Learner Guide: TLIP5004

Develop a transport and logistics business plan and TLIP5025 Set and achieve budgets

NATIONAL TRAINING

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1.0	01/08/2016	Training	Original
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Contents

TLIP5004 Unit Description

Application of Unit

This unit involves the skills and knowledge required to develop a business plan for an organisation or a discrete business unit in the transport and logistics industry, in accordance with relevant Australian and international regulatory requirements, standards, codes of practice and workplace procedures.
This includes conducting a situational and market analysis, analysing the organisational environment, developing appropriate strategies, and implementing and evaluating the resulting business plan.
Work is under general guidance on progress and outcomes. It requires discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes.
The unit generally applies to those with responsibility for resource coordination and allocation, and who lead individuals or teams.
No licensing, legislative or certification requirements apply to this unit at the time of publication.

TLIP5025 Unit Description

Application of Unit

This unit involves the skills and knowledge required to set and achieve workplace budgets in accordance with relevant regulatory requirements, standards, financial codes of practice and workplace procedures.
It includes planning budget requirements, monitoring the budget and taking appropriate corrective action when needed. It also includes monitoring expenditure, and reviewing and appropriately modifying the budget if necessary.
Work is under general guidance on progress and outcomes. It requires discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes.
The unit generally applies to those with responsibility for resource coordination and allocation, who lead individuals or teams.
No licensing, legislative or certification requirements apply to this unit at the time of publication.

Element and Performance Criteria TLIP5004

1. Conduct a situational and market analysis	**1.1** Transport and logistics business's principal services, markets, products and the factors that distinguish the business and contribute to its success are identified **1.2** Transport and logistics business/operating environment is defined and reviewed using information from staff members, customer feedback and external sources **1.3** Qualitative and quantitative market analysis data is documented **1.4** Target markets and relevant regulatory requirements are identified **1.5** Impact of transport and logistics business on market is recorded and projected change in market and/or services during the life of the plan is projected **1.6** Competitors, customer perceptions and market share of existing competitors operating in the transport and logistics industry are identified **1.7** Proposed business focus on specific target markets, pricing, sales and appeals are defined **1.8** Potential profitable opportunities are identified and documented
2 Analyse organisational environment	**2.1** Current transport and logistics business operations, practices, work flow, equipment and facilities are analysed **2.2** Organisational capability in terms of technology, research, development and tools is outlined **2.3** Current resources and resources that may be accessed to meet identified opportunities for business operations are evaluated **2.4** Developments in technology predicted within the lifetime of the business plan are evaluated and analysed **2.5** Organisational capability in terms of staff, equipment, facilities, operational systems and financial status are assessed for strengths and weaknesses **2.6** Costs of making operational adjustments in relation to existing and new business to influence improved profitability and positioning are reviewed **2.7** Premises for decisions are documented, potential circumstances which may alter the environment are identified and contingency provisions are made
3. Develop strategies	**3.1** Benchmark goals are documented and checked for realism in terms of internal and external environmental factors **3.2** Decisions and adjustments regarding resource allocation for products and services are made, based on external and internal analyses **3.3** Organisational adjustments are documented and implementation strategies are established **3.4** Projections of profit and loss or income statements per quarter until break-even point are constructed for the whole organisation and each cost centre **3.5** Business plan, including performance indicators, is finalised in accordance with enterprise requirements and is circulated to stakeholders **3.6** Questions and feedback from stakeholders are responded to promptly and, where appropriate, incorporated into the plan
4 Implement and evaluate business plan	4.1 Implementation plans for the management of workplaces, staff, business operation and operational systems are monitored and, where required, adjustments to the plans are made 4.2 Current and future marketing strategies and areas of specialisation are detailed and implemented 4.3 Organisational performance in relation to identified performance indicators is regularly monitored and reviewed

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Performance Evidence TLIP5004

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include

- adapting to differences in equipment in accordance with standard operating procedures
- applying relevant legislation and workplace procedures
- communicating effectively with others when developing a transport and logistics business plan
- completing documentation related to work activities and the development of a transport and logistics business plan
- modifying activities to cater for variations in workplace contexts and environment
- monitoring work activities in terms of planned schedule
- operating electronic communications equipment to required protocol
- planning and organising business systems and activities
- prioritising work and coordinating self and others in relation to workplace activities
- providing leadership and working collaboratively with others when developing a transport and logistics business plan
- reading and interpreting business and market data, regulatory requirements and other planning information relevant to the development of a transport and logistics business plan
- reporting and/or rectifying identified problems promptly, in accordance with workplace procedures
- selecting and applying appropriate technology, information systems and procedures
- working systematically with required attention to detail without injury too self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:
application of current competencies within functional activity

- application of relevant Australian and international standards and associated certification requirements
- Australian and international regulations, codes of practice and legislative requirements relevant to business operations
- equipment applications, capacities, configurations, safety hazards and control
- operational competitor and internal business systems, resources, management and workplace operating systems
- hazards that may exist in the operation of a transport and logistics business, and ways of controlling the risks involved
- market and other external environmental factors including the regulatory environment
- organisational strengths and weaknesses including the competencies of individuals in the team/group
- problems that may occur during the development of a transport and logistics business plan, and action that can be taken to report or resolve these problems
- relevant workplace documentation procedures
- resource availability including the competencies of individuals in the team/group
- workplace processes for developing a transport and logistics business plan.

Element and Performance Criteria TLIP5025

1. Plan budget requirements	1.1 Financial flows for budgetary periods are planned and scheduled in accordance with workplace requirements 1.2 Information on costs and resource utilisation is fully assessed and correctly interpreted 1.3 Effective action is taken to reduce costs and enhance value to customer and/or workplace
2. Monitor budget and take corrective action	2.1 Corrective action is taken in response to actual or potential significant deviations from financial plans 2.2 Where a budget under- or over-spend is likely to occur, appropriate people are informed with minimum delay 2.3 Prompt, corrective action is taken in response to actual or potential significant deviations from budget
3. Monitor expenditure	3.1 Expenditure made is within agreed limits and future spending requirements are not compromised, in accordance with workplace policy and procedures 3.2 Requests for expenditure outside limits of responsibility are referred to appropriate persons
4. Review and modify budget	4.1 Actual income and expenditure is checked against agreed budgets at regular, appropriate intervals 4.2 Necessary authority for changes in allocation between budget heads is obtained in advance of requirement 4.3 Modifications made to agreed budgets during the accounting period are consistent with agreed guidelines and are correctly authorised

Performance Evidence TLIP5025

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying basic accounting principles to budgetary processes
- applying relevant legislation and workplace procedures
- communicating effectively with others when setting and achieving budgets
- completing documentation and entering data related to setting and achieving budgets
- making calculations when setting and achieving budgets
- maintaining budgetary records and documentation
- modifying activities to cater for variations in workplace contexts and environment
- monitoring work activities in terms of planned schedule
- operating electronic communications equipment to required protocol
- prioritising work and coordinating self and others in relation to workplace activities
- providing leadership and working collaboratively with others when setting and achieving budgets
- reading and interpreting budgetary documents, financial statements and reports, and workplace policies and procedures relevant to setting and achieving budgets
- reporting and/or rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures
- selecting and applying appropriate technology, information systems and procedures
- working systematically with required attention to detail.

Knowledge Evidence TLIP5025

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- accountancy practices relevant to budgetary control
- budgetary control systems
- budgetary procedures and policies
- budgetary systems, resources, management and workplace operating systems
- limits of authorised expenditure
- problems that may occur when setting and achieving budgets and action that can be taken to report or resolve these problems
- quality and customer service standards, policies and procedures
- relevant regulations, codes of practice and legislative requirements
- resource availability including the competencies of individuals in the team/group
- risks that may exist when setting and achieving budgets and ways of controlling these risks
- workplace processes for setting and achieving budgets

Introduction TLIP5004

In this unit the following areas will be covered:

SITUATION AND MARKET ANALYSIS

- What are your business' principal services markets and products?
- Review business and the operating environment through customer feedback or independent professionals.
- Market analysis data is fully documented.
- Identify target markets and regulatory guidelines
- Forward planning for changes in your market.
- Identify competitors and understand your customer
- Targeting a specific market
- Identify opportunities

ANALYSE THE ENVIRONMENT OF THE ORGANISATION

- Analyse current operations
- Conduct market research
- Evaluate your resources for expansion
- Evaluate new technology and equipment
- Costing analysis for new equipment investment
- Preparing for changes in the workplace

DEVELOP STRATEGIES

- Working to a plan
- Adjust the business plan where internal or external factors may impact.
- Using business analysis to influence resource allocation.
- Construct and monitor quarterly financials
- Communicate business plan to stakeholders for feedback and action where necessary.

IMPLEMENT AND EVALUATE BUSINESS PLAN

- Monitor and adjust the business plan if necessary.
- Investigate and implement new operational systems if needed.
- Future market projections.
- Using KPI and how it can impact on the business unit.

Manage a Transport and Distribution Business Unit

This unit involves the skills and knowledge required to manage a transport and distribution business unit in accordance with relevant regulatory requirements and workplace procedures. This includes identifying the market for the business unit, setting transport and distribution business unit objectives, collecting information for business planning operations, establishing the resources required to achieve objectives, and managing business unit performance to achieve the required outcomes.

What is a business plan?

A business plan is a formal statement of a set of business goals, the reasons why they are believed attainable, and the plan for reaching those goals. It may also contain background information about the organisation or team attempting to reach those goals.

Business plans may also target changes in perception and branding by the customer, client, tax-payer, or larger community. When the existing business is to assume a major change or when planning a new venture – a 3 to 5 year business plan is essential.

Business plans are decision-making tools. There is no fixed content for a business plan. Rather the content and format of the business plan is determined by the goals and audience. A business plan represents all aspects of business planning process; declaring vision and strategy alongside sub-plans to cover marketing, finance, operations, human resources as well as a legal plan, when required. A business plan is a bind summary of those disciplinary plans.

Preparing a business plan draws on a wide range of knowledge from many different business disciplines:

- finance,
- human resource management
- intellectual property management
- supply chain management
- operations management
- marketing

It can be helpful to view the business plan as a collection of sub-plans, one for each of the main business disciplines." … a good business plan can help to make a good business credible, understandable, and attractive to someone who is unfamiliar with the business. Writing a good business plan can't guarantee success, but it can go a long way toward reducing the odds of failure."

The format of a business plan depends on its presentation context. It is not uncommon for businesses, especially start-ups to have three or four formats for the same business plan:

- an "elevator pitch" – a three-minute summary of the business plan's executive summary. This is often used as a teaser to awaken the interest of potential funders, customers, or strategic partners.
- an oral presentation – a hopefully entertaining slide show and oral narrative that is meant to trigger discussion and interest potential investors in reading the written presentation. The content of the presentation is usually limited to the executive summary and a few key

graphs showing financial trends and key decision making benchmarks. If a new product is being proposed and time permits, a demonstration of the product may also be included.

- a written presentation for external stakeholders – a detailed, well written, and pleasingly formatted plan targeted at external stakeholders.
- an internal operational plan – a detailed plan describing planning details that are needed by management but may not be of interest to external stakeholders. Such plans have a somewhat higher degree of candour and informality than the version targeted at external stakeholders.

Typical structure for a business plan for a start-up venture

- cover page and table of contents
- executive summary
- business description
- business environment analysis
- industry background
- competitor analysis
- market analysis
- marketing plan
- operations plan
- management summary
- financial plan
- attachments and milestones

Business Considerations

To many people, a warehouse is simply a large shed. In most cases, this assessment is a gross oversimplification of the facts.

As well as the storage areas, most warehouses will also include loading bays, office accommodation, workshops and an area for truck parking. Depending on whether the warehouse handles containers, pallets or smaller items, high bay racking or other shelving may be required, together with the appropriate types of forklift trucks or automated materials handling systems to move goods around.

A computerised stock control system is also likely to be essential. If food or pharmaceutical items are being stored, refrigerated or air conditioned storage areas may also be required.

Security and fire safety are always important issues in warehouses and insurers will insist on secure doors, intruder detection and fire alarms, floodlighting, emergency lighting, sprinkler systems, CCTV and often on-site security personnel to monitor the premises around the clock.

The transportation and warehousing services sector is a vast industry. It covers businesses like air transportation, water transportation, general freight transportation, specialized freight transportation, household and office goods moving, urban transit systems, taxi service, limousine service, charter buses, scenic and sightseeing transportation, port and harbour organizations, motor vehicle towing and many others.

There are over a 380,000 larger businesses (with employees) in this industry sector that employ over 4.1 million people with a total payroll of $154 billion. On average, the larger transportation and warehousing firms have at least 11 employees and the average income nationally for each of these employees is about $37,000.

In the small business world covering firms with no employees, there are 962k such transportation and warehousing firms with total gross receipts of $58 billion and the average annual income as reported by each firm of around $60k.

When writing a business plan for any firm in the transportation and warehousing sector the single most important element that must be mentioned is how important the cost of energy and labour is to this sector. As we all know the cost of oil has been moving up regularly resulting in an increase in the costs of petrol and diesel. A business plan must address the huge impact of this increase to the profitability and viability of any business operating in the transportation sector.

Labour wages with on costs is another significant cost when operating a business. The labour component as a percentage of the total expenses vary between each type of business category. The percentage may be a little as 8% while in other industries it could be above 60%. There are many different employment arrangements from State industrial awards through to various employment contracts.

Business plans for firms operating in transport and warehousing must account for the increased cost of keeping these trucks operating and at what point the business owner may start passing their cost onto the customer or consumer.

Sound business planning also must make some mention of forward hedging contracts that the larger firms may want to consider to lock themselves into better prices for fuel. The cost of petrol and diesel directly affects the profit margins of a transportation company. It may be a sound idea to have a business plan that accounts for different scenarios and inputs costs.

The availability of relatively skilled labour is yet another challenge facing the transportation and warehousing sector.

Job related injury is very common in this industry sector and it affects the productivity and profitability of the firm directly. A sound business plan must also account for some loss of labour and business due to injuries on the job and the resulting costs in disability premiums to the firm. Spending on appropriate safety equipment for employees can also be a costly preposition and business plans should address these costs as and where possible.

An ancient Chinese proverb declares that a journey of a thousand miles begins with a single step. For Australian exporters that single step usually involves moving products from the factory, the orchard, the farm or the processing plant, to a ship or plane bound for markets overseas.

It’s not a simple process. To begin with, the exporter has to organise appropriate packaging, essential paperwork and insurance cover, product testing and export permits and then decide whether to use truck, rail or air to move the goods to port.

Does the exporter try to handle it all himself or pass it to a logistics supplier?

Does he try to cope with imponderables like transport failures, booking foul-ups and accidents, or would using a freight distribution centre be a better idea?

Stuart St Clair, CEO of the trucking industry's peak body, the Australian Trucking Association (ATA), advises exporters to talk first to Customs agents who deal with freight movements. He also suggests searching the internet to find transport companies with specialist freight capabilities is recommended.

"Some specialise in container traffic, others in bulk, so check out their expertise," St Clair suggests. "Price is important, but so is the safe and timely delivery of your products to port. So go for operators with special skills in getting exports to the ship or plane."

This can be a boon to smaller exporters in regional areas, like Westend Estate wines at Griffith in southern NSW, which sells to 30 countries. Paul Lenon, Westend's export manager, says the company exports either in full container loads (sent by rail to Melbourne) or in LCL part-container loads by road to Melbourne or Sydney.

"The inland freight system has improved and the entire process is getting easier and more efficient," he says. "Our LCL shipments are palletised and shrink-wrapped, and full container loads go on slip sheets," Lenon says. "The wines are packed in cardboard boxes with dividers and we try to fill our containers to maximum capacity so nothing moves around. There's an occasional delay when there is not enough LCL freight to fill a full container."

Across the NSW-Victoria border at Mildura, the Angus Park/Sunshine group exports dried fruit and citrus juices to Europe, Asia, and the Pacific. Export manager, John Orwell, says he relies on the company's locally based logistics supplier to consign loaded containers to Melbourne where they are transferred to trucks at an inter-modal exchange about a kilometre from Port Melbourne.

"They are now working on a rail link right into Port Melbourne that will deliver uninterrupted 24-hour road and rail access," Orwell says.

Rail currently carries 75 percent of freight on Australia's major east-west route but only 20 percent of east coast freight. The major problem seems to be the need to move rail freight through Sydney, turning the Melbourne-Brisbane run into a 34-hour journey.

David Hensher, director of the Institute of Transport Studies at the University of Sydney, says urban congestion is a major factor in escalating distribution costs.

The Australian Industry Group (AIG), a not-for-profit association aimed at helping industry become more competitive, has released a report suggesting Australia's "inefficient transport network" is pushing up manufacturing costs and undermining competitiveness.

Freight Infrastructure

The Federal Government has put a $120 million down payment on an ambitious plan to build a 'steel Mississippi' rail link between Melbourne and Brisbane through inland Victoria, New South Wales, and Queensland, which will meet Australia's east-west rail line at the NSW mid-west town of Parkes.

A new company called Asciano Ltd—formed from the infrastructure assets of the mammoth Toll Holding group and which controls a hefty slice of Australia's rail freight business through Pacific National as well half the nation's docks and cranes—will be based at Parkes and the town is set to become Australia's freight rail hub.

The inland north-south link is part of the Commonwealth's $22 billion Auslink transport plan which predicts enormous rail freight growth on the east coast. The rail industry is also demanding that government policy favouring trucks over trains be changed so that rail gets to carry a bigger share of freight.

The National Transport Commission (NTC) says it wants a single economic regulator to oversee freight pricing to create a level playing field between road and rail.
"Road transporters support a competitive and efficient rail industry that pays its way," says Stuart St Clair.

"We know rail has to double its freight load over the next 20 years just to stay in the same position it occupies today, but the growth in freight must be shared among all modes of transport."

He says a lot of thought is going into the question of how Australia will deal with a projected massive increase in road freight, doubling by 2020 according to the Bureau of Transport.

"Do we build more trucks and put them on roads where they are already in competition with millions of cars?" St Clair asks. "The answer is no. We need to build bigger and safer road vehicles that will be more productive without putting more traffic on the roads. That's the direction the industry is moving in and we can expect greater productivity to be passed onto our customers."

Deputy Prime Minister Mark Vaile in 2005 backed the idea of bigger freight vehicles on our roads and has warned state transport ministers that it is now time for trucks the size of road trains to be brought to the outskirts of cities like Sydney to help ease predicted increases in traffic congestion.

In June 2008, the NSW State government announced that a freight terminal will be built in western Sydney to transfer freight from rail to roads while opting not to impose a freight charge on trucks using the state's main port at Botany. The Victorian Government has also begun letting contracts for a major freight rail upgrade in that state.

Significantly, the AIG survey pointed to the growing popularity—and cost effectiveness—of outsourcing logistics which, it said, saved Australian firms about $640 million over two years.

Distribution centres are opening all over Australia and are playing an increasing role in the export planning of many exporters, large and small.

Phillip Taylor, chief operating officer of Northline, a major freight forwarding operator, says distribution Centre's can be a boon to smaller exporters, especially those doing business in Asia.

"Say you're a smaller, self-owned business like a winery that needs to manage its export stock very carefully," says Taylor. "Sending one full container load overseas would probably deplete the entire stock of a small winegrower, but by putting the stock into one of our distribution Centre's we can complete the company's orders and send them off very quickly in loads that may be much less than a full container load.

