recognise and quantifies idle time costs
- TDABC based surveys of employee activities

There are two forms of product functionality of interest to customers: hard functions and soft functions



Understanding life cycle costs helps determine opportunities for cost reduction, especially pre-production decisions where many of the subsequent costs are determined.

Takes selling price as given by market so, to achieve a desired profit margin, costs must be at or below target cost.

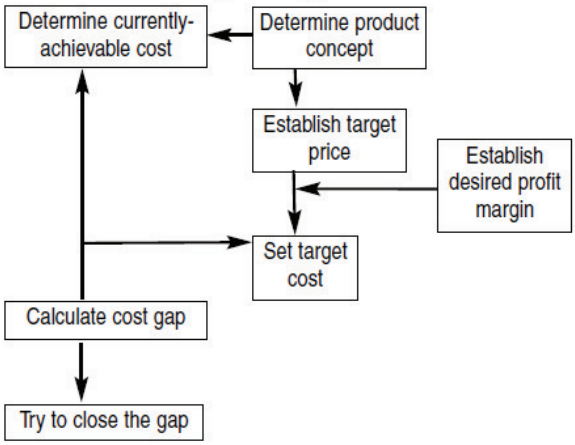
Life cycle costing

Traditional management accounting systems tend to report costs at the physical production stage of the life cycle and do not accumulate costs over the entire life cycle, assessing product profitability on a periodic basis instead.

Life cycle costing tracks and accumulates costs and revenues over the entire product life cycle, which means that a product's total profitability can be determined.

Target costing

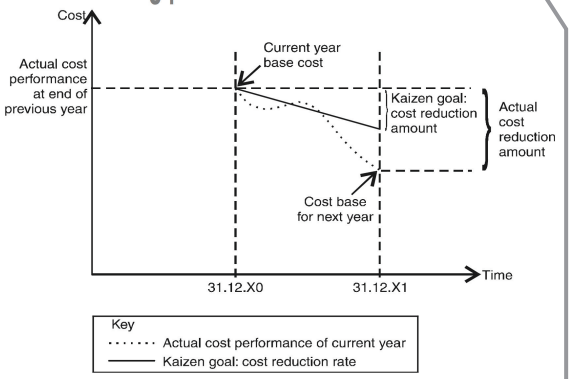
The target costing process



Kaizen costing

Focuses on obtaining small incremental cost reductions during the production stage of the product life cycle, using various tools such as value analysis and functional analysis.

Kaizen costing process



Kaizen provides opportunities for in-production cost improvements.

Kaizen is Japanese for 'improvement'.

Standard costing vs Kaizen costing

Used for ...	cost control	cost reduction
Focus is on ...	standard costs based on static conditions	actual costs assuming dynamic conditions
Standards/cost reduction **targets are set ...**	every 6–12 months	monthly
Costs are controlled ...	using variance analysis	by implementing continuous improvement
Employees are ...	the cause of problems	the source of solutions

Variances don't work as standards keep changing.

Focuses management attention on key value-added activities (which enhance value to customer and to customer satisfaction), key customers and key products.

Takes ABC cost analysis and uses it to improve organisational profitability.

Activity-based management (ABM)

Aspects of ABM

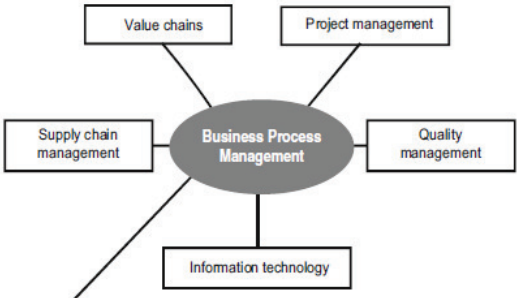
- **Cost reduction** (controlling/reducing the incidence of cost drivers) and process improvement.
- **Activity value analysis:**
  - Value-added and non-value-adding.
  - Eliminate non-value adding activities to reduce costs without affecting revenue.
  - Core/primary, support and diversionary/discretionary.
- **Design decisions** (providing cost driver information to ensure production of low cost products meeting customers' requirements).
- **Cost driver analysis.**
- **Continuous improvement/Kaizen** (eliminating non-value-added activities).
- **Performance evaluation** (using measures relating to volume, time, quality and cost driver rates).
- **Benchmarking** (internal, functional, competitive and strategic).

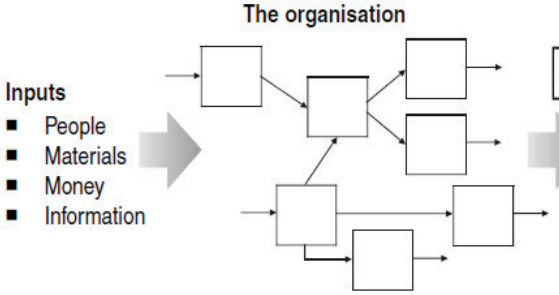
Popular in the 1990s as a technique for rethinking business processes and reducing value chain costs.

Business process management (BPM)

The **fundamental** rethinking and **radical** redesign of business **processes** to achieve **dramatic** improvements in critical contemporary measures of performance such as cost, quality, service and speed.