"Companies can keep their products in Australia rather than having them sit somewhere overseas for long periods of time. This considerably reduces risks, allows for the careful servicing of markets, and lessens the lead time in getting products to market."

Northline's network of integrated distribution centres in almost all Australian capitals is reporting growing interest among exporters in moving their goods through Perth and Darwin because both are currently operating below capacity and export processing is fast and efficient.

Taylor explains that Northline does a lot of business with Indonesia, generally moving goods by road and rail from southern Australia to its Darwin distribution centre. The Indonesian Government has established its own clearance centre in Darwin so goods can be cleared prior to export.

"Operating as an international freight forwarder around the country with our own equipment allows us to pick and choose the best solutions for our clients, who export everything from food to ceramic tiles, business machines to mining equipment," Taylor says. "By using a distribution centre that can handle a broad range of goods under cover, an exporter opens up his business to a much broader customer base.

Our software system allows clients to manage their stocks through a web interface and lets them see instantly what products they have in specific locations.

"They can send requests to us, generate their own consignments, and we do the work for them while they track and trace every element of their shipments right through to final delivery. It also allows them to operate as close as possible to a just-in-time consignment strategy—and demand for it is growing very fast."

Some exporters face very different conditions that demand unique solutions to their export transport needs, such as Riversun, an umbrella global sales organisation established by small and medium-sized citrus exporters and packers in South Australia's Riverland and Victoria's Mildura Fruit Company.

Each year it ships out 2.4 million tonnes of citrus to the United States from regions around the Murray River. The flow of citrus is so massive that it charters its own ships at $1.7 million a time to move product from Port Adelaide or Port Melbourne to San Diego on America's west coast.

Riversun's managing director, Steve Allen, explains that to get the company's oranges, lemons and grapefruit to port, it organises every truck it can get its hands on—usually a fleet of up to 30 local vehicles—to collect fruit from orchards and cool-rooms at 20-minute intervals for delivery to the wharf in Adelaide or to the nearest rail-head for railing to Melbourne. "AQIS inspection takes place when the fruit is packed and it doesn't hold us up.

Our pallets are lifted and manhandled at least 50 times before they are delivered to our American buyers so packaging is probably the most important element in ensuring safe and efficient delivery to the wharf and on to market. Each pallet of fruit is worth about US$2,500. Who would jeopardise this for the sake of saving 20 or 30 cents on packing costs?" who indeed. Stuart St Clair wants exporters—especially in the food and beverage industry—to acknowledge the need for superior packaging and to work closely with transporters to ensure they get it right.

"The fact is that exporters don't always consult as much as they should about the transport process and they need to understand that they can benefit from talking to people with expertise, like transport operators," he says.

Why Do I Need a Business Plan?

A business plan is like a map. It tells you where you are going and how you plan to get there. The process of doing the plan also clarifies the degree of commitment you have to the business and opportunities and threats that may exist.

Although no two business plans are done in the same way, you need to have a systematic approach to the task. The general steps in the planning process must be covered.

Identifying and defining a business opportunity could mean identifying a demand for a product or service and starting a business from scratch. It could also involve buying an existing business or franchise and using your knowledge and skills to expand an existing business.

Work out whether the business is right for you and if you are right for the business. This involves assessing whether there is a good personal fit between the type of business you are considering and the skills, knowledge, experience, commitment and other personal attributes you have to offer. If there is not a good fit, the business is likely to run into problems and may not be successful.

If you feel the opportunity or fit is good, move onto the next stage of the planning process – that of evaluating the opportunity. This involves doing a SWOT analysis covering strengths, weaknesses, opportunity and threats. The headings provided below will provide a framework for this evaluation, and the writing of a draft or initial the business plan.

Business Plan Structure

Step 1. Introduction:
This section incorporates details as to the purpose of the Business Plan and should include the title of the plan, who the author is, and a date. If the Business Plan is also to be used in an application for finance or a grant, this section of the report should make that reference.

Step 2. Executive Summary:
Although written last, a concise summary will show what the business is about by describing its key points and why the business will be successful. Keep this to a maximum of two pages. Specifically, should cover:

- Description and concept of the business
- The Business opportunity
- The target market
- Marketing/Business strategy
- Financial requirements
- Financial projections
- Other key factors

Step 3. The Business and its Industry:
Specific details about the business and the industry within which it operates, and should include the following;

The Business:

- Ownership details
- The business legal structure, sole trader, company, partnership etc.
- Main business activity
- The business location and contact details
- Business advisers, such as Accountant and Bank Manager etc
- A brief history of the past business if an existing business

The Industry:

- An overview of the industry sector, incorporating specific characteristics of the industry and how economic, social and political factors impact on the industry.
- Consumer Trends
- Government statistics

Step 4. Product/Services:
Describe exactly what product or service the business is offering, the unique or special features, the advantages, benefits or improvements planned. To be expressed in terms of how the customer will view the product or service. Specifically, this section will cover:

- Product/Service Description – including any intellectual property etc
- Special features
- Sales history and relevant facts
- Future development

Step 5. The Current Situation:
Also known as the Strategic Audit and will cover:

- The business aims and objectives should come through clearly and associate with the business concept. May be expressed in either financial or operational terms and can relate to a 1-5-year time frame.
- SWOR Analysis is an objective assessment of the strengths, weaknesses, opportunity and risks of the business and what these mean in terms of business potential and strategies.
- Key success factors are critical influences, external and internal, that may make the difference between success and failure of the business. May only be 3 or 4 key factors in total.
- Competitive Advantage is the identification of that unique selling point of the business that distinguishes this business against competitors in the same market.
- Key Issues and opportunities can be strategic or operational issues that the business needs to deal with to ensure that its future potential is realized.

Step 6. Marketing:
A description of efforts and findings of market research undertaken, covering customer needs and wants, competitive advantage, customer's reaction to the proposed product or service and buyer behaviour patterns. In essence involves identifying to what extent the proposed product or services will meet client's needs.

Will also need to reflect understanding of the market opportunity in terms of the size and characteristics of the market place and whether or not the business has been able to identify the various market segments to which the product or service is attracted. Emanating from this analysis will be an expression of the overall marketing strategy, particularly as it relates to dealing with the 4 p's of marketing, known as the marketing mix. Specifically, will cover:

- Market Research
  - Activities
  – Results
- Market size, share and potential
- Market trends
- Market segmentation
- Target market – primary/secondary
- Customer analysis
- Overall marketing strategy
- Marketing mix (4P's)
  – Product/service policy
  – Pricing policy
  – Promotions policy
  – Place policy (distribution)
- Competitor analysis
- Sales forecasts

Step 7. Operations:

Extent of coverage here will vary dependent on the nature of the business and will need to be more detailed for manufacturing type businesses.
In general terms may cover;

<u>Production</u>. If a product is being produced or manufactured, the plan will need to describe how it will be produced, what technology or processes are involved and the extent of the production capacity. If there are a number of stages in the process, it is useful to illustrate this in a flow diagram.

If other parties such as subcontractors are involved they need to be described with detail as to how they will be organized and supervised.

<u>Equipment</u>. All businesses require an inventory of plant and equipment that is already held or needed in the future to support the business.

Listing and value of plant and equipment needs to be separately shown as regards that held and that required for purchase. If equipment is to be borrowed or hired this needs to be shown.

<u>Materials and Stock</u>: Describe what materials and stock will be required as regards cost, where it will come from, how it will be transported, the financial implications and alternative supply source.

Specifically, will show:

- Production processes
- Equipment Requirements
- Raw materials/stock requirements
- Technology influences
- Logistical influences, such as OHS
- Future Needs

Step 8. Human Resources:

Include a resume of the owner with details of experience and qualifications. If staff are to be employed or consultants engaged details to be shown and you will also need to address training needs.

Specifically, will show:

- Key management
- Staffing requirements
- Duties and responsibilities
- Skills and training needs

Step 9. Financial:

An essential element of the Business Plan will be the financial forecasts, particularly the cash flow budget that show the amounts and timing of monies coming into and going out of the business and the resultant bank balance on a monthly balance.

Financial statements will also reflect the need for loan funds short or long term. Start-up costs for a new business will also be identified. Financial statements are prepared on a monthly schedule and can be broken down to varying timeframes, from 12 months to 5 years.

Specifically will incorporate:

- Current financial position of the business
- Profit and loss budget
- Cash flow budget
- Balance sheet
- Personal budget of the owners
- Break ever analysis
- Capital requirements
- Funding needs
- Sources of finance

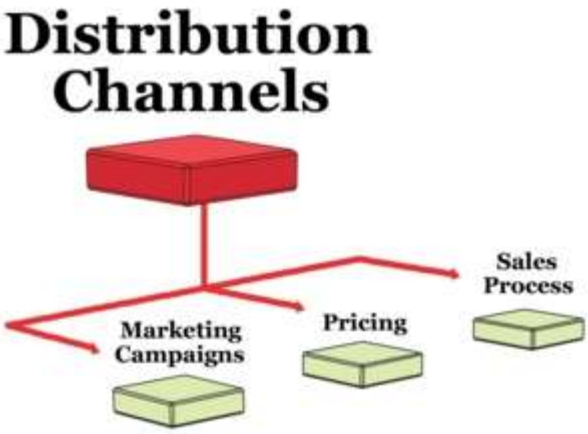
Step 10. Contingency Plan:
In business there are risks and threats and whilst these will be identified in part through the SWOT Analysis, it is appropriate to have considered a contingency plan to determine what steps can be taken if the strategies outlined in the plan cannot be implemented, e.g. such as sales targets not being achieved.

Step 11. Action Plan:
For a plan to come alive it needs specific actions with deadlines for implementation and completion. Responsibility for actions needs to be shown if there is more than one person involved. These action plans will simply reflect the implementation of the strategies outlined in the Business Plan.

Distribution Channels

There are six recognised distribution channels in Australia. Each channel is described in more detail within this next section.

The concept of distribution channels is not limited to the distribution of physical goods. Producers of services and ideas also face the same problem of making their output available to target populations. Governments develop “educational distribution channels” and “health delivery systems”.



They must determine agencies and locations for reaching a variety and a widely spread of population.

Hospitals must be located in geographic locations to serve the community with complete medical care and we must build schools close to the children who have to learn. Fire stations must be located to give rapid access to potential fires.

Channel 1.
Channel one in the industrial market is where a manufacturer sells directly to an industrial customer. An example of this might be a person who manufactures nuts and bolts and sells them directly to a mine-site. This is the best distribution channel as the opportunity to maximise profit and to minimise inventory is achieved.

One of the disadvantages of the channel is, should the mine-site be an inconsistent user of the bolts and nuts, then the manufacturer of the bolts and nuts would have to increase their inventory in anticipation of sales. (Perhaps you can think of an example of this distribution channel.)

Channel 2.
The second distribution channel is where a manufacturer makes a product and sells to an industrial distributor who in turn on-sells these services to an industrial customer. With this particular distribution channel, the nut and bolt manufacturer is able to consistently produce nuts and bolts to an agreed schedule or forecast and sell them to a company such as A.E. Baker or Blackwoods.

These companies are wholesalers or industrial distributors who then sell the products in small or large quantities to one or multiple mines. The benefit of this distribution channel is the manufacturer has consistency of supply, the industrial distributor has a reliance on the manufacturer and hopefully not a large need to keep inventory and then has the opportunity to level out or maximise sales by having multiple customers. Compare this with the first channel whereby should the mine-site not be happy with the quality of the bolt or nut then the total production or a large percentage of that production from the bolt and nut manufacturer could be lost.

Channel 3.
The third distribution channel is where there is a manufacturer who might be geographically located in either another State or country. These manufacturers may appoint a manufacturer's representative or agent within Australia. In turn, this agent or representative then sells the product to the industrial distributor or wholesaler who in turn then sells it to the industrial customer.

An example of this might be the large American company called 3M. This company manufacturer the majority of their products outside of Australia and then have them imported to Australia to an agent or one of their own representatives.

These representatives then sell the products to industrial distributors such as A.E. Baker, Blackwoods or Bunning Hardware who then sell to either an industrial or a retail customer. For certain product categories there are only industrial sales and are not retail sales due to by their very nature or product type.

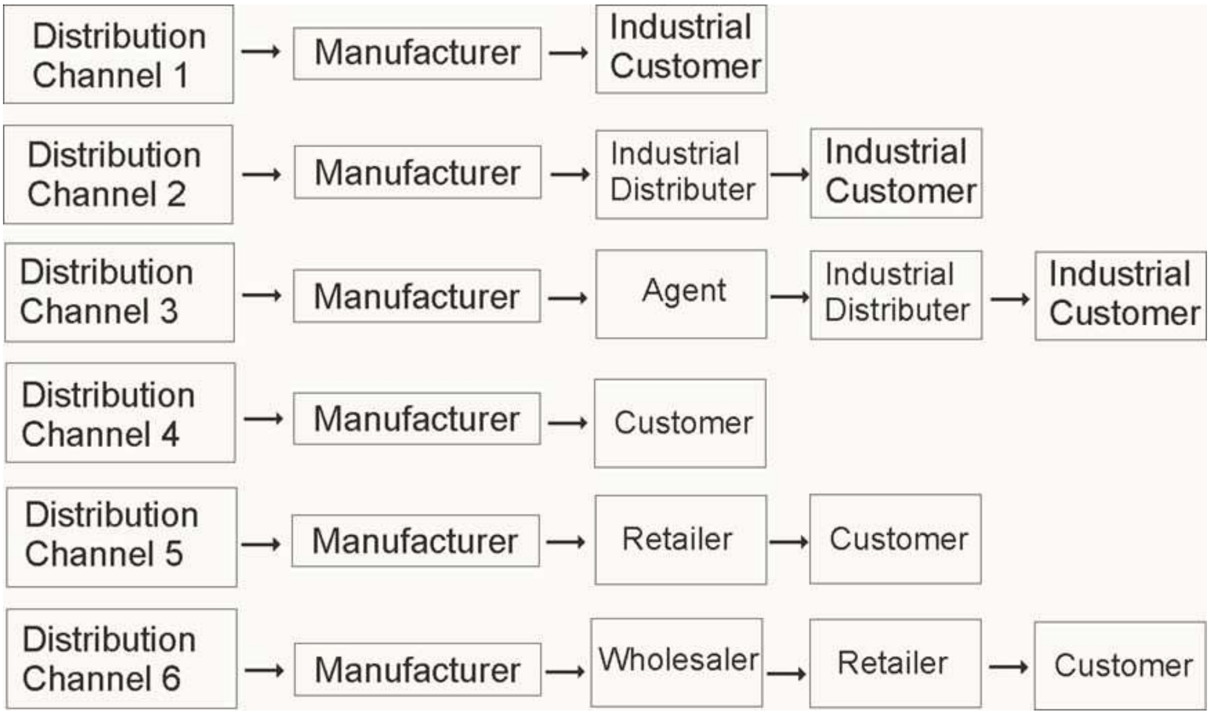
Channel 4.
The fourth distribution channel is from a manufacturer direct to a consumer or a customer. An example of this might be a person who is a farmer growing oranges and delivering them directly by a mail order service to persons or to a domestic customer. This is an efficient distribution channel and removes many of the costs. Another example of this might be a manufacturer of cakes who sell them over the internet directly to a customer.

Channel 5.
The fifth distribution channel is a manufacturer who sells to a retailer who then on-sells to a customer. Using the example of the cake manufacturer, they may make lamingtons in bulk and sell them to a number of retail cake shops in shopping centres who in turn sell them to the consumers.

The benefit of this distribution channel is the manufacturer can focus on what they do best which is manufacturing lamingtons and allowing the retailer to service their customers and determine when is needed. It is up to the retailer to ensure that the service provided allows the customer opportunities to have fresh lamingtons which may be supported by tea or coffee.

Channel 6.
The sixth distribution channel might be a company such as Golden Circle who manufacture or produce a range of juices, jams and drink products. These in turn are sold to wholesalers such as Woolworths, Coles, Pick N Pay or Metcash who then sell them to a retailer which may or may not be one of their own shops or supermarkets who then on-sell them to a customer or consumer. This is a well recognised distribution channel for the fruit and vegetable industry.

Diagram of the six channels



From the previous six distribution channels identified we are then able to relate this to our Distribution Plan and Strategic Plan. The type of distribution facility will vary dependent upon the channel. Some organisations try to operate three or four different distribution channels simultaneously. In some instances, this is beneficial whereas in other instances one competes against the other for resources.

In any Distribution Plan the role and purpose of the sales and marketing department should always be seriously considered. The sales and marketing department develop plans on the range of products which are required to satisfy a consumer need or requirement.

As part of their plan they work on the four P's which is

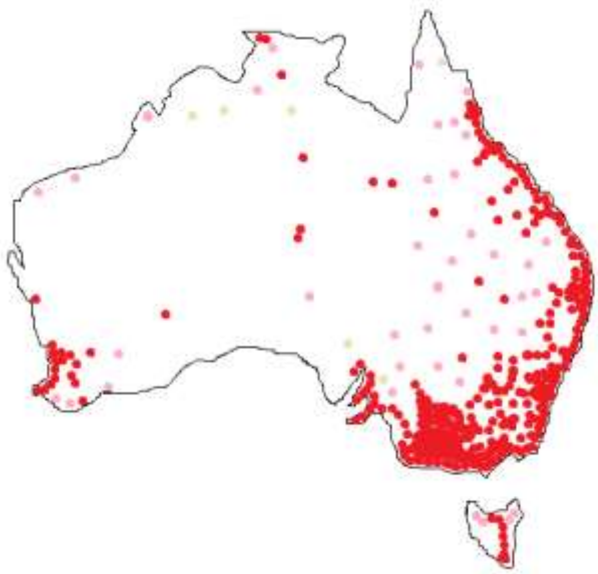
- product
- place
- price
- promotion.

The first of the four P's is the product.

Which products are manufactured and distributed and how are they to be handled and what timeframes do they need to be passed through the distribution facility? Products such as yoghurts with short shelf life have to be handled very differently than frozen peas which may be able to be stored in a freezer warehouse for a number of years.

The next P is place

This is a further consideration and this is where is the customer geographically located. For example, it is unlikely that ice-cream would sell very well in frozen countries during winter whereas in warm countries during summer that is the ideal place. Goods which are aligned to the hospitality and tourism industry should be marketed within those areas.



The next P is price.

The price of a product is large component in a distribution cycle and is important to include in the Distribution Plan. If it is projected by the marketing department that a product should be able to be sold for $2.50 and the distribution component of that is .40 cents to make a profit margin of .10 cents, this could be the pricing objective. If the distribution of the product takes .45 cents instead of .40 cents, then the margin is reduced by .5 cents. This might make the product an unprofitable product to have in the marketplace.

The last of the four P's is the promotional activities.

TV advertising and radio campaigns can create a significant increase in demand for a particular product. TV shows such as Big Brother or Master Chef can focus consumers on a product or range of products from the same category to an alternative product or brand. There have been many instances where a product has achieved its national sales within a number of weeks.

There are also other examples where the annual sales have never ever been achieved. Supporting the four (4) principles is another concept known as product maturity or life cycle. The life cycle of a product, and in particular a new product, is measured in months or in years. Previously most products from time of introduction until they matured were approximately 5 years.

Some products launched today will only last 12 months in the marketplace. Statistics indicate that for every thousand products that are released in a calendar year only 200 of those products are still in the marketplace at the conclusion of the one year and within three years approximately 20 still remain.

Description of the Business

An excellent question to ask yourself is: "What business am I in?" In answering this question include your products, market and services as well as a thorough description of what makes your business unique. Remember, however, that as you develop your business plan. you may have to modify or revise your initial thoughts or plans.

The business description section is divided into three primary sections, business description, the product or service you will be offering and the location of your business, and why this location is desirable (if you have a franchise, some franchisors assist in site selection).

Business Description

When describing your business, generally you should explain:

- Legalities – business structure: sole trader, partnership, company. The licenses or permits you will need.
- Business Type: wholesale/retail, manufacturing or service.
- The type of product or service offered.
- Is it a new independent business, a buy-out, an expansion, a franchise?
- Why your business will be profitable. What are the growth opportunities? Will franchising impact on growth opportunities?
- When your business will open (days, hours)? Check regulations.
- What you have learned about your kind of business from outside sources (trade suppliers, bankers, industry associations, other franchise owners, franchisor. publications).

A cover sheet always goes before the description. It includes the name, address and telephone of the business and the names of all principals. In the description of your business, describe the unique aspects and how or why they will appeal to customers. Emphasise any special features that you feel will appeal to customers and explain how and why these features are appealing. If the business has a logo or corporate colour scheme, include it on the front cover.

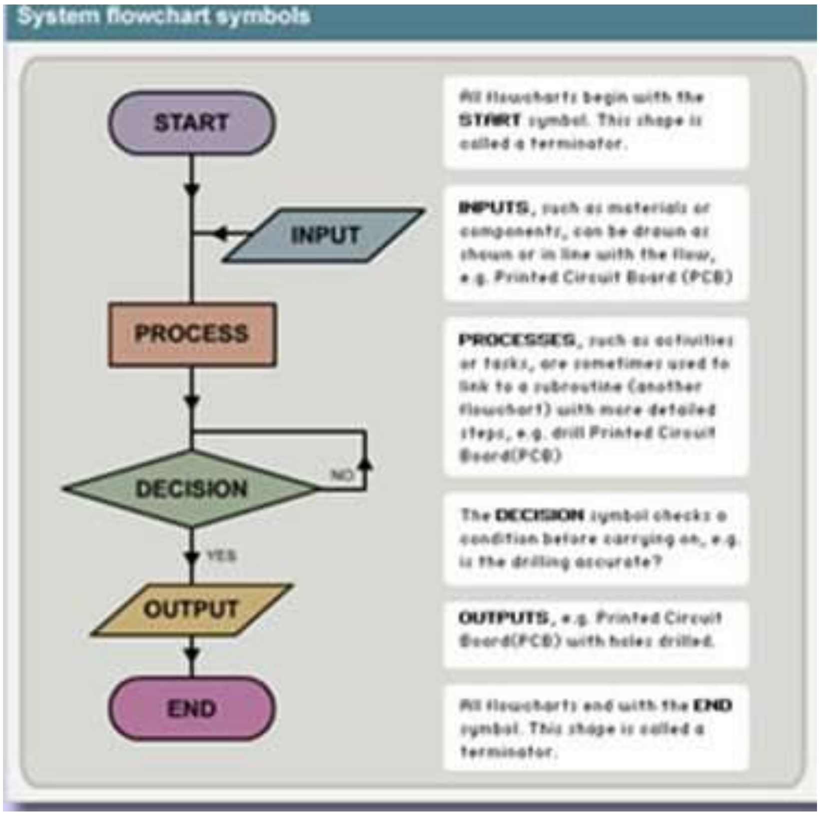
The description of your business should clearly identify goals and objectives and it should clarify why you are, or why you want to be, in business.

Situation Analysis

The study of flowcharting has been around for many years and is based on scientific management approaches identified and reinforced by Taylor. Operations research, method study or scientific management considers all the steps and stages in a process from start to finish. In our daily lives there are many examples of flowcharting.

Many flowcharts can be created manually whereas with some software systems they can be created electronically. The various symbols used within flowcharting give a determined function. For example, in any flowchart there has to be a start and a finish and within that there are a number of entry related activities.

Flow Charts



Flowcharts are pictorial representations of the steps in processes or activities. Analysing flowcharts are useful to visually depict the workflow in their company and help discover if their work processes can be improved.

By breaking work down into step-by-step component parts, it is possible to see any duplication of work or bottlenecks that could be eliminated. Processes are often quite complex, particularly in the transport logistics industry, where there are a number of participants involved.

As a result, workflow modelling can be difficult to achieve manually. Fortunately, widely available software systems enable managers to represent and manipulate their processes on screen and thus find ways to improve their systems and reduce inefficiencies.

It might seem extremely simplistic to think about the activities in your section or department in this way, but by reducing them to this simple level, they can then be built upon in creating models of workflow, and this can enable managers to understand how processes within the organisation work and how they might be improved.

Activity. Workflow in your Organisation

Think of all the steps involved in moving a consignment from its origin to its destination. Draw a flowchart depicting each step in the process, starting with the receipt of the order from the customer, to delivery at its final destination.

Within distribution planning it is important to flowchart the various stages within the supply cycle from receipt to dispatch including how products are ordered and how customers interact with the business. This section will look at the receiving operations, storage methods, order assembly operations, packaging process, despatching and outbound transportation.

Within these functional areas you could develop a range of flowcharts which consider or review the various documents used for various decision points and how some of those cycles can either be reduced or eliminated. Unfortunately, most supply cycles are not in straight lines.

Designing A Distribution Plan

To design a Distribution Plan, we must have information about the following;

- the products,
- the material flow or route,
- the quantity of goods processed
- the cubic volume
- the shapes and sizes,
- the frequency of movements and
- the support systems including equipment.

Prior to analysing this information, the Distribution Plan must consider whether we are going to work on centralised or decentralised warehousing systems.

1. A centralised warehouse is one warehouse where all the goods of the total organisation for either the State or Australia are distributed.
2. A decentralised warehouse is where there are a number of warehouses or distribution centres to support the organisation. These may be multiple facilities within one State or multiple facilities within Australia.

By way of history, the cycles in which organisations move from centralisation to decentralisation will depend on the economic environment, the types of products and the customer requirements. In the 1970s many of Australia's organisations had decentralised facilities and in many cases had warehouses within regional locations

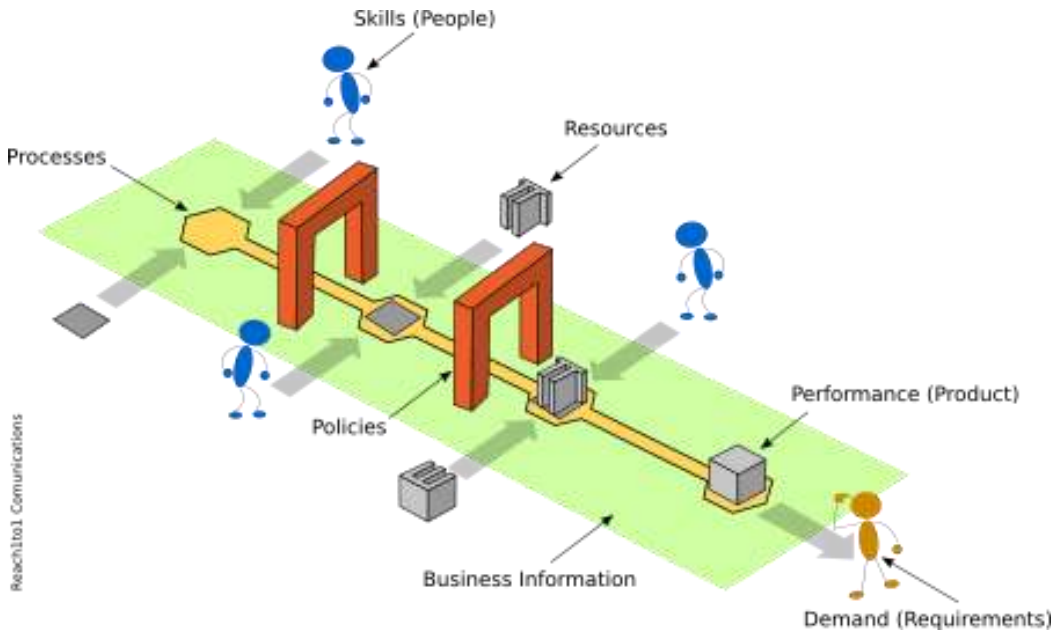
The reason for this was that transportation systems predominantly relied on both rail and sea freight. Australia had quite a busy coastal shipping arrangement where organisations shipped things from one port to another in preference to using rail systems. Road transport although it was significant was not able to be as cost effective as the other two transportation modes.

During the formation of the ACTU and better organisational management of the individual trade union movements, Australia went through significant workplace change. The organisation of the trade union movement and the economic environment allowed significant changes to occur.

Wage increases of between 30 to 50% in one calendar year were common as was changes in the number of hours worked per week and the conditions and benefits given to employees. Companies were forced to accept these imposed conditions and in some instances were unable to pass the higher them on to the consumer.

Other organisations were unable to compete and were either taken over, merged with smaller organisations or closed. Aligned to this was an increase in the inflation rate with prices going up on a weekly basis. The major companies looked at their distribution systems and the cost to run those distribution systems and made significant changes to all systems. One major decision was to reduce the labour or the raw material component cost. To achieve this, aim the regional warehouses were closed followed by the State based warehouses until a single national warehouse or DC existed.

Organisations invested significant amounts of money in new distribution facilities to ensure that they had a centralised warehouse for all of Australia, and where possible replaced manual processes with equipment and technology. The initial financial gains achieved by the trade union movement were reduced by restructuring of all business processes, relocation of work overseas or reduced staffing in all sectors.



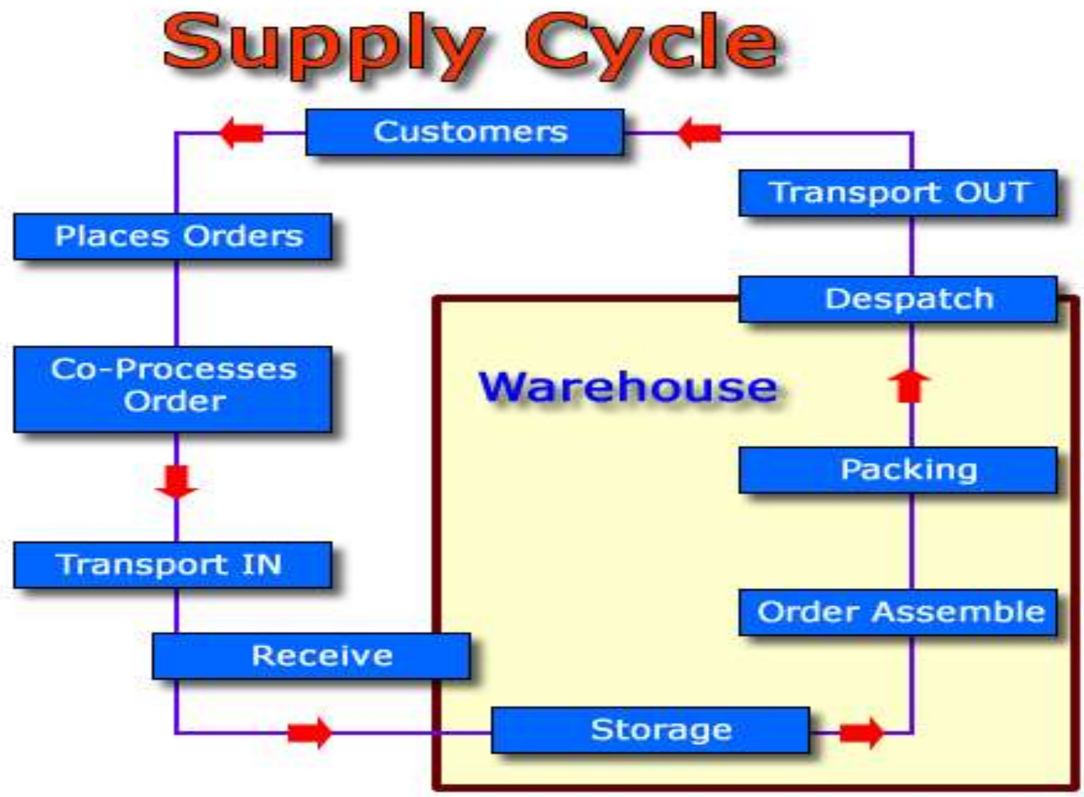
The emergence of sub-contracted warehouse operations or as they are called now "third party warehouse operations" came to the front of manager's minds. This allowed an organisation an opportunity to control their distribution components for a fixed fee or a fee based on the percentage of sales cost. Since those days the levels and number of services provided by third party warehouse (3PL) operations have improved and grown significantly.

A 3PL partner can be great; it helps you manage your time, makes shipping hassle free, gives you an easy access way to manage costs, and allows for flexibility in shipping controls. A 3PL is a great partner to have especially if you do not have the funds to hire your own drivers, buy trucks and send them all over the country for you. A 3PL will save you money and time. Be smart and use one that works for your needs.

Often you could be locked into carriers you don't like. Make sure that your service level remains top notch. Shop around to get the best 3PL for your needs. Most 3PL's have reliable customer service; make sure you get one that allows for returns and damage claims. Remember a 3PL is like a partner, so look for all the things you would like in a shipping partner. For example, the benefits of a 3PL are that they provide instant quotes and 24 customer service hotline. When shopping for a 3PL it is helpful to write a list of wants and pain points you want solved before approaching a 3PL.

The Warehouse or Distribution Centre

The warehousing and distribution industry has changed dramatically in the recent years due to changes in both the Australian and global economies. Business is now required to work smarter not harder in everything they do. This involves changes in the types and geographic locations of warehousing, and the skills level of the persons working within them.



The modern warehouse comprises a vast array of resources both human and physical. Human resources are the people involved in the management and actual operation of the warehouse. The physical resources are the forklifts, racks hand tools, building, the products etc that the people use to perform their tasks.

In most warehouses, there are a number of fundamental or basic tasks that must be performed, such as receiving, storage order assembly, packing and despatch.

Supporting the warehouse operations are purchasing, stock control and transportation.
The wide range of knowledge and skills needed by a store person today cannot be compared with those of a few years ago.

As computers gain acceptance and become a necessary tool in the warehouse, store persons must have knowledge of, or be able to use a computer to key warehouse data.
Today, the storage of goods is big business. Some companies do nothing else but provide contract storage facilities for large manufacturers. These warehousing companies are often referred to as “third party warehouses” or 3PL.

Storage is the second step in the Supply Cycle. It follows directly after receiving, and precedes order assembly. Order assembly, the third step in the Supply Cycle will commence in the storage area. The picked items are then taken to a marshalling area pending checking and packing. Various types of storage systems are used in businesses all over the world. Storage systems are used primarily to:

- Make goods more accessible
- Enable goods to be found easily
- Protect the goods from damage.

As Australia becomes further de-regulated, our industry must be competitive with other countries. It is essential to use the total company resources more productively and efficiently. This includes machinery, labour, money, manufacturing processes, warehouse and transport resources.

In the coming years there will be a good deal of change occurring in Australian workplaces. It is most necessary that you become involved in the changing ways of business in Australia, and that we remain competitive with other countries.

History of Storage Systems

Prior to the invention of materials handling equipment, humans lifted and moved all of the items they needed manually. Naturally, human capabilities limited the size and weight of the objects handled, how far they were transported and how high from the ground they were able to be stored.

The introduction of materials handling equipment (MHE) dramatically changed how we could operate a warehouse.

In the earliest warehouse there were little materials handling equipment except for barrows and trolleys. In those early days, a warehouse was typically a single level building, built to about three meters high. Racks and shelves could only be as high as the strongest worker could lift or climb with a load of product. If a company had a lot of stock to store, it followed that its warehouse would have to spread out over large areas of ground.

The spread of warehouses over large floor areas created two problems. Firstly, was the issue of travel time, i.e. how much time workers had to spend walking over the great distances each day. Secondly, was the cost of buying or renting land and/or a building to cover such a large area. The combined result of these problems was increased operating costs for businesses. Business people challenged inventors to solve these problems.

One early solution was to build taller warehouses with many floors, thus allowing workers to uses steps, chutes, ropes, pulleys and nets to move goods up and down through the levels. This did not greatly reduce the travel time as people still had to walk up and down the steps and ladders.

Increasing height also brought some new problems e.g. increased risk injury and more rapid worker fatigue from all the climbing. It did however reduce the cost of building space to some extent. Business people felt there must be a better way and pressed the inventors further. The inventor observes, thinks and draws conclusions.

In warehouse terminology, travelling around the floor is known as horizontal travel. Whilst the travelling up and down between the floor and roof is known as vertical travel. Please reflect on what you have seen in the preceding image. It is actually the result of many years of research and development in:

- Materials handling equipment, e.g. forklifts,
- Building engineering design, e.g. wall heights, and
- Storage fixtures, e.g. load-bearing capacity of racks.

The combination of all this technology is why our society has progressed so far in such a short period of time. Technology has a domino effect, as one area of research progresses; it allows research in other fields to also advance. We have the tools to increase our productivity in the form of machines that:

- lift larger, heavier objects,
- travel further faster,
- work safely at great heights, and
- work longer than humans without tiring.

The introduction or advent of such materials handling equipment also opened the potential to invent new racking and storage systems. As racks and materials handling equipment reached new heights, building technology had to move to stay abreast of it, and so the cycle continues.

There are a wide variety of storage systems in use in warehouses throughout the world. These systems range from tried and true basic systems through to multi-million dollar hi-tech installations.

Types of Storage Systems

Binning and Shelving Systems

Companies use binning and shelving systems for any of a number of reasons:

- To improve or increase the total storage capacity of goods
- For storage of small items
- For small stock holdings of items
- To protect the goods from damage and loss
- those using metal components to act as the bin, and
- those using a combination of plastic boxes and metal components

Binning systems have been available for many years in various forms. In early times bins were made of timber, on site in the warehouse to suit the dimensions of the building and the products stored. Today binning systems are built from modular components consisting of two basic types:

Shelving systems have also been available for many years in various forms. In early times shelves were also made of timber, on site in the warehouse to suit the dimensions of the building and the products stored. Today shelving is manufactured by a number of suppliers. Systems commence from several bays each measuring approximately 1.8m high by 1.2m wide and 300mm deep, with 5 adjustable shelves.