A process is a collection of activities that takes one or more kinds of input and creates an output.





Aim: fundamental examination of all parts of a process with the intention of lowering the value chain cost.

CSR has increased the need for organisations to consider social and environmental impact of activities.

Social and environmental value chain analysis

'The generation and analysis of both financial and non-financial information in order to support internal environmental management processes'.

Traditional management accounting
- Underestimates cost of poor environmental behaviour
- Underestimates benefits of improvements
- Distorts and misrepresents environmental issues

→ Poor management decision-making

- Classifies environmental costs as general overheads

→ Managers are unaware of these costs, have no information with which to manage them and no incentive to reduce them.

Social and environmental value chain analysis attempts to make all relevant, significant costs visible so that they can be considered in business decision making using:

- Input/output analysis
- Flow cost accounting
- ABC
- Life cycle costing

for the purposes of

- Product pricing
- Budgeting
- Investment appraisal
- Setting performance targets

Organisations may need to invest in upstream (supplier) monitoring activities to ensure that suppliers not only commit to, but also continually comply with, environmental and social expectations.

Supplier costs

- Purchasing.
- Delivery failure.
- Poor quality.
- Holding inventory.

Global suppliers

- Cheaper labour.
- Lower tax.
- Economies of scale.
- But quality concerns. These can be managed by:
  - Seeking ISO accreditation status from potential suppliers: e.g. ISO 9000 Quality Management; ISO 14000 Environmental Management; ISO 26000 Social Responsibility; ISO 3100 Risk Management.
  - Ensuring suppliers comply with a code of conduct.

Supplier management

Strong relationships:

- Minimise disruptions.
- Generate ideas for improvement.
- Improve coordination of production and logistics – making JIT a reality.

Supply chain disruption

- Supplier failure.
- Logistics failure.
- Natural disaster.
- Geo-political events.

Supplier failure, logistics failures, natural disasters and geo-political events can all disrupt the supply chain

Supply chain costs

- Purchasing
- Delivery failure
- Poor quality
- Holding inventory

Risks

- Strategic
- Operational
- Legal and regulatory
- Financial

Supplier management

Closer relationships with suppliers reduces risk, builds partnerships, opportunities to improve. But: may weaken your negotiating power.

Supplier selection

- Cost v quality balance
- Single or multisource

During the selection process assess ability, expertise, experience

Benefits

- Reduce risks
- Identify opportunities for improvement
- Mutually beneficial
- Suppliers that are more responsive and adaptive to your needs
- More trust: less checking needed

Global sourcing issues: - culture and language

- Differernt legal and political jurisdictions
- Little interpersonal interraction
- Potential reputational damage (e.g. sourcing from low labour cost locations)

Can be addressed with codes of conduct

Various ISO standards exist. Accreditation of suppliers improves the reliability of the supply chain, for example ISO9000 Quality management

TQM is the process of applying a zero defects philosophy to the management of all resources and relationships within an organisation, as a means of developing and sustaining a culture of continuous improvement which focuses on meeting customer expectations.

Focus on prevention of defects rather than putting them right afterwards.

Total Quality Management (TQM)

The process of focusing on quality in the management of *all* resources and relationships within the organisation.

Two basic principles of TQM

Getting things right first time, on the basis that the cost of correcting mistakes is greater than the cost of preventing them from happening in the first place.

Zero defects: the belief that it is always possible to improve, no matter how high quality may be already.

Measuring and controlling quality

1. **Quality assurance** (supplier guarantees quality).
2. **Inspection of output** (at various key stages).
3. **Monitoring customer reaction.**

Employees and quality

Workers are **empowered** and encouraged to become **multi-skilled**.
Workers are encouraged to **take responsibility** for their work.

Internal customers and suppliers

To satisfy external customers' expectations, the expectations of internal customers at each stage of the overall operation must be satisfied. Internal customers are therefore linked in quality chains.

Cost of quality

The difference between the actual cost of producing, selling and supporting products/ services and the equivalent cost if there were no failures during production/usage.

- **Cost of prevention:** Costs incurred prior to or during production in order to prevent substandard or defective products/ services from being produced.
- **Cost of appraisal:** Costs incurred in order to ensure that outputs produced meet required quality standards.
- **Cost of internal failure:** Costs arising from inadequate quality which are identified before the transfer of ownership from supplier to purchaser.
- **Cost of external failure:** Costs arising from inadequate quality discovered after the transfer of ownership from supplier to purchaser.

Examples

- **Cost of prevention:** Training in quality control.
- **Cost of appraisal:** Inspection of goods inwards
- **Cost of internal failure:** Losses due to lower selling prices for sub-quality goods.
- **Cost of external failure:** Cost of customer service section.

Internal and external failure costs are 'non-conformance' costs. These costs are likely to be high.

Prevention and appraisal are 'conformance' costs. Expenditure here is likely to reduce failure costs and hopefully reduce costs overall.

Specialist contractors can offer better quality and efficiency than if you tried to do everything yourself.

Common activities include IT, legal advice, HR, logistics and market research, though these can represent quite high risk activities in certain organisations.