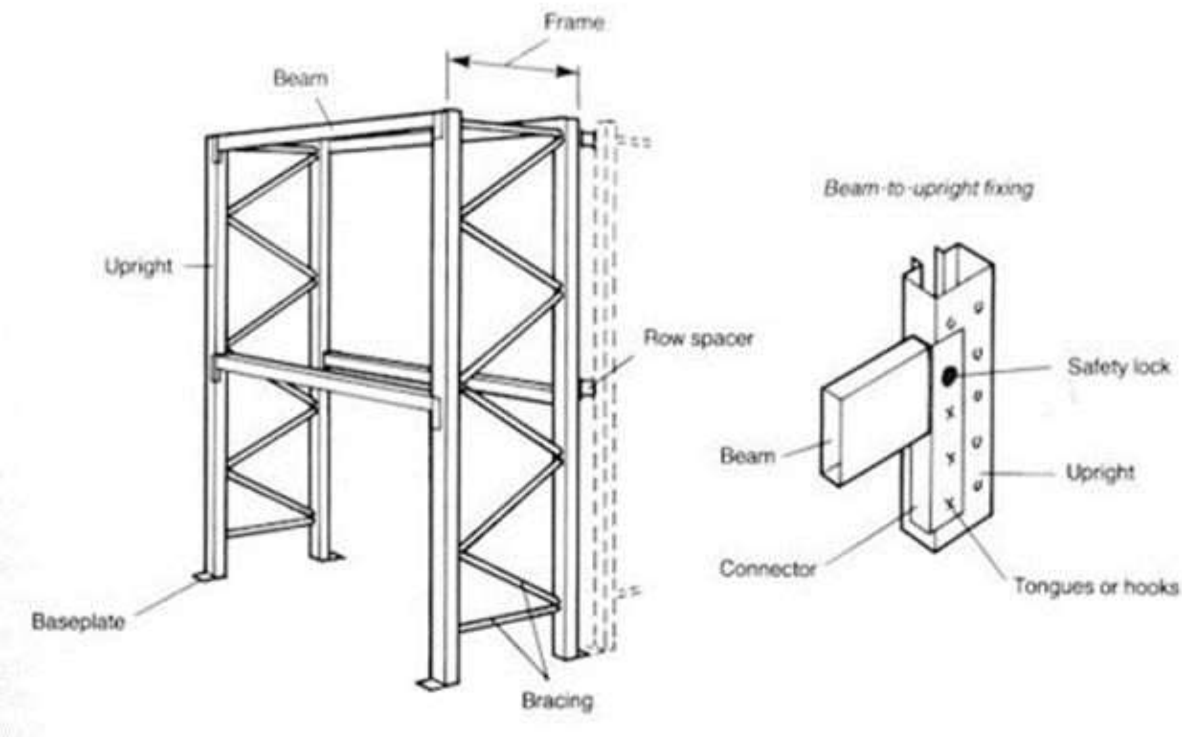
Another approach to metal shelving which generally has a higher load bearing capacity, are those assembled with angular frame material. Various fittings such as heavy duty metal or wooden shelves, shelf reinforcement and diversion can then be added as required by bolting them into place.

Racking

The term racking covers a wide variety of storage systems used in the warehousing industry. Companies have racking storage systems for any of a number of reasons:

- To improve or increase the total storage capacity of goods
- For storage of larger items
- For large stock holdings of items
- To protect the goods from damage and loss

Racking systems have been available for many years in various forms. In early times racks were made of hardwood timber, on site in the warehouse to suit the dimensions of the building and the products stored.



The most common form of racking used in industry today is pallet racking. These structures have evolved from welded steel frames, which once made, were difficult to change to fit changing product dimensions. To the present day when we find they are built from modular steel components that can be easily rearranged to fit the products being stored.
A basic pallet rack unit consists of:

- Two pairs of uprights
- Several pairs of beams
- Several braces
- A number of fasteners, spacers and locking devices

This illustration presents a "spare parts breakdown" of one bay of pallet racking. Let us now look more closely at its component parts in the diagram.

Uprights are the metal supports at the end of each beam and vary in height from 2 metres through to 33 metres. These uprights are strengthened with various braces. Uprights can be secured to further stands of uprights to form either double selective racking or drive-through racking.

Braces are formed metal bars that are bolted between the uprights to improve the total carrying capacity and strength of the racking system. Should a piece of mobile equipment bump or hit the racking system, the braces allow the upright to flex out of shape before (hopefully) returning to their original shape.

Beams are the bars made from hollow rectangular steel that span between two uprights, and upon which one or more pallets can be stored. Each beam has a load carrying capacity designed by the engineering section of the pallet manufacturing companies. These vary from 750 kg per pallet space through to 4 tonnes per pallet space. The thickness of the steel and the dimensions of the rectangular bar determine the carrying capacity of the beams.

Base plates are the metal plates that are located between the concrete floor and the upright. They act as feet and facilitate the fastening of the rack to the floor by the use of a fastening system such as masonry anchors.

Row Spacers are tubular metal spacers that are used to keep the backs of two racks a set distance apart. As the back of the pallet overhangs the beam it rests on, fixed spaces between racks are vital to prevent one pallet from pushing its back neighbour off the adjoining racking.

Safety Locks come in a variety of designs depending on which brand of racking is purchased. Their purpose is to lock the beams onto the uprights.

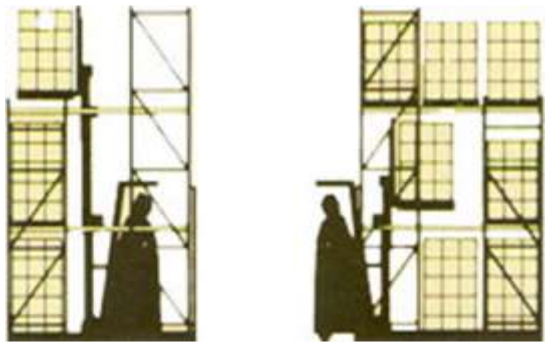
Storage System Selection Considerations

If the opportunity arose to choose a storage system, the store person would need to consider several factors:

- The types of products being handled
- The quantity of those items to be stored
- How quickly the item is used
- If the items have unique features
- The type of materials handling equipment available
- Price of the racking versus its effectiveness

Single Selective Racking

- Uprights 2-6 metres high
- Lowest cost to purchase
- Easily allows stock rotation
- Work from both sides.



Double Selective Racking

- Uprights 2-8 metres high
- Slightly more expensive than single selective
- Easily allows stock rotation

- Work from one side only, therefore uses fewer aisles than single selective to store the same number of pallets.

Drive-In Racking

- Uprights up to 8 metres high
- More expensive than double selective
- Limits stock rotation, – Last In First Out only
- Work from one side only, therefore uses fewer aisles than double selective.

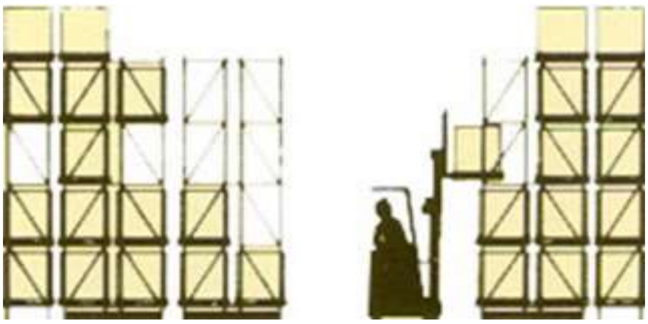
Two-Deep Reach Racks (Double Deep Racks)

- Uprights up to 6 metres high
- More expensive than double selective
- Limits stock rotation
- Work from one side only, therefore uses fewer aisles than double selective
- Requires specialized materials handling equipment.

Gravity Flow Racks

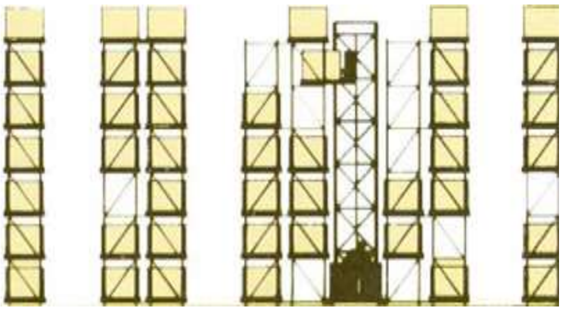
- Uprights 8-15 metres high
- More expensive than double deep racks
- Easily allows stock rotation
- Fill from one side, pick from the other, therefore uses less aisles than other systems

Power Mobile Racks



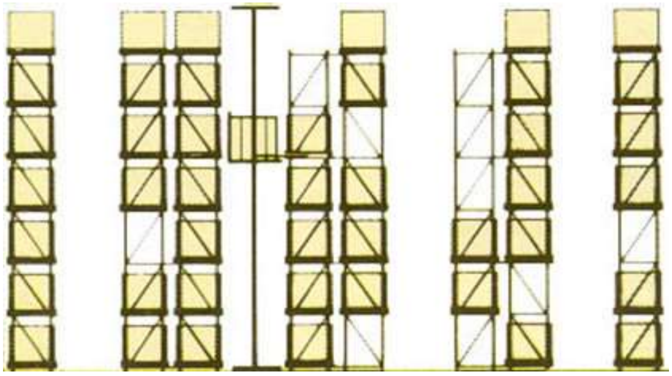
- Uprights up to 6 metres high
- Racks are built on motorised bases to open and close
- More expensive than pallet flow racks
- Easily allows stock rotation
- Work from one aisle only at any time, therefore uses less aisles than all other systems
- Having only one aisle limits multiple users

Narrow Aisle Racks



- Uprights to 10 metres high
- More expensive than double selective racks
- Easily allows stock rotation
- Requires specialized materials handling equipment
- Requires very exact pallet sizing
- Uses narrower aisles than other systems (1.7M)

High Rise Racks

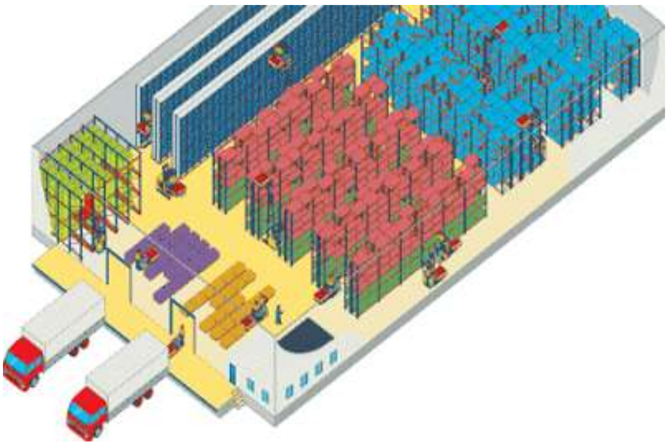


- Uprights to 20 metres high
- More expensive than narrow aisle racks
- Easily allows stock rotation
- Requires specialized materials handling equipment
- Requires very exact pallet sizing
- Uses narrower aisles than other systems (1.4M)

Receiving Area Layout

Throughout the world, warehouses vary in size from small rooms or enclosures in the corner of a factory, to massive purpose built buildings that are many metres tall and cover many hectares. Regardless of the size of the building, some basic principles apply to the design and location of the receiving section within the overall warehouse layout.

Prior to the construction of a warehouse or factory complex, consideration should be given to traffic flow. Warehouse designers and site engineers need to ensure that there is a safe and unobstructed flow of traffic into, around and out of the entire site. Lack of forethought in this area can lead to many delays and frustration when the site is commissioned.



The primary consideration in relation to the design of the receiving area in a warehouse will be based on the volume and type of materials or products being received. A company which receives thousands of small cartons every day will require a different receiving area design to one which receives bulk liquids pumped directly from road tankers to its storage tanks.

The receiving section of a warehouse revolves around the receiving of goods from the outside world. Essentially goods arriving on a truck must be unloaded and placed within the confines of the receiving area so that the receiving personnel can perform their various tasks.

Herein lies the basic problem; truck decks are higher than ground level. The warehouse designer must decide which is the most appropriate construction method for enabling goods to be moved from the truck into the warehouse.

Many warehouses use forklifts to deal with the deliveries that are made to them. The forklift overcomes the variations in height between the truck deck and the warehouse floor. However, it can be a costly exercise having a fleet of forklifts split between the outside and the inside of a warehouse.

Consequently, a number of specialised construction alternatives have been created to reduce the reliance on this type of equipment. If the warehouse floor is built at the same height as the truck's deck, as depicted in the image to the right, less expensive materials handling equipment such as electric pallet jacks can be used. By eliminating the vertical travel time, i.e. the time taken to raise and lower the forklift's carriage, time is saved. If time is saved, employees can become more productive.

Vertical Carousels – a storage system

Certain companies have a range of products which are small in size and highly valuable. Some examples of this category of product include mobile phones, laptop computers, medical drugs and electronic components.

A vertical carousel is similar in principle to a Ferris wheel where products are rotated on a endless chain system and move from one physical location to another as required. The highest vertical carousels in Australia are approximately 30 metres high, two to three metres wide and approximately two metres deep. These smaller carousels hold approximately 2,000 line items or SKUs (Stock Keeping Unit). The larger units can hold up to 55,000 items.

This type of storage and order assembly system can be refrigerated or chilled similar to a cold store. Other applications include keeping goods free from dust or moisture. Organisations who have vertical carousels in their supply chain in clued the Department of Defence, Arnott's biscuits, Brisbane City Council, Toyota and many others.

See example video below.

The procedure to pick an order using a carousel is as follows:

- Customer's order is received into the computer system
- All items have a bin location that is known to the computer
- The computer identifies the first item on the order and rotates the bin in the carousel to in front of the store person
- The next stage is that a display lights up in front of the item to be picked and the quantity to be picked similar to a pick to light system
- The store person picks the quantity of items and hits the cancel button

- The carousel then rotates the products around so that the next item on the customer's order is presented to the store person
- This process repeats itself until all items on the order in the carousel are picked or assembled

At the end of a working day or shift, the vertical carousel can be secured by closing the roller shutter.

Automated Warehouse Operation

Automated warehouses are ones where all processes of order assembly are conducted by computers controlling micro switch release systems and conveyors. Products are removed from the storage locations to the despatch area by sophisticated conveyor systems. In Australia there are several fully automated warehousing systems.

See example from Amazon Warehouse Systems

They are purpose built warehouses, fitted with computerised stacker cranes and high-rise, high-bay pallet racking. Some are used for the receipt, storage and dispatch of full pallet quantities of an item, whereas others are used for single items.

The operation of automated warehouses will largely be dictated by the type of product handled and the computer technology used in the installation. The processes used may vary between organisations, but they will be similar to the following information.

Goods are received by the receiving section and recorded into the computer system. These goods are moved from receiving by either palletised or loose carton conveyor systems.

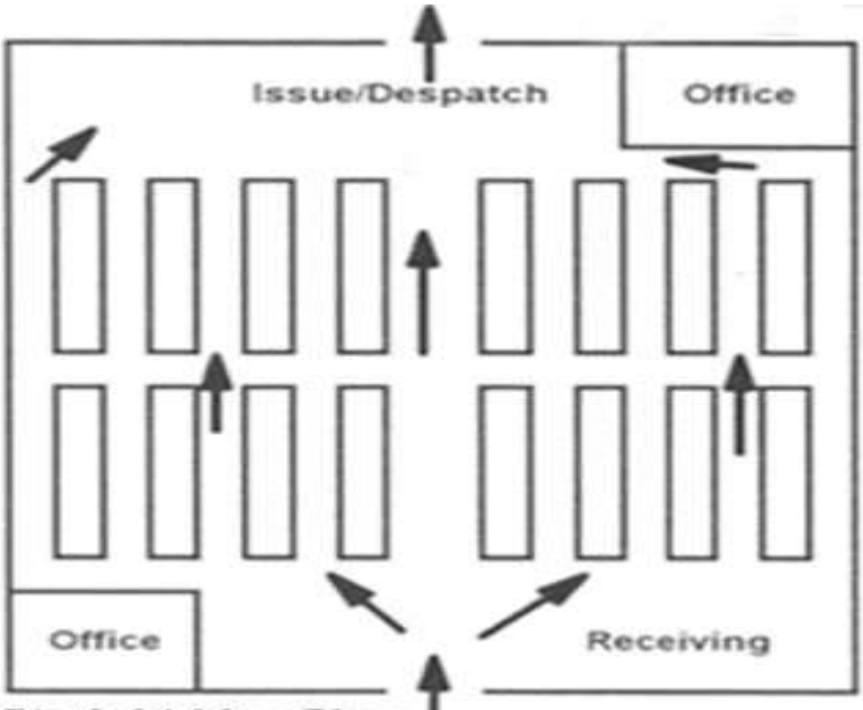
- Pallets are transported by conveyor, and then stored by robotic stacker cranes in the location dictated by the computer system. The use of high rise systems for bulk and reserve storage is quite common in this type of operation. The pallets sit in these locations until they are retrieved by the robotic stacker crane at some future time
- Loose cartons are also transported by conveyors. When they approach their storage location they are pushed off the conveyor by computer controlled arms.

With loose carton operations, the storage racking used is of the gravity flow type which is replenished from the higher back end. The product stored rolls down the slope on the rollers until it stops at the release gate. The orders are picked from the lower front end at the release gate

- When the main computer receives a customer order it processes this into a selection format
- In a full pallet environment, the robotic stacker crane is sent to retrieve the pallet. It does so, and then places it on the outbound conveyor
- In a loose carton environment each gravity flow slot faces a conveyor system which transports product away from the pick modules. At each slot a micro switch activates a gate that will release one carton per impulse
- The computer activates this micro switch to release the nominated number of cartons of that item for the order. This process continues for all items on the customer's order.

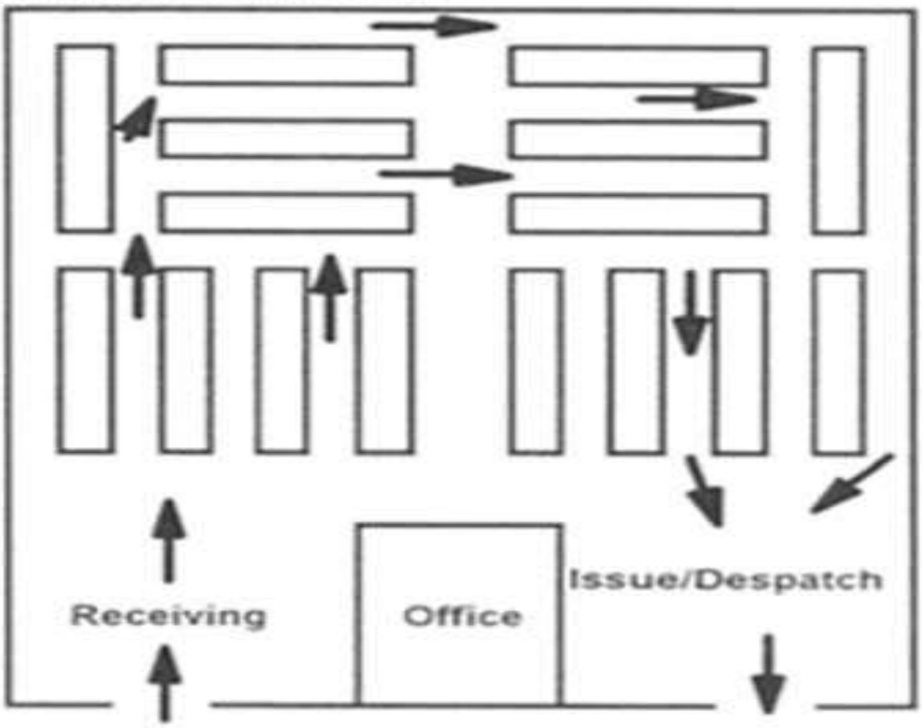
In both of these systems advanced conveyor technology is utilised to transport and idle the products being moved. This ensures that goods from all sections of the warehouse arrive at the packing and despatch location at approximately the same time.

- At the despatch area the computer system checks all cartons using a bar code reader and directs them to nominated dispatch zones or bays. The computer will only allocate correct items to these bays. Any item not recognised will be diverted to a manual checking area
- At the despatch zones the products are either manually palletised or automatically palletised for loading on the dispatch vehicles. It is not necessary to check at this stage for accuracy, as the computer has done this prior to diverting to the zone.



Straight Line Flow

Schematic layout of store with "straight line" flow



Horse Shoe Flow

Schematic layout of store with "U" or "horseshoe" flow

Warehouse Material Flows

Once traffic flow has been suitably managed by site design, the issue of material flow must be addressed. Material flow refers to how the goods are handled by the organization and where they go to once they have arrived on the site.

It also includes what happens to them whilst they are on the site, for example where they are stored, or where they are used in the production line. Finally, material flow considers how and where the goods go to on the site when it is time for them to be released to the customers.

The receiving area is the starting point of the material flow cycle within a warehouse. Consequently, it is desirable to have the receiving section of the warehouse located in a distinctly separate area to the despatch section.

In a perfect world all warehouses would have facilities for a separate receiving and despatch dock or docks. The logic behind this is quite simple, to maintain good customer service it is imperative that goods being received do not get mixed up with goods being despatched.

The flow of material through a warehouse from receiving to despatch is know as the “Material Flow”. Material flow is usually determined by the building design, and the location of its various access doors. There are two basic types of material flow “Straight Line” and Horse Shoe”.

Unloading Dock Facilities

To enable the transfer of goods from the outside of the warehouse to the inside, without using a forklift, civil engineers have developed a number of different types of dock systems. Each dock type is suited to a particular purpose or industry sector.

- Flush Docks
- Enclosed Docks
- Saw Tooth Docks
- Finger Docks
- Depressed Docks
- Ramps

Flush Docks

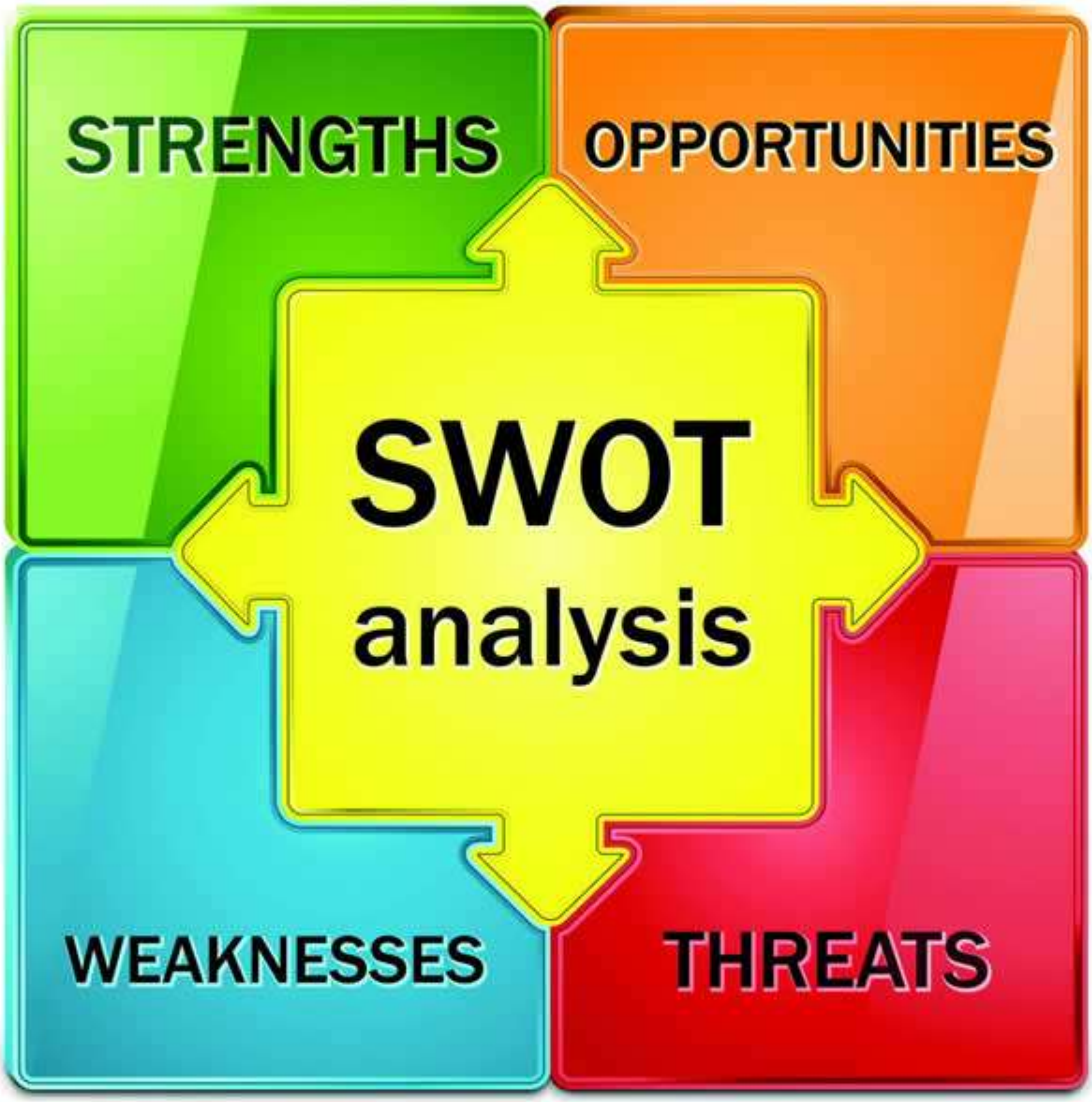
Saw Tooth Docks

Enclosed Docks

SWOR Analysis (Strengths, Weaknesses, Opportunities and Risks (Risks replace Threats)

History of SWOT

SWOT analysis came from the research conducted at Stanford Research Institute between 1960 to1970. The background to SWOT stemmed from the need to find out why corporate planning failed. The research conducted was funded by the fortune 500 companies in America to find out what could be done about reducing these failures.



The Research Team were Marion Dosher, Dr Otis Benepe, Albert Humphrey, Robert Stewart and Birger Lie.

It all began with the corporate planning trend, which seemed to appear first at Du Pont in 1949. By 1960 every Fortune 500 company had a 'corporate planning manager (or equivalent) and 'associations of long range corporate planners' had sprung up in both the USA and the UK.

However a unanimous opinion developed in all of these companies that corporate planning in the shape of long range planning was not working, did not pay off, and was an expensive investment in futility. It was widely held that managing change and setting realistic objectives which carry the conviction of those responsible was difficult and often resulted in questionable compromises.

The fact remained, despite the corporate and long range planners, that the one and only missing link was how to get the management team agreed and committed to a comprehensive set of action programmes.

To create this link, starting in 1960, Robert F Stewart at SRI in Menlo Park California lead a research team to discover what was going wrong with corporate planning, and then to find some sort of solution, or to create a system for enabling management teams agreed and committed to development work, which today we call 'managing change'.

The research carried on from 1960 through 1969. 1100 companies and organizations were interviewed and a 250-item questionnaire was designed and completed by over 5,000 executives. Seven key findings lead to the conclusion that in corporations chief executive should be the chief planner and that his immediate functional directors should be the planning team. Dr Otis Benepe defined the 'Chain of Logic' which became the core of system designed to fix the link for obtaining agreement and commitment. The steps were;

1. Values
2. Appraise
3. Motivation
4. Search
5. Select
6. Programme
7. Act
8. Monitor (repeat steps 1, 2 and 3 as required)

The research's discovered that they could not change the values of the team nor set the objectives for the team so we started as the first step by asking the appraisal question, "what's good and bad about the operation?"

The next steps were to find out what was good and bad about the present and the future.

- What is good in the present is <u>Satisfactory</u> (S)
- What is good in the future is an <u>Opportunity</u> (O)
- What is bad in the present is a <u>Fault</u> (F)
- What is bad in the future is a <u>Threat</u> (T)
- This was originally called the **SOFT** analysis
- It later became the SWOT analysis.

When this was presented to Urick and Orr in 1964 at the seminar in long range planning at the Dolder Grand in Zurich Switzerland they changed the F to a W and called it SWOT Analysis. SWOT was then promoted in Britain by Urick and Orr as an exercise in itself. What was necessary was the sorting of the issues into the programme planning categories of:

- Product (what are we selling?)
- Process (how are we selling it?)

- Customer (to whom are we selling it?)
- Distribution (how does it reach them?)
- Finance (what are the prices, costs and investments?)
- Administration (and how do we manage all this?)

The second step then becomes 'what shall the team do' about the issues in each of these categories. The planning process was then designed through trial and error and resulted finally in a 17 step process beginning with SWOT with each issue recorded separately on a single page called a planning issue.

The first prototype was tested and published in 1966. In 1970 the prototype was brought to the UK, under the sponsorship of W H Smith & Sons plc, and completed by 1973. The process has been used successfully ever since and now the system has been fully developed, and proven to cope with today's problems of setting and agreeing realistic annual objectives without depending on outside consultants or expensive staff resources.

In conclusion, by sorting the SWOT issues into the 6 planning categories, one can obtain a system which presents a practical way of assimilating the internal and external information about the business unit, delineating short and long term priorities, and allowing an easy way to build the management team which can achieve the objectives of profit growth.

Strengths

A firm's strengths are its resources and capabilities that can be used as a basis for developing a competitive advantage. It is an important organisational resource which enhances a company, competitive position. Some of the internal strengths of an organisation are:

- Distinctive competence in key areas
- Manufacturing efficiency like exclusive access to high grade natural resources
- Skilled workforce
- Adequate financial resources
- Superior image and reputation such as strong brand names
- Economies of scale
- Superior technological skills
- Insulation from strong competitive pressures
- Product or service differentiation
- Proprietary technology such as patents and resultant cost advantages from proprietary know-how
- favourable access to distribution networks

Weaknesses

A "weakness" is a condition or a characteristic which puts the company at disadvantage. The absence of certain strengths may be viewed as a weakness. Weaknesses make the organisation vulnerable to competitive pressures. Weaknesses require a close scrutiny because some of them can prove to be fatal.

Some of the weaknesses to be reviewed are:

- No clear strategic direction
- Outdated facilities
- Lack of innovation is Complacency
- Lack of patent protection
- Poor research and developmental programmes
- Lack of management vision, depth and skills
- Inability to raise capital
- Weaker distribution network
- Obsolete technology
- Low employee morale
- Poor track record in implementing strategy
- Too narrow a product line
- Poor market image
- Higher overall unit costs relative to competition
- a weak brand name
- Poor reputation among customers
- High cost structure
- Lack of access to the best natural resources
- Lack of access to key distribution channels

Opportunities

The external environmental analysis may reveal certain new opportunities for profit and growth. An "opportunity" is considered as a favourable circumstance which can be utilised for beneficial purposes. it is offered by outside environment and the management can decide as to how to make the best use of it.

Such an opportunity may be the result of a favourable change in any one or more of the elements that constitute the external environment. It may also be created by a proactive approach by the management in moulding the environment to its own benefit. Some of the opportunities are:

- Strong economy
- Possible new markets and an unfulfilled customer need
- Emerging new technologies
- Complacency among competing organisations

- Vertical or horizontal integration
- Expansion of product line to meet broader range of customer needs
- Removal of international trade barriers
- Loosening of regulations

Threats / Risks

Changes in the external environmental also may present threats to the firm. Management should anticipate such possible threats and prepare its strategies in such a manner that any such threat is neutralised. Some examples of such threats include:

- shifts in consumer tastes away from the firm's products
- emergence of substitute products
- new regulations
- increased trade barriers
- entry of lower cost foreign competitors Cheaper technology adopted by rivals
- Rising sales of substitute products
- Shortages of resources
- Changing buyer needs and preferences
- Recession in economy
- Adverse shifts in trade policies of foreign governments
- Adverse demographic changes

Distribution Plan

The components of Distribution Planning including all activities for the inbound freight or transportation of raw materials, components or finished goods into the distribution facility or warehouse and its various related activities through to the outbound transport or distribution to the customer.

In this environment, the distribution centre should work with all other sections of the organisation. This includes the marketing and sales department, production planning, forecasting and scheduling, transportation, finance, human resources, and general administration sections. Within these functional sections, there are a number of sub-sections.

As part of any well-run organisation, it is necessary that harmony exists and all sections work to meet the strategic objection of the organisation and satisfy the various components of the Distribution Plan. Many organisations in Australia do not have a clear strategy or Strategic Distribution Plan.

This has been that distribution or logistics is only one component of the organisation and it is thought by senior management that sales and marketing should control the whole organisation. As we move into the new millennium it is important to focus on the customer.

The best practiced organisations have customers as the primary focus and the satisfaction of their needs and wants as the first stage in developing a strategic plan. Layered under the Strategic Plan is the Corporate Mission or vision of the organisation. This in some cases is a warm and fuzzy statement where in others it is very precise and includes the levels of customer service or satisfaction which is required to be met as corporate objectives.

Within the distribution plan there are a number of sub-sets to include:

- The distribution facility,
- The mechanical handling equipment,
- Human resources,
- Information technology,
- Budget and financial considerations,
- Government legislation,
- Training and education,
- Customer service.

It will depend on the type of industry and your customer environment as to the various components or requirements of your Strategic Plan. Some of the organisations have vertical integration where they flow from raw material right through to retail outlet and are part of a conglomerate where others only have one component or one section of that distribution cycle.

One of the difficulties faced by management today is gaining an understanding of terms and definitions and clearly what is logistics and what is distribution. For this particular Unit we will accept that logistics covers all components from raw materials through to the customer receiving the finished product.

Distribution is the inbound freight, the warehousing functions and the outbound freight and not all the inter-related activities. Some of the textbooks now refer to logistics as everything to do with transportation and distribution is to do with only warehousing. This will depend on the author and the university from where that person emanates.

Materials management and physical distribution are two other terms which also are bandied around within the marketplace. The Council of Logistics Management in America has logistics as the following definition:

Logistics is the process of planning, implementing, and controlling the efficient, cost-effective flow and storage of materials, in process *inventory, finished goods and related information from* point *of origin to point of consumption for the purpose of conforming to customer's requirements.*

The ideal Distribution Plan can be likened to a pipeline where it was recognised that products that are defect free perform to requirements and meet the customer's expectation being delivered in a timely manner is probably the best. Unfortunately, with pipelines there are a number of variables in this philosophy which doesn't always allow it to happen.

Financial Plan

Sound financial management is one of the best ways for your business to remain profitable and solvent. How well you manage the finances of your business is the cornerstone of every successful business venture. Each year thousands of potentially successful businesses fail because of poor financial management. As a business owner, you will need to identify and implement policies that will lead to and ensure that you will meet your financial obligations.

To effectively manage your finances, plan a sound, realistic budget by determining the actual amount of money needed to open your business (start-up costs) and the amount needed to keep it open (operating costs). The first step to building a sound financial plan is to devise a start-up budget. Your start-up budget will usually include such one-time-only costs as major equipment, utility security deposits, down payments, rental bonds, etc.

Start-up Budget

The start-up budget should allow for these expenses:

- Personnel (costs prior to opening)
- Legal/ professional fees
- Rental Bond
- Licenses/ permits
- Equipment
- Insurance
- Supplies
- Advertising/ promotions
- Salaries/ wages
- Accounting
- Income
- Utilities
- Payroll expenses

An operating budget is prepared when you are actually ready to open for business. The operating budget will reflect your priorities in terms of how you spend your money, the expenses you will incur and how you will meet those expenses (income). Your operating budget also should include money to cover the first three to six months of operation. It should allow for the following expenses.

Operating Budget

- Personnel
- Insurance
- Rent
- Depreciation
- Loan payments
- Advertising/promotions
- Legal/accounting
- Miscellaneous expenses
- Supplies
- Payroll expenses
- Salaries/wages
- Utilities
- Dues/subscriptions/fees
- Taxes (GST, PAYG, FBT, etc.)
- Superannuation
- Repairs/maintenance

The financial section of your business plan should include any loan applications you have filed, a capital equipment and supply list, balance sheet, breakeven analysis, pro-forma income projections (profit and loss statement) and pro-forma cash flow. The income statement and cash flow projections should include a three-year summary, detail by month for the first year, and detail by quarter for the second and third years.

The accounting system and the stock control system that you will be using are generally addressed in this section of the business plan also. If a franchise, the franchisor may stipulate in the franchise contract the type of accounting and stock systems you are required to use. Your financial adviser can assist you in developing this section of your business plan.

The following questions should help you determine the amount of start-up capital you will need to purchase and open a business:

- How much money do you have?
- How much money will you need to purchase the entity?
- How much money will you need for start-up?
- How much money will you need to stay in business?

Other questions that you will need to consider are:

- What type of accounting system will you use?
- What will your sales goals and profit goals for the coming year be?
- What financial projections will you need to include in your business plan?
- What kind of stock control system will you use?

Your business plan should include an explanation of all projections. Unless you are thoroughly familiar with financial statements. get help in preparing cash flow and income statements and a balance sheet. Your aim is not to become a financial wizard. but to understand the financial tools well enough to gain benefits. Your accountant or financial adviser can help you accomplish this goal.

Income Protection Statement

The next part of developing a business plan is to project the income and expenditure. This is where estimations of income and expenditure must be carefully considered and planned. The figures must be realistic and achievable based on either research or past history. New businesses often over estimate their income and don't achieve the plan. On the expenditure side the costs are often underestimated.

	Industry (%)	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Total	Annual (%)
Total Net Sales (Revenues)															
Cost of Sales															
Gross Profit															
Gross Profit Margin															
Variable Expenses															
Salaries/Wages															
Payroll Expenses															
Legal/Accounting															
Advertising															
Motor Vehicles															
Supplies															
Subscriptions															
Repairs & Maintenance															
Outside Service															
Miscellaneous															
Total Variable Expenses															
Fixed Expenses															
Rent															
Depreciation															
Utilities															
Insurance															
Licence/Permits															
Loan Repayments															
Miscellaneous															
Total Fixed Expenses															
Total Expenses															
Net Profit/Loss Before Taxes															
Taxes 38%															
Net Profit/Loss After Taxes															

Supporting information on Income Projections

The income projections (profit and loss) statement is valuable as both a planning tool and a key management tool to help control business operations. It enables the owner/manager to develop a preview of the amount of income generated each month and for the business year, based on reasonable predictions of monthly levels of sales, costs and expenses.

As monthly projections are developed and entered into the income projections statement, they can serve as definite goals for controlling the business operation. As actual operating results become known each month, they should be recorded for comparison with the monthly projections. A completed income statement allows the owner/manager to compare actual figures with monthly projections and to take steps to correct any problems.

Industry Percentage

In the industry percentage column, enter the percentages total sales (revenues) that are standard for your industry, which are derived by dividing

$$\frac{\text{Costs/expenses items x 100\%}}{\text{Total net sales}}$$

These percentages can be obtained from various sources, such as trade associations, accountants or banks.

Industry figures serve as a useful benchmark against which to compare cost and expense estimates that you develop for your firm. Compare the figures in the industry percentage column to those in the annual percentage column.

Total Net Sales (Revenues)

Determine the total number of units of products or services you realistically expect to sell each month in each department at the prices you expect to get. Use this step to create the projections to review your pricing practices.

What returns, allowances and markdowns can be expected?
Exclude any revenue that is not strictly related to the business

Cost of Sales

The key to calculating your costs of sales is that you do not overlook any costs that you have incurred. Calculate cost of sales of all products and services used to determine total net sales. Where stock is involved, do not overlook freight costs. Also include any direct labour.