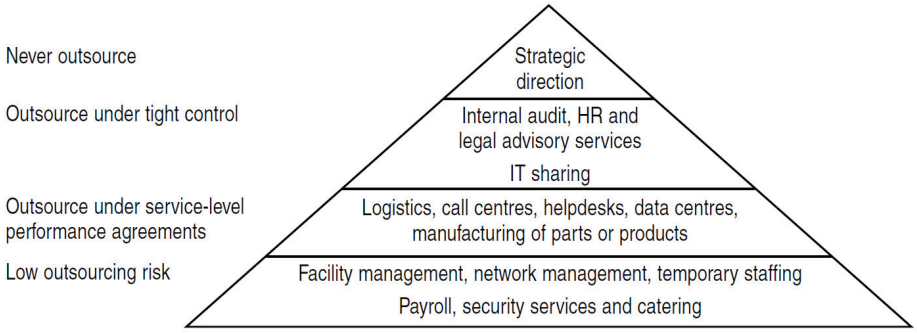
Choosing activities to outsource

An activity is a candidate for outsourcing unless the organisation must control it to maintain its competitive position, or if the organisation can deliver to a level comparable with the best organisations in the world.

Activities should be risk assessed before a decision to outsource is made. Low risk activities are usually appropriate for outsourcing, eg:

- Facilities and network management
- Temporary staffing
- Payroll
- Security services
- Catering

DO NOT OUTSOURCE STRATEGICALLY IMPORTANT ACTIVITIES.



Offshoring

In an effort to cut costs, many organisations are now offshoring all or part of their manufacturing and service chains to low labour cost countries.

Pros and Cons

☑ Frees up time	☒ Can be more expensive
☑ Should be cheaper	☒ Lost skills
☑ Take advantage of expertise	☒ Commercial sensitivity
	☒ No guarantee of quality

Relationship management (covering contract management, project management and supplier management) is critical here:

- Specification of service and standards.
- Performance measurement.

An example would be a bank's call centre.

More money can be spent on marketing for the most profitable groups.

Aim to:

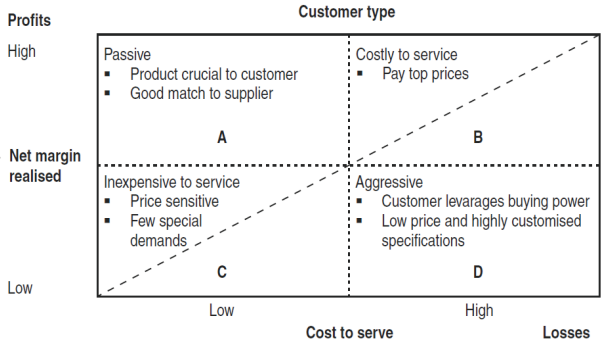
- Eliminate unprofitable customer groups.
- **Or** change the way sales are made to them.

Customer profitability analysis (CPA)

The analysis of the revenues and costs associated with specific customers or customer groups.

The relative profitability of specific customers/ customer groups can be assessed, and strategies aimed at attracting and retaining the most profitable customers implemented.

Customers can be categorised using this grid.



- The aim is to attract as many accepting customers as possible.
- Many large retail organisations fall into the demanding category.

The extent of customer profitability is dependent on the amount by which the net margin realised from sale exceeds the customer-specific costs.

Limitations of CPA

- The allocation of common costs is arbitrary
- The treatment of unavoidable or committed costs

Advantages of CPA

- Identifies unprofitable customers and products.
- Identifies whether poorly performed customer service causes some customers to become unprofitable.
- Focuses management attention on improving profitability for both customers and products.

Due to their very stringent product and order turnaround requirements.

Costs are then linked into individual customers or customer groups to determine their profitability.

CPA and ABC

The necessary analysis of costs can be successfully carried out using ABC cost drivers.

Examples

Cost:	Cost driver:
■ Delivery.	■ Kilometres travelled.
■ After sales service and support.	■ Number of visits.

Unprofitable customers identified by CPA should be persuaded to alter their buying behaviour (eg discouraged from placing lots of small orders).

The ABC approach also highlights where cost reduction efforts should be focused (eg reduce ordering cost).

Example

	$'000	$'000
Revenue at list prices		X
Less: discounts given		X
Net revenue		X
Less cost of goods sold		X
Gross margin		X
Less customer specific costs		X
Less financing costs		
credit period	X	
customer specific inventory	X	
		X
Net margin from customer		X

Customer life cycles

Customers can be costed over their life cycle and expected future cash flows discounted.

Managing and retaining unprofitable customers

- Ideally, transform an unprofitable customer into a profitable one by:
  - Increasing the realised net margin.
  - Reducing the service cost.
- Usually an organisation will choose to focus only on profitable customers, and those that have been made profitable.
- But may choose to retain unprofitable customers if:
  - Currently loss-making but new and growing: potentially profitable in future.
  - Provide qualitative benefits eg leading edge technology or marketing.
  - Highly reputed.

Could maybe give discounts for bulk buying.

Promotional expense is front loaded; sales grow with time and later purchases may be more differentiated.