Gross Profit

Subtract the total cost of sales from the total net sales to obtain gross profit.

Gross Profit Margin

The gross profit is expressed as a percentage of total sales (revenues). It is calculated by dividing

$$\frac{\textbf{Gross profits}}{\textbf{Total net sales.}}$$

Variable Expense

Salary/Wages	Base pay plus overtime
Payroll Expenses	Include paid holidays, sick leave, Superannuation
Legal/Accounting	Outside professional services.
Advertising	Include desired sales volume and classified directory advertising expenses.
Motor Vehicles	Include charges if personal car is used in business, including parking, tools, buying trips, etc.
Supplies	Services and items purchased for use in the business.
Repairs& maintenance	Regular maintenance and repair, including periodic large expenditures such as painting.
Outside service	Include costs of subcontracts, overflow work and special or one-time services.

Fixed Expenses

Rent	List only real estate used in business.
Depreciation	Amortisation of capital assets.
Utilities	Water, Electricity and Gas
Insurance	Fire or liability on property or products. Include worker's compensation.
Licence/Permits	Any licences or permit fees required to establish or run the business.
Loan repayments	Interest on outstanding loans.
Miscellaneous	Unspecified: small expenditures without separate accounts.

Net Profit (loss) (before taxes)	Subtract total expenses from gross profit.

Taxes	
Net Profit (loss) (after taxes)	Subtract taxes from net profit (before taxes)
Annual Total	For each of the sales and expense items in your income projection statement, add all the monthly figures across the table and put the result in the annual total column.
Annual Percentage	Calculate the annual percentage by dividing *Annual total x 100%* Total net sales. Compare this figure to the industry percentage in the first column.

Transport Plan

In 2001-02, Australia's domestic freight task totalled 2.3 billion tonnes. Rail carried 25% of this tonnage as compared to 73% by road transport and 2% by sea. As part of developing a distribution plan you must consider the various transportation modes and the ones that best suit your distribution channel and customer requirement.

The National Transport Policy Framework (February 2008), prepared by the National Transport Commission (NTC) for the Federal Transport Minister, highlighted that supply chain performance, bottlenecks and capacity constraints are the key challenges for the Australian transport system.

Australian Transport Council (ATC) Ministers agreed that their goal is to deliver a seamless national marketplace to allow better signals for the efficient, productive, safe, sustainable and timely provision and use of transportation infrastructure and services. With the freight task predicted to double over the period from 2005 to 2020, it is critical to national competitiveness and to governments' broader policy objectives to have good intelligence and analysis of future demand for transport infrastructure and services, and to promote efficiency and best practice solutions across the sector.

There has been a consolidation of transport operators in Australia over the last few years and the economic downturn. The large transport companies of the 1980 have almost gone in one way or another. Brambles, Mayne Nickless and TNT were the big three companies covering all transport modes.

Today the major operators are Toll. Linfox, K&S, Lindsay Transport, Northline, Finemore, Pearson and GSF. Australia Post logistics is another major transport company that competes for freight against the other operators. The current major operators have services in road, rail, sea and air either directly or in conjunction with partners.

The Transport Modes in Australia

- Road
- Rail
- Sea
- Air
- Post
- Intermodal (mixes of all modes)

Advantages of Road Transport

- For short journeys, road transport is the fastest
- Advanced security as the driver is in "direct control"

- Marginal costing/pricing for return loads
- Physical handling is reduced on full vehicle loads because of the need to load and unload once
- Transportation can be done 24 hours 7 days a week
- The flexibility of road transport allows changes to be made relatively easily
- Image and PR possibilities from the vehicle are noticed by other road users and the public

Disadvantages of Road transport

- The speed and reliability of deliveries can be slowed down considerably because of traffic congestion
- Large trucks cannot use narrow access places
- Low bridges can often cause diversions
- Environmental damage to old buildings
- Pollution levels from diesel engines
- Image problems when "things go wrong" in view of other road users.

Advantages of Rail Transport

- Rail transport is usually used on national freight transport for longer distance journeys. The maximum general freight rail wagon carries 63 tonnes, 129 cubic meters
- Speed over longer distances
- More energy efficient than road transport
- Lower air pollution than from road transport
- Large tonnage consignments can be handled very easily
- More environmentally friendly than road transport

Disadvantages of Rail Transport

- There may be a long distance between the collection and delivery points and the rail freight terminal; it may be very inconvenient to bring the goods to it
- Trains operate only at specific times
- Not every town is serviced by rail so the train will only bring the goods to the nearest town
- It is expensive for short journeys
- Quality and capacity of the rail infrastructure.

Advantages of Sea Transport

- Reliable transit between terminals with regular frequent timetabled service frequencies between all major trading countries
- Suitable for transporting bulky goods
- Cheaper per tome or cubic metre
- The main mode used for companies who trade globally

Disadvantages of Sea Transport

- Insurance costs for transporting by sea are higher that fro air transport, as the goods spend longer in transit
- More packing is needed than when using other modes
- Slow form of transport (although potential developments of "fast ship" 1400 TEU vessels using gas turbines/water jet propulsion could mean having the transport times of current more conventionally powered and designed vessels)

Advantages of Air Transport

- Air transport is very reliable
- It is the speediest form of transport available (between airport terminals)
- Can be used where surface transport is not viable or easily possible for example, helicopters flying over jungles, high mountain ranges etc.
- Low security risk (between airport terminals) and reduced risk of less packaging is required.

Disadvantages of Air Transport

- It is the most expensive method of transport on a cost per mile basis, especially in comparison with the road and rail costs
- Aircraft may be delayed/diverted because of weather conditions preventing landing/take-offs. This mode is the most susceptible to weather delays
- There are limits to the amount of heavy and large freight that a plane can carry
- It is necessary to transport the goods from the factory to the airport and this increases the transport costs, especially if the factory is a long distance from the airport
- Ground handling at the airports can be slow
- Ground security pilferage risks as air freight handled high-value cargo

Advantages of Intermodal Transport

- On long journeys, lower costs can be found by combining modes
- Potentially can be faster than using just one mode, for example, by using road/sea/air combinations instead of just sea
- Reduces road congestion, for example, when rail combinations are used
- Lower environmental effects than when just using road transport

Disadvantages of Intermodal Transport

- Not widely available for many applications/trades
- Needs specialised equipment e.g. trailers
- Non-coordinated information/transfers between modes/different operator's involved
- Needs specialised terminals for the interchange to take place between modes
- Road legs are still needed for the start and destination journeys

The cost of transport is a component of the budget and must be accounted for in daily operations. If the wrong transport mode is used the cost to distribute goods is higher than planned. If the transport mode is cost effective but too slow to reach the customer on time, service levels and customer loyalty will fade.

With the recent high cost of oil globally freight rates increase by up to 17%. In some instances where the customer paid the freight on the goods, this additional costs was the difference between buying interstate versus buying locally.

Staffing Plan

Managers are faced with a bewildering number of tasks which they have to prioritise when running transport logistics operations. Prioritisation needs to be made about all manner of things. Deciding who is responsible for a task will be detailed in position descriptions and organisation charts. All large companies should have a detailed organisation chart listing positions, lines or reporting, functional areas and geographic areas of work.

Managing a business requires more than just the desire to be a boss. It demands dedication, persistence and the ability to make decisions and manage both employees and finances together. Your management plan along with your marketing and financial management plans sets the foundation for and facilitates the success of your business.

Like plant and equipment. people are resources, they are the most valuable assets a business has to work with each day. You will soon discover that employees and staff will play an important role in the total operation of a business. Consequently. it's imperative that you know what skills you possess and those you lack since you will have to hire personnel to supply the skills that you lack.

Additionally, it is imperative that you know how to manage and treat your employees. Make them a part of the team, keep them informed of market directions and get their feedback regarding and changes that are planned or may be implemented.

Employees often have excellent ideas that can lead to new market areas, innovations to existing products or services or new product lines or services that can improve your overall competitiveness and market share. They may also have ways to reduce operating costs by changing a process.

Woolworths and Coles have over 100,000 employees each in Australia working in multiple divisions of the business and in many different geographic locations. The organisation chart of the business allows a new employee the opportunity to see a career pathway in the organisation to reach senior management. It also allows opportunities to relocate to other States or divisions in the company.

How Many Staff is Needed?

To calculate the number of staff required the business plan must have some idea of the amount of work that can be done by a person or value of sales that is achievable. Benchmarks or KPI's is one measure of how much work can be done within a timeframe. Many large companies use engineered standards to set production targets.

If you have too many staff the labour costs as a percentage of sales is too high. If you do not have enough staff, the existing staff may be overworked or the overtime bill increases which affects the budget. Too much work often results in high staff turnover and absenteeism.

Most transport logistics companies have guidelines on which tasks are priorities over others. However in the dynamic environment of transport logistics, in which things change almost hourly, you must often exercise your own judgement, which may require you to go outside these guidelines in order for you to meet your operational requirements.

Activity – Total company organisation chart

Draft an organisation chart from the General Manager or owner of the business to include all operational area within the business. The size of the business for this activity is 35 staff or more and includes operational section such as sales, marketing, computing, warehousing, administration, transport, security, manufacturing (if applicable), purchasing, stock management, and other section you feel required.

Activity – Distribution section organisation chart

Draft an organisation chart to cover all activities and sections for the distribution section to include the transport and warehousing section of the company. Functional areas are to include receiving, order assembly, quality control, packaging, despatch, transportation, supervision, safety and plant operation. Your chart must include the types of positions and number of persons performing tasks.

Factors to consider when planning staff roles include:

- the needs of customers
- the needs of other partners involved in the transport logistics process
- the logical order in which processes take place
- requirements of government bodies, such as customs & quarantine services
- the administration that has to be completed
- OHS requirements

- Lead times for particular steps in the process
- seasonal demand variations
- high and low sales volume periods

You may wish to delegate some tasks to team leaders, line managers and supervisors.

Benchmarking

Benchmarks are an important tool that organisations can use to measure their performance. 'Best practice' is another term for benchmarks. Measures are established for key indicators of effectiveness of operations. These can include:

- timeliness of progression through each work process
- inventory carried
- accident-free days
- days without breaks in the cold chain
- units transported
- on-time delivery performance.

'*Freight Logistics in Australia: an Agenda for Action* ', a report by the Australian Logistics Council (2005), lists five ways in which organisations can benchmark their processes:

- By comparing internal operations, for example in another section or department
- By comparing itself with its competitors
- By comparing itself with non-competitor firms
- By seeking third party help, such as a consulting firm
- By comparing itself with publicly available data

Of course, organisations can also compare internal operations within departments based on historical records from previous years.

Whatever benchmark is being used for comparison, it is crucial that operational performance versus benchmarks and any subsequent variations are documented. Most organisations require their managers to produce regular reports comparing operational performance versus established benchmarks and present this to senior management at least monthly.

Having documentation allows the organisation to establish historical records and facilitates the communication of information to all relevant parties quickly and efficiently.

The new IT systems are an ideal way of measuring and recording variances in the achievement of benchmarks. If your organisation does not have a software system, it will be necessary to record benchmarks manually on paper.

Analysing the performance of operations, workflow and productivity against benchmarks provides an ideal opportunity to pinpoint where operations are performing both well and unsatisfactory.

Before deciding whether a workflow variation is of significant concern to require intervention, you should consider all the factors previously discussed which may be causing the variation such as seasonality, high or low volume period or zone output.

Other considerations include the financial cost of the variation and how it impacts on your company's strategic and operational objectives. Once unsatisfactory, performance is identified, as a manager you are responsible for investigating why the variation is occurring and what action is necessary to improve operations.

Benchmarking is also used to measure the performance of suppliers, external transport logistics providers or sub contracted transport logistics providers. Meeting minimum benchmarking standards is generally required before funds are released and almost certainly form part of the contract between transport logistics companies.

Marketing Plan

Marketing plays a vital role in successful business ventures. How well you market your business, along with a few other considerations, will ultimately determine your degree of success or failure. The key element of a successful marketing plan is to know your customers likes, dislikes and expectations.

By identifying these factors, you can develop a marketing strategy that will allow you to arouse and fulfill their needs.

Identify your customers by their age, sex, income, educational level and residence and determine what product they buy and if you company is able to supply those products at a competitive price and place. As your customer base expands, you may need to consider modifying the marketing plan to include other customers or products.

Your marketing plan should be included in your business plan and contain answers to the questions outlined below:

- Who are your customers? Define your target market {s}.
- Are your markets growing? Steady? Declining?
- Is your market share growing? Steady? Declining?
- If a franchise, how is your market segmented?
- Are your markets large enough to expand?
- How will you attract, hold, increase your market share?
- What pricing strategy have you devised?

Competition

Nations compete for the consumer in the global marketplace as do individual business owners. Advances in technology can send the profit margins of a successful business into a tailspin causing them to plummet overnight or within a few hours.

When considering these and other factors, we can conclude that business is a highly competitive, volatile arena. Because of this volatility and competitiveness, it is important to know your competitors.

Questions like these can help you:

- Who are your five nearest direct competitors?
- Who are your indirect competitors?
- How are their businesses: steady? Increasing? Decreasing?
- What have you learned from their operations? From their advertising?
- What are their strengths and weaknesses?
- How do their products or services differ from yours?

Start a database on each of your competitors. Keep copies of their advertising and promotional materials and their pricing strategy techniques. Review these files periodically, determining when and how often they advertise, sponsor promotions and offer sales. Study the copy used in their advertising and promotional materials, and determine their sales strategy.

For example, is their copy in their advertisements short, descriptive or catchy? How often do they reduce prices for monthly or promotional sales? Using this technique can help you to understand your competitors better and how they operate their businesses.

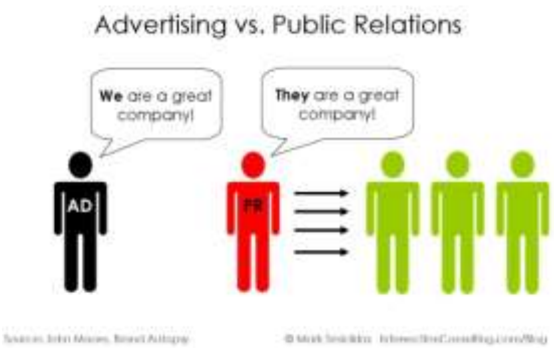
Pricing and Sales

Your pricing strategy is another marketing technique you can use to improve your overall competitiveness. Get a feel for the pricing strategy your competitors are using. That way you can determine if your prices are in line with competitors in your market area and if they are in line with industry averages. Some of the pricing strategies are:

- Competitive position
- Pricing below competition
- Pricing above competition
- Service costs and pricing
- Cost plus a fixed percentage for service businesses

Where GST is applied, purchasing supplies from their source, or as close to the source as possible, will shorten the supply chain, reduce the number of times the GST is applied and marginally reduce the cost of supply. This strategy may provide your business with a competitive edge.

The key to success is to have a well-planned strategy, to establish your policies and to constantly monitor prices and operating costs to ensure profits. Even in a franchise where the franchisor provides operational procedures and materials, it is a good policy to keep abreast of the changes in the marketplace because these changes can affect your competitiveness and profit margins.



Advertising and Public Relations

How you advertise and promote your goods and services may make or break your business. Having a good product or service and not advertising and promoting it is like not having a business at all. Many business owners operate under the mistaken concept that the business will promote itself, and channel money that should be used for advertising and promotions to other areas of the business.

Advertising and promotions, however are the lifeline of a business and should be treated as such. Devise a plan that uses advertising and networking as a means to promote your business.

Use catchy phrases to arouse the interest of your readers, listeners or viewers. In the case of a franchise, the franchisor will provide advertising and promotional materials that you and your staff develop. Whether or not this is the case, as a courtesy, allow the franchisor the opportunity to review, comment on and, if required, approve these materials before using them. Make sure the advertisements you create are consistent with the image the franchisor is trying to project. Remember the more care and attention you devote to your marketing program, the more successful your business will be.

Review the Distribution Plan as Needed

As we live in times of change you must always review your distribution plan to ensure that the market-place has not moved, competition increased within your market segment or the types or services offered are outdated. Diets change which may result in a change in the types of food being sold and provided by the catering industry.

Medical procedures change as new technology and surgical practices evolve. All markets change in some way each day. Financial downturns can make a business fail if the financial planning component of the financial plan is not well prepared and every contingency planned for in some way or another.

To ensure that business remains viable, all activities, section and processes within the business should be analysed and reviewed. Often planning sessions are done away from the workplace in resorts over a number of consecutive days to ensure that everyone remains focused. The use of a professional consultant may be necessary for large companies so that one or two persons do not dominate the session. Group think is something that must be avoided in all planning sessions.

If your organisation has not reviewed its distribution plan in the last year, maybe it is time to do it.

Introduction TLIP5004

In this unit the following areas will be covered:

1. **Plan budget requirements**
2. **Monitor budget and take corrective action**
3. **Monitor expenditure**
4. **Review and modify budget**

Plan Budget Requirements

What Is a Budget?

A budget is a financial plan of action for an organisation that enables it to coordinate and control its financial activities.

At its most basic, a budget is a plan, expressed in dollars, of all expected expenses (expenditure) and revenues (income) over a specific period of time such as a month or a year

Definition – A budget specifies the financial aspects of achieving an organisation's objectives.

Why Have a Budget?

Every well-managed organisation has objectives that are documented and well-known to employees. To achieve these objectives, the organisation needs workable plans that specify the actions that need to be taken. If these plans are to be achieved, then there must be the financial resources to support the plan. The budget is a specification of these financial resources.

Although a budget looks into the future, it is neither a forecast nor a prediction. It is not a statement of what **might** happen, but what **will** happen – where the organisation's money will go, and where it will come from. It is not a guess, but a considered and noble estimate of what the organisation collectively intends to achieve.

Who Budgets?

This subject does not consider personal or family budgets although very important, but the budgets of large organisations such as publicly listed companies, private-sector businesses, sole traders, public sector departments and agencies in government and community-based organisations. Although large national organisations have a single budget, these commonly are aggregated budgets of various smaller business units, departments or sections within the organisation.

The smallest unit of an organisation that has responsibility for a particular group of activities will usually prepare a budget. This subject addresses budgets at this level.
For budgeting purposes, many organisations use the idea of 'area of responsibility centres'. These might be:

- cost centres (that report costs only)

- revenue centres (that report only revenues)
- profit centres, that report revenues, expenses and net income or net loss
- investment centres that report revenues, expenses, income or loss, and the investment used by the centre or functional area

What Is in A Budget?

A budget sets out various types of income such as sales or internal charges and expenditure such as wages, transport and printing, rather than every single item. In summary, each budget item is the addition or total of all related single items that will cost or earn the functional unit income or money.

Depending on the activities of the responsibility centre for which the budget is developed, it might deal mainly or only with income or expenditure.

A budget should use units of measurement that are easily understood by workers and relate directly to their work such as distance travelled or total tonnage of freight moved within a period.

A budget will also usually include notes about the assumptions that have been made to arrive at the budgeted dollar amount against every item. These budget notes might include:

- specifications such as number of transactions or operations, carton quantities, weights, transport methods, units of production, damage, repairs to plant, staff work hours or equipment requirements
- projected rates of growth or shrinkage in the organisation
- projected inflation where this is a issue
- particular objectives or priorities that govern the assumptions made

Why Are Budgets Needed?

Budgets are an organisation’s best way of ensuring that staff, Managers of business units, suppliers of goods and services and others all work together to meet the organisation’s financial or budgeted objectives.

At their most fundamental objective they are to ensure that income for the budget period is greater than expenditure.

The budget helps achieve this by helping with the following management functions.

Forecasting

A sound budget is based on reliable forecasts or projection of the future. The budgeting process requires a manager to systematically consider the future, identify and take into account current business trends (and the consequences of those trends) when preparing their forecast plans. Managers need to predict the business, economic and even social conditions that will affect trading, and therefore the profitability and ultimately viability of the business. Managers must also factor in any efficiencies or productivity improvements that they forecast or are due to implement during the period.

Planning

A budget is the concrete plan of action that gives senior managers the confidence that objectives will be met and that the organisation will be profitable. It provides solid figures for plans, which would otherwise be based on gut feel, guesswork or instinct.

A budget compels Managers to think ahead. Without a good plan, whether or not objectives are achieved is more luck than good management. A budget anticipates future requirements early enough to address them, before the requirement is on top of the organisation. For example, if you anticipate increased sales due to an economic upturn or a competitor's supply problems, you need to do something about organising salespeople, administrators and supply chains right now, well before customers come knocking on the door.

The budget development process also enables managers to assess and compare alternative courses of action.

Motivating

The provision of detailed financial and statistical information to middle managers, team leaders and other workers is a fairly recent development for most organisations. This is often referred to top down or bottom up management methods. Most now provide to lower levels of staff because operational managers need to use it to encourage, monitor and assess performance if they are to be fully responsible for the performance of the people they manage. This also makes all workers more aware of the organisations aims and goals and is likely to motive others to achieve them.

Communicating

A budget is a manager's way of communicating to relevant people inside and outside the organisation its requirements and the resources it needs to achieve its objectives. It is your way of communicating expectations (such as a salesperson's targets), who is responsible for their performance expected from all parties. The budget process provides the means for relevant people to be involved in planning, and to know what performance is expected of them. The organisation might also use the budget to communicate its objectives and strengths more broadly (such as to potential investors, financiers and the media).

Coordinating

If the organisation is to achieve its objectives, the activities and resources of many people inside and outside the organisation must be coordinated. The budget provides the means to coordinate this diverse range of people, by indicating what human and physical resources are needed and available.

A budget is more than an expression of how much an organisation and its various responsibility centres will earn and spend. A budget based on the organisation's objectives is a quantitative expression of the organisation's planning. Without it, the organisation and its units would have no clear direction and would muddle along from month to month.

The budget is also a statement of how the various parts of the organisation will work together to achieve overall objectives. As such, it focuses managers at all levels on the need to actively participate in setting the organisation's direction, and to work together to dovetail their plans to meet the requirements and limitations of other departments and units. This also makes individual managers more aware of the problems and issues of other managers

Controlling

The budget is the main way of exercising control over operations and of enabling managers to monitor progress towards the organisation's objectives.

Too much expenditure or too little revenue means that your responsibility centre is failing to achieve its plan, which might put the organisation's objectives and even its sustainability at risk.

Managers use budgets to measure individual and unit performance, identify variations that show shortfalls in performance, identify the reasons for variances and take the necessary corrective action. Variances also give early warning of problems (such as poor sales figures) which can be addressed before they become serious. Variances over or below budget can also highlight areas of efficiency or inefficiency.

Characteristics of Good Budgets

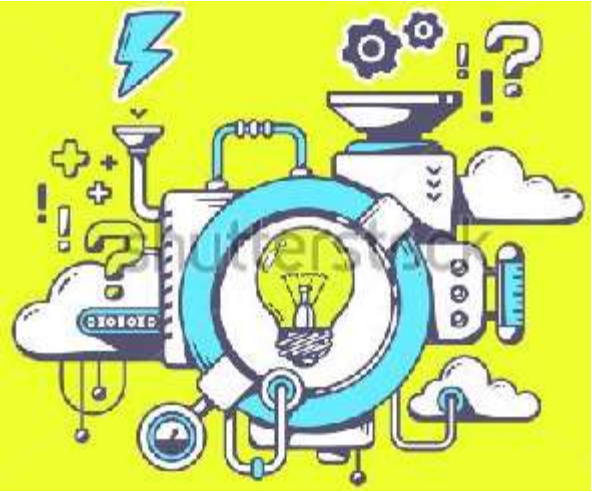
If the benefits of budgeting are to be realised, budgets must have the following characteristics.

Clearly Defined Boundaries

Each responsibility centre within an organisation should have its own separate operational budget, and should monitor its implementation of the budget and any variances.

Reflect Organisational Objectives

While the budget should cover the activities of the unit, it should be based on organisational rather than unit objectives. In many cases, the two might not align. For example, an organisation may set an objective to cut costs by 3% but each unit may want to grow or spend more. While it is only human nature for each unit manager to try to protect their turf, organisational objectives must be paramount in the development of each unit's budget.



Equally, all organisation budgets need to be coordinated, such as production with sales and supply with production etc. Otherwise, there will be chaos.

Based on Accurate, Relevant and Timely Information

Your budget needs to be based on information that is accurate, relevant and timely. If it is inaccurate, your budget will have errors which may lead to major financial problems for the organisation. If information is too old, it may be incorrect or only partially correct. Nor should it be too detailed – unless you disregard irrelevant information, you run the risk of being swamped with information and might not be able to see the big picture.

If your forecasts are inaccurate, the budget will be based on incorrect assumptions and will therefore be wrong.

Useful

The budget should provide a clear guide for day-to-day decisions. It should be understandable and use relevant and easily-measurable units such as items of equipment, tonnes, items of freight, or hours of staff time.

Based on Consultation

Staff who will be responsible for implementing the budget should be involved in developing it. If they are not, where will the practical, on-the-ground information be needed for an accurate budget come from?

Also, their involvement creates buy-in – staff and is more likely to accept budget targets, and be motivated to achieve them if they are involved in setting the targets.

On the other hand, unit managers cannot fairly be held accountable for performance when they have played no part in the budgeting process.

Achievable

A budget should be realistic and attainable. Unrealistic targets mean that hard work is not recognised and rewarded, staff loses motivation and the whole budget loses credibility.

For example, if the sales budget is too high, sales representatives will resent being expected to do the impossible, which will cause morale problems and possibly resignations.

Revenue budgets should be based on realistic, rather than pessimistic or overoptimistic, forecasts

Bottom-up' Budgeting

The best budget processes start from the 'bottom-up'. Managers of responsibility centres first prepare operational budgets in consultation with their workers and submit them to senior managers who return them (if necessary) for amendment.

Comprehensive

A budget should cover the whole organisation, and should detail every item of expected revenue and expenditure. Bad forecasts and forgotten items are the two main reasons why budgets are not met.

Basic Accounting Principles

You cannot hope to really understand budgets and budgeting without an understanding of some basic accounting principles.

Fixed and Variable Expenses

The difference between fixed and variable expenses is a key accounting concept.

Variable expenses are those expenses that vary in proportion to the amount of production or sales. Some examples are raw materials, salesperson's commissions, royalties and fuel to deliver goods. For example, the organisation's fuel expense varies according to the number of deliveries that are made for customers – the more deliveries, the higher the fuel bill.

Fixed expenses do not vary in the short-term, or with fluctuations in sales. They include rent, insurance and administrative salaries. For example, the amount of rent the organisation pays is fixed whether it has 50 or 500 customers in a particular month.

In other words, fixed expenses do not change in the short term as sales go up or down. They might, however, vary in the long term, as you achieve economies of scale or need to downsize). On the other hand, fixed expenses as a dollar amount for each item sold increase if fewer items are sold, and fall the more sales are made.

Expenses can also be classified as semi-variable, containing elements of both fixed and variable expenses. For example, the cost of a salesperson per sale is the sum of both the salesperson's commission on that sale as well as a percentage of their base cost.

Cash versus Accrual Accounting

The accrual method of accounting records income and expenses according to the time periods to which they apply, rather than to the time in which monies were received or paid. For example, cash accounting records an invoice payable by a customer at the time they pay the invoice. Accrual accounting records the invoice at the time your organisation issues it.

Types of Budgets

Strategic and Long-Range Plans

The most forward-looking budget is a strategic plan that sets the overall goals and objectives of the organisation.

A strategic plan sets general and long-term directions for the organisation, and can include long-range financial forecasts for up to ten years.

Master Budget

In the last section, we saw that the practice of budgeting is a bottom-up process whereby individual units develop their own budgets as a contribution toward the whole organisation's budget, which is built up brick-by-brick. However, a responsibility centre usually does not prepare just one budget but a number of budgets. All these budgets are then combined into one, organisation-wide 'master budget' that covers all the planned activities of all the organisation's business units.

The particular budgets prepared by each responsibility centre vary, but most commonly include sales, production, distribution and staff budgets. Budgets are prepared in line with organisation-wide policies (such as, 'each unit will cut expenditure by 2% this year') and may also draw on economic or other types of forecasts prepared for the whole organisation.

The master budget brings all these budgets together, recognising that all budgets are interdependent and that changes to one budget will affect some or all of the other budgets. For example, if sales targets are not achieved, then distribution and some staff costs may fall.

The master budget goes by different names and, among other names, may be called a budgeted statement of revenue and expenses. Whatever it is called, it provides an overarching picture of the expected financial results for the organisation, to indicate whether operations are sustainable within the budget period.

Static and Flexible Budgets

The master budget is what is known as a 'static budget'. It assumes a fixed level of activity or output by each of the organisation's responsibility centres. All actual results are compared with the original budgeted amounts, even if sales volume is less than originally planned.

By contrast, a flexible budget is a budget that uses standard costs and adjusts line items according to changes in sales volume or other indicators of activity. This provides a more accurate measure of total costs and enables the budget to be monitored more closely.

Spreadsheet programs are a good way of preparing flexible budgets. Once a budget template is created, the same format and formulae can be used over and over again, by simply updating the required information. A set of flexible budget worksheets can be combined, and linked together, so beginning and ending amounts automatically flow from one month to the next.

Operating and Finance Budgets

Master budgets usually aggregate the various budgets of responsibility centres into either operating budgets or finance budgets.

Operating Budgets

Operating, or operational, budgets cover every day operating activities – activities that gather or consume scarce resources.

Put simply, the purpose of these budgets is to ensure that the organisation does not spend more providing a service or product than it collects in revenue from customers and other sources.

A very small organisation might have a master operating budget for total income and total expenditure, and no other budget. In a larger organisation, line managers use operating budgets to guide the activities of their unit.

At the highest level, the operating budget will take account of:

- the cost of direct inputs into the goods or services sold
- the prices at which goods or services are sold
- the level of business activity (the volume of sales)
- the operating expenses of sales, administration, distribution and finance
- the amount of profit required to provide the organisation with a targeted return on investment
- the cost of purchasing, maintaining and depreciating capital assets (such as plant and equipment, land and buildings)
- the organisation's cash flow

Below are some common types of operating budgets.

Sales Budget

The sales, or revenue, budget records all sources of revenue resulting from everyday operations and commonly drives the other budgets.

It is based on the number of units of different types of products and services the organisation expects to sell, and the various selling prices.

The calculation of sales budgets varies widely. Some might be calculated on the basis of cash collected, or by credit sales approved, or by invoice issued, or by a combination of these. And there are many combinations of each. For example, cash collections might include the current month's cash sales plus the previous month's credit sales.

This budget might also detail other revenues, such as consulting and fee-for-service revenue, rebates, subsides and government grants.

Preparation of this budget might involve detailed research of, and discussions with key customers as well as analysis of past sales.

Cost of Sales / Resources / Purchases Budget

This budget records the cost of resources directly consumed in everyday operations that result in sales.

The types of resources that are directly consumed in the production of goods or services for sale varies widely between industry sectors. For example, a manufacturing organisation's major expenses are cost of raw materials, factory overheads and manufacturing equipment. In a manufacturing organisation, this is commonly called a production budget and might include a materials purchase budget.

Most transport and distribution organisations will have few or none of these expenses. Their main costs of sales might instead be sub-contractor's expenses, storage fees and clerical and administrative salaries.

Operating Expenses Budget

The operating expenses budget records fixed costs: that is, costs that do not vary according to monthly fluctuations in sales. Advertising expenses, rent, salesperson's salaries (but not commission, which is a variable cost of sales), insurance, administrative and clerical salaries, accounting fees, directors' and audit fees are all examples of operating expenses that do not vary in the short-term according to sales volume.

These are also called overheads, and in our industry they are likely to comprise a higher proportion of total costs than in, say, manufacturing.

Some organisations do not have a separate operating expenses budget but allocate a proportion of overheads to each unit of product or service. This has the obvious disadvantage of changing unit costs as sales volumes rise or fall. An alternative is to allocate some proportion of operating expenses to a cost of sales budget, and some to an operating expenses budget.

The operating expenses budget also usually includes finance expenses. These are expenses incurred in the raising or maintaining of finance (such as interest on loans, overdrafts, loan fees and charges), bad debts, doubtful debts and discount expenses. However, in more sophisticated budgeting arrangements, these expenses might be included in a finance budget.

Production Budget

Because most transport and distribution industry businesses do not produce goods, most do not need production budgets. However, particular business units within large organisations might be production-oriented.

They might, for example, prepare specialist parts or panels and other products for repairs. In those cases they would need a production budget. The main components of a production budget are ordinarily materials purchased, staff time allocated and overheads allocated.

Finance Budgets

Finance, or financial, budgets look at how funds will be obtained to acquire scarce resources. The most common types of finance budgets are as follows.

Capital Budget

The capital budget is usually an organisation's longest-range working budget because it details planned expenditure on facilities, equipment, new products and other long-term investments. This budget might set expenditures (including depreciation) many years in advance. However, it will also indicate the organisation's capital position in the short-term.

Cash Budget

A cash budget shows expected cash receipts and disbursements. It indicates the month-by-month cash.

The cash budget is affected mainly by the organisation's and customers' policies about when they pay bills and when they require their bills to be paid.

Budgeted Balance Sheet

The budgeted balance sheet shows the forecast assets and liabilities at the end of the budget period. It takes account of retained earnings (budgeted net income less estimated dividends), capital expenditures and changes in fixed assets.

Budgeted Cash Flow Statement

The budgeted cash flow statement indicates the extent and nature of cash flows during the budgeted period. The statement can categorise the expected cash flows, for example, from operating activities, investing activities and financing activities.

Learning Reinforcement Exercise 1

Complete the following exercise. This is not part of your final assessment and does not need to be submitted to the College of Warehousing. When you have completed it, click on the solutions icon at the bottom of the exercise to see how you went and get immediate feedback.

Preparation of the Sales Budget (Exercise)

McRae Logistics Pty Ltd produces a single product and has set up a budget task force to oversee the preparation of each department's budget. For the first month of the budget, July, the budget task force has received two forecasted sales figures: one from the sales representatives and the other from the marketing manager.

The sales representatives have forecast sales at 120,000 units, an increase of 10% on the current year's sales. The marketing manager has forecast sales at 110,000 units.

After consultation, the budget task force decided that the sales representatives have overestimated sales and the marketing manager has underestimated sales. It now decides to: decrease the sales representatives' forecast by 5% increase the sales manager's forecast by 3% average the two adjusted amounts.

The product sells for $10 per unit.

You are required to calculate the budgeted sales for July, in units and dollars.

The Workplace Framework for Budgets

Before your organisation can implement an adequate system of budgetary control and so realise the benefits of budgeting, it must have an adequate workplace framework to support the principles and practices of budgeting. Otherwise, the system will be about as useful as buying an expensive truck without having anywhere to garage it or training anyone to use it.

Following are the integral parts of a workplace framework for budgets.

BUDGET PLANS

Clear Definition of Roles and Responsibilities

Management needs to clearly identify who is responsible for preparing and controlling each budget.

One of the most important aspects of clarifying budget responsibilities is specifying:

- who is delegated to approve particular items if expenditure?
- the limit of their expenditure delegation
- to whom expenditures above the upper limit must be referred for authorisation
- situations in which there is a temporary change to delegations.

Roles and responsibilities also need to be communicated to all relevant staff.

Budget Policies

Larger organisations will commonly have policies about the treatment of particular budget items. This may include policies about:

- which particular expense and revenue items are to be aggregated into which line items
- how items like travel, entertainment and other items that potentially offer fringe benefits are treated
- purchasing, for example, the dollar limits beyond which written quotes must be obtained, or when and how competitive quotes must be obtained.
- suppliers, for example whether local supplies are preferred or whether supplies must be obtained from a range of different suppliers
- customer concessions
- allowable variances from quotations
- apportionment and cost-sharing arrangements between units.

Budget Procedures

Most organisations also have procedures for developing and implementing budgets. These may include:

- procedures about how salaries and entitlements are calculated
- forms and other paperwork for requests for expenditure approvals and for comparing quotations.

Involvement of Relevant People

To realise the benefits of budgets identified earlier, such as motivating employees, communicating the organisation's objectives and coordinating and controlling activities, people affected by the budget need to be involved in its development from the outset.

Imagine a sales manager setting a sales budget without input from the sales representatives. Forecasts, quantities and amounts would quite likely be wrong.

Involvement brings the intimate knowledge of all employees to the budget process and lets them know and understand what the organisation is trying to achieve. If they are involved in setting budget targets, they are more likely to accept the targets and be motivated to achieve them.

Clear Timeframes

As a matter of organisation policy, the time span for both long and short-range budgets needs to be decided. This will vary from organisation to organisation and involves considering factors such as:

- seasonal cycles of business – for example, transporters specialising in moving produce from growers to market will have seasonal fluctuations in demand for their services
- demands of major customers – if your organisation relies on a small number of large customers, your business may be subject to the ups and down of their trading cycles
- holiday lay-offs – businesses in Australia commonly slow down or close for part of December and January.

Budget Reviews and Revisions

Many organisations also have policies about how and when the assumptions that underpin their budgets will be reviewed. Underlying assumptions are influenced by both internal and external factors that are constantly changing, and some of these might quickly make a budget out of date. These might include things such as a catastrophe or a lesser event such as the relocation of an existing supplier. If there is no plan to systematically consider the consequences of events, their budget implications can be easily overlooked.

Budget Systems

As noted earlier, your organisation will have general budget systems established by senior managers and accountants within which you operate. These systems should cover, amongst other things:

- the internal resources used to prepare, implement and monitor budgets
- policies and procedures relating to budgeting
- accountancy practices relevant to budgetary control
- workplace systems to control budgets
- quality and customer service standards, policies and procedures.

You will need to understand and draw on these aspects of your organisational system.

One important aspect of a budget system is its method of preparation. These days, people use computers to prepare budgets. Depending on the size of your organisation, you will use software such as:

- a complex accounting and budgeting package tailored to suit your particular organisation
- an off-the-shelf accounting package (such as MYOB or QuickBooks)

- spreadsheet software (such as Microsoft Excel).

Computer software minimises the need for time-consuming and tedious manual calculations. It reduces the resources required to prepare a budget, and makes it easier to update and amend budgets as circumstances change.

Computer software also enables you to ask 'what if' questions – you can change various factors in your budget and see what the consequences of the changes will be. For example, you can see the consequences of rising fuel charges, changing the price of tickets or choosing a different route for a particular type of cargo.

Budget Implementation

Management Commitment

For a budget to be a viable instrument for financial control, management must be fully committed to the idea of budgeting and to using budgets to control activity. Without this, no budget program can succeed. Management's commitment must also be communicated to all levels of the organisation.

Adequate Training

Successful budgeting requires employees to have the knowledge and skills to develop and manage budgets. The workplace framework should include a training program for managers at all levels to promote the concepts of budgets and budgetary control, and to train managers and other employees in how to use budgets.

Adequate Administrative, Bookkeeping and Accounting Systems

The organisation's administrative, bookkeeping and accounting systems must be capable of providing data that can be used to plan budgets and to check whether income and expenses are on-budget. This means ensuring that all systems use the same organising logic, comparable categorisations of items and equivalent time-frames.

In practice, this also involves having the administrative and bookkeeping systems to allocate all transactions into their correct budget group and record them in a time-frame that matches the budget time-frame.

For example, accrual accounting will not match cash budgeting without time-consuming adjustments. Long delays in entering or reconciling transactions will delay the examination of variances and will reduce the effectiveness of budgetary controls.

Illustration by Chris Gash

Documented Policies and Procedures

All the elements of the workplace framework for budgets described above should be written down in clear policies and procedures. All relevant employees should know about these, have access to them and be required to follow them.

People developing budgets should also have access to the documentation they need to develop the budget. This might include suppliers' quotes, contracts (to know which rates are charged), industrial agreements and awards and the assumptions underlying the budget calculations.

Legislative Requirements for Budgets

Legislative, Regulatory and Standards Framework for Financial Matters

The conduct of an organisation's financial affairs in Australia are well-regulated by legislation, regulations and standards. For example:

- companies, trusts, partnerships and other types of commercial entities are governed by Commonwealth, State and Territory legislation (for example, the Corporations Act 2001)
- financial behaviour and general governance issues are regulated by the Australian Securities and Investments Commission and by state and territory departments of fair trading and consumer affairs
- accounting standards are set by the Australian Accounting Standards Board, working within international standards frameworks
- Standards Australia provides general advice about business and financial matters.

However, the line manager who compiles or administers a unit budget will have little exposure to these legislative, regulatory and standards frameworks. A line manager will usually work within workplace policies and procedures and use workplace templates, all of which have been established to take account of legislative, regulatory and standards requirements.

Further, there are no specific standards, legislative or regulatory requirements for the budgeting process.

Other Legislative, Regulatory and Standards Requirements

Although there are no legislative requirements specifically for the budgeting process, managers preparing budgets must be aware of legislative, regulatory and standards requirements that relate to their activities, and so affect their revenues and expenditures. In some areas of the transport and distribution industry, these requirements will be extensive and will be a primary factor affecting costs or revenues. These might include requirements about:

- customs and quarantine
- rail and passenger
- security
- Occupational Health and Safety
- environmental protection
- workplace relations
- workers' compensation
- equal opportunity and affirmative action.

Learning Reinforcement Exercise 2

Complete the following exercise. This is not part of your final assessment and does not need to be submitted to the College of Warehousing. When you have completed it, click on the solutions icon at the bottom of the exercise to see how you went and get immediate feedback.

Preparation of the Salaries & Wages Budget

McRae Logistics Pty Ltd has asked James Wilton, the Warehouse Manager, to prepare the Salaries & Wages budget for the Warehousing Section. He collected the following data from current records:

Xxxxxxxxxx

Additional Information

One of the clerks has handed in her resignation as she will be moving to Queensland when she marries in August. She will be leaving at the end of the last pay period in July. She will not be replaced. The other two clerks have agreed to work overtime (paid), if necessary, at the busy time of the year.

The annual salary and wages review is held in June (so any changes are able to be incorporated into the budget) but does not take effect until the first pay period in August. The Leading Hand will have his annual salary increased to $55,000; the Supervisor will have his annual salary increased to $62,000 and the clerks will have their weekly salaries increased to $490 each.

Busy times of the year are September to November. It is estimated that each clerk will be expected to work four hours overtime each week during that time. Overtime will be paid at time and a half, on the normal hourly rate. The clerks work a 40-hour week.

The Warehouse Manager, Supervisor and Leading Hand are paid on a monthly basis, which means they receive their salary in 12 equal instalments over the year. The clerks, store-man and forklift drivers are paid weekly. There will be four pay periods in July and September and five pay periods in August.

McRae Logistics Pty. Ltd requires the salaries and wages budget to be prepared for the months of July to September. (Work on gross figures only. Do not take into account tax or any other deductions.

Prepare and Implement a Budget

Setting Up to Prepare a Budget

Defining the Area to be covered by the Budget

The starting point to developing your budget is to define which aspects of the organisation's operations will be affected by it.

Budgets are usually prepared for a specific area of operations. This might be called a responsibility centre, department, workgroup or business unit. It does not particularly matter what it is called although we will use 'responsibility centre', so long as:

- it can be identified both physically and organizationally – for example the staff work together on the same type of tasks in a particular part of the office.

- it has a stable workgroup for the life of the budget – for example if the workgroup is formed and disbanded during the life of the budget, there is insufficient continuity to make the workgroup responsible for performance against the budget.
- its performance can be measured – that is, the organisation's bookkeeping system can track revenue and expenditure and compare it to budget
- a particular person is responsible for performance, such as a line manager, supervisor or team leader.

In the transport and distribution industry, responsibility centres in a typical organisation might be:

- the sales team
- the maintenance division
- the accounting or human relations departments
- the safety or occupational health and safety inspectors.

Cost Centres

Just as an organisation has areas of operations whose main job is to make money, there are other areas that supply the goods or services to be sold. These cost money, and the organisation's main budgetary interest in these areas is to minimise the costs they incur.

Cost centres include:

- units that purchase raw materials, stock or equipment needed to produce goods or services
- maintenance departments
- units that produce goods.

Expense Centres

An expense centre aggregates costs that apply to the entire organisation and allocates them to different units or activities, so that costs can both be carefully monitored and controlled, and also made the responsibility of the particular area that is incurring the costs.

Expense centres include:

- accounting and human resources departments
- research and development units.

Profit Centres

A profit centre is responsible for achieving a particular targeted profit. Profit centres include:

- branches or subsidiaries that are required to return a specified level of profit
- an investment unit that is responsible for investing surplus cash for a targeted return.

A small organisation with simple operations will usually only have one profit centre. In larger organisations, each department, division or business unit might be a separate profit centre. Profit centres are primarily interested in maximising the difference between revenue and costs, in order to maximise profit. Their budget will usually specify the level of profit to be made either as a dollar amount or as a percentage of sales, costs or capital used.

Identifying Relevant Personnel and their Roles

Budgets are financial work plans, and they affect all people in your work unit. In line with the workplace framework principle of clear definition of responsibilities, you need to identify who is involved in preparing your budget and what their responsibilities are.

A budget is of little use if the people who are responsible for implementing it are not clear about what they are required to achieve. The best way of ensuring that your budget is understood is to involve those responsible for achieving it in the planning and budget development process.

This gives them an understanding of what needs to be achieved, and provides responsible people with a degree of ownership over the budget.

Specifically, you need to identify:

- who is affected by the budget, and what role they should play in developing it to ensure they have the information and the commitment to be able to implement it
- any people who work in other responsibility centres within the organisation, or outside the organisation, who are affected by the budget and should help you to develop it
- who will provide the data you need for your budget?
- who in your organisation coordinates the budgets of the various responsibility centres
- who approves budgets.

In a small organisation, there might be only one or two people involved in developing and implementing your budget. In a large organisation, a budget might need a great deal of carefully coordinated input from a lot of people.

Responsibilities for the preparation and approval of budgets vary from organisation to organisation. Generally:

- senior management's role is to set policy and overall budget objectives, approve budgets or send them back for amendment if necessary
- the accountant's role is to provide high-level advice about financial concepts that underlie the budget, and to provide information for it. Budgets are not an accounting exercise, and should not be left to an accountant
- line managers are responsible for preparing their budget.

Define Budget Objectives

As explained earlier, a budget specifies the financial aspects of achieving an organisation's objectives. Those objectives might be broad and non-financial, such as to be the number one supplier to a particular territory, or to build a reputation for a particular type of service. Or they might be broad and financial such as to minimise costs or increase revenues.

The budget gives tangible and quantifiable financial expression to the organisation's objectives. For example, budget objectives might be to:

- earn a 15% return on sales
- invest 3% of revenue in research and development
- generate a return of 15% on capital.

At the outset, these budget objectives must be identified. This will usually be done by senior managers and communicated to you, so you can shape a budget to achieve the objectives.

What Type and Sequence of Budget?

Different organisational objectives will call for different types of budgets. For example, a freight forwarding company that has seasonal ups and downs needs to manage its cash carefully, so it can pay its bills during quiet times with the cash accumulated from busier times.

It also needs to manage its debtors and creditors carefully, so it is collecting cash quickly and controlling the cash paid out. The most important budget for this company will be its cash budget.

As another example, an automated warehousing organisation that is growing rapidly and has strong demand for its services will have most need for a capital budget, to keep close watch on the costs of acquiring new equipment and building new warehouse facilities to meet demand.

Both these organisations will also need income and expense budgets, but both face the same question – 'Given our particular objectives and the situations we face, which is the most important budget? Which is the one we start off with, which one budget drives the others?'

For many organisations, the revenue budget is the key budget – but this is not always the case. For an organisation with excess capacity to service more customers if it can find them, the key budget is a sales budget.

For an organisation running to capacity, the key budget is an operational budget to ensure it has the resources to service demand. As we saw above, a small organisation with severe cash problems most needs a cash budget which might look at, for example, how cash can be generated quickly through cash discounts, or which suppliers might extend extra credit.

Sometimes, the decision on which budget to start with is not yours. The organisation might dictate a profit budget or profit targets, or an expenditure budget or expenditure targets. In the case of a profit budget, the targets might be achieved in a number of ways. Your budgeting task would then be to find these ways and to create a budget that meets profit targets.

It is not always easy to decide on the key budget. It is a process of thinking through the consequences of starting with one budget rather than with another, and making a judgement about which is best.

Define Budget Time Frames and Time Factors

The Budget Period

Most organisations have both long-term and short-term budgets. Long-term budgets are usually adjuncts to long-range strategic plans that apply for five to 10-year periods or even longer.

They address the organisation's broad objectives and goals and have only high-level financial detail.

In contrast, detailed budgets usually match the financial reporting period, generally the financial year. These budgets are usually broken down by month, which enables managers to regularly review whether budget outcomes were achieved and identify and address budget variances and fine-tune the budget.

Some organisations, such as those with well-developed records systems, large volumes of transactions and routine operations, may have shorter budgeting and review periods to keep close track on over-expenditure or revenue shortfalls.

Although a budget will apply for a particular period of time, the budget process is continuous and has no real beginning or end. In theory, a good budget is continually being reviewed and modified as time goes on. In practice however, particular effort might be put into developing the 12-month budget before the start of the financial year.

Irrespective of the length or timing of your budget period, enough time should be allowed to consult with others, get the necessary data, develop the budget and test it if necessary before the start of the next budgeted period.

On a one-year budget cycle, this usually means planning the next budget at least three months before the end of the current budget period. If you are budgeting for a much shorter period, such as a month, you should begin preparing next month’s budget within one to two weeks of the start of the month.

Timing within the Budget

Business conditions are usually not uniform throughout the year. Demand, and therefore the sale of products or services, is usually not consistent, but can vary according to the season, to particular external events or to prevailing economic conditions.

A budget that does not take account of such variances will be much less useful as a month-by-month guide than a budget that does. For example, history might show (and therefore the budget should reflect) that:

- one quarter of sales are made in spring and summer
- half of all sales are made in winter
- one quarter of sales are made in autumn.

In the above example, if a monthly sales target was set simply by dividing yearly projected sales equally by 12, sales in most months would be either above or below budget. This would make the budget virtually useless for monitoring sales performance month-by-month – effectively, the monthly target is acknowledged as being unrealistic.

Similarly, long-term operating experience might show particular relationships of expenses to sales, overheads to sales or fixed expenses to variable expenses. These and other relevant relationships should be documented and should influence budget planning.

Planning Budget Requirements

Now that you have determined the parameters of the budgeting process, it is time to turn to the process of preparing your budget.

Define Budget Activities and Line Items

As we have seen previously, the budget is the financial plan guiding your activities. It specifies the costs and revenues involves in each type of activity in which your responsibility centre engages.

Your first step is therefore to specify the main activities of your responsibility centre, and then analyse these activities to determine precisely what resources are required, or what revenues are generated, in the conduct of these activities.

This analysis should also enable you to determine the budget line items associated with the activity. For example, if an activity of your responsibility centre is to receive goods, your main budget line items for this activity might be labour, rent, equipment maintenance, utilities and office consumables.

In other words, if you are a cost centre, you need to determine what it takes to conduct the activity in terms of materials and supplies, labour and overheads.

If you are a revenue centre, you need to determine how many units you expect to sell, the sale prices of the units, any discounts or concessions and any extra costs of sales such as commissions. It is like preparing a recipe and then working out the quantities and prices of each ingredient.

'Job costing' is the activity of determining the amount of time, materials and expenses required for a project, a job or a specified amount of service – for example, transferring a particular amount of cargo to a particular city.

Budgeting and job costing are very closely aligned. Both require a comprehensive specification of activities to be undertaken and accurate financial data for each component of the work. It is most likely that, if your organisation has a comprehensive job costing system, you will have activities and line items already specified.

Equally, the budgeting process can inform the job costing exercise. For example, if you're preparing a budget to purchase a truck, you would do calculations about fuel consumption, carrying load, interest charges, extended warranty charges and maintenance allowance in order to compare different brands and models and so make a decision.

The documentation you compile to develop a budget is a good, solid support for calculations you will need to make about the cost of running the truck and the price you will charge customers to use it.

Identify The Information You Need and Data Sources

Quality, Detailed Information is Important

To be a useful and reliable guide for your organisation, your budget needs to be based on information sourced from inside and outside your organisation. This information should be:

- accurate (true and correct)
- comprehensive (cover all relevant operations and activities)
- timely (relate to the most recent past and be provided quickly enough to enable corrective action to be taken in the event of variances)
- easily understood in a format and using measures that can be easily understood by the people preparing and following the budget
- cost-effective (sufficiently economic that it can be collected regularly) down to the lowest level of detail that you can reasonably gather such as quantities, hours, prices and rates.
- Budgeting using only totals rather than line items and components of line items and does not give you enough flexibility to amend your budget, if quantities and other values on which line item calculations are based change.

Sources of Internal Organisation Information

Primary Documents and Aggregate Reports

The primary sources of information for your organisation's financial management system are the original documents used to record transactions such as purchase orders, receipts, cheque's, invoices, delivery dockets, timesheets and job cards. These primary documents are also often aggregated into working reports such as reconciled bank statements, weekly or monthly time reports and aggregated sales reports. This primary or aggregated data is not usually required by a manager preparing a budget, because the organisation's accounting system will aggregate it into financial statements that are easier and quicker to understand and use.

Financial Statements

Your accounting system will further analyse and aggregate the primary documents and report on performance through the standard financial statements. These include the profit and loss statement and balance sheet or any of the supplementary financial statements that feed into these two major statements, such as accounts receivable or accounts payable reports.

These are important documents for preparing budgets, and you must be able to read and understand them.

A second important source of internal information is past forecasts such as past budgets, cash flow forecasts or sales forecasts compiled by sales representatives.

Financial statements or historical projections must be treated with caution. Circumstances seldom repeat themselves precisely, and some organisations take the simple course of just adding a percentage to last year's results or last year's forecasts and use that as the budget.

This practice carries the risk of ignoring the inevitable changes that will have occurred in the organisation or in the market in the intervening period.

Workplace Policies and Procedures

Workplace policies and procedures statements are an essential source of information. Your budget must take account of policy if it is to be acceptable to senior management. Equally, budgets must be prepared and monitored in line with established workplace procedures.

Job Costing Information

As we saw just above, job costing information is important budgetary information. It might include calculations such as average fuel consumption per kilometre, warehousing costs per cubic metre stored, labour cost per item handled, depreciation rates on different types of equipment and number of items of service that can be provided per staff member.

Some Sources of External Information

External sources of information are also important for the budget process. They include:

- Suppliers' estimates of price rises
- estimates of wage cost rises and consumer price index adjustments
- market intelligence about competitors' likely activities
- labour market information.

External data is particularly important for forecasting revenue. Your budget must take account of what is happening in your market. For example:

- is demand stable, increasing or decreasing?
- is your market share stable, increasing or decreasing?
- what are your competitors doing?
- what are prices and wage rates forecast to do?
- are there new work methods or technologies which might reduce your costs, or increase costs?

For example, to construct a reliable budget a removalist might need information about:

forecast house sales and new housing construction activity industry averages for the volume of goods moved by different types of customer such as two adult families, partners without children and single adults market expectations about new services or quality of service quotes from external supplier's trade information about product, service or equipment innovations competitors' pricing schedules.

Trade publications are a very useful source of information. They may have details of new products, new markets, new technologies and suppliers, information about your competitors and news of overseas developments.

Industry associations often publish statistical data about your industry. This is often free, or low-cost, information that would be prohibitively expensive for your organisation to collect.

The Australian Bureau of Statistics collects a wide range of statistical information about the transport and distribution industry.

It can provide information by specific regional area, age group, occupation and many other criteria. Although the information is not organisation-specific, it provides useful views of the market and the key factors that affect it.

You still need to be able to analyse and interpret this information according to your organisation's particular situation and requirements.

Market research and interviews with customers can also be good sources of external data.

Treatment of Line Items

While the calculation of some items is straightforward, the treatment of other items might be determined by internal accounting rules or accounting conventions. For example, your accountant will tell you how your organisation allocates equipment depreciation.

Many expenses are not spread evenly across every day, week or month in the budgeting period. Some, such as rent, are usually based on the number of calendar days in the month. Some, such as advertising, are budgeted in the month in which they are incurred and some, such as wages and salaries, in the month in which they are actually paid.

The table below shows some common expenses, and how they are budgeted.

Table 1 – Common Expenses and Budgets

Type of Expense	How Budgeted
Employee expenses	
Full-time employees	Hourly wages or monthly or annual salary
Payroll taxes	Applicable scale available from state or territory department
Tax payable	Applicable scale available from Australian Taxation Office
Superannuation	9% of salary/wage
Sales commissions	Based on to sales revenue
Bonuses	Possibly correlated to other budget items, such as sales
Long-service leave	As a percentage of time served, according to applicable industrial relations agreement
Other expenses	
Advertising	Quoted rates from media company
Rent	As contracted in rental agreement
Equipment leasing	As contracted in lease agreement
Insurance	Prepaid, or apportioned over the policy period
Contacted preventative maintenance, extended warranties	Prepaid, or apportioned over the period Based on historical information or as advised by supplier
Equipment maintenance	
Utilities	(Amount consumed for last period) + (seasonal adjustment) X (current rate)
Telephone	(Amount consumed for last period) + (seasonal adjustment) X (current rate)
Depreciation	Depends on the method of calculating depreciation used by

Calculation of Line Items

The actual calculation of particular line items in the budget will vary according to the item. As a broad rule, it is a matter of quantifying the item, seeking to determine its cost or revenue contribution and allowing for any particular adjustments.

As an example, let us consider billable hours. Most organisations in the transport and distribution industry do not produce or sell products, but provide services.

In a service business, the inventory is staff time. In this case, the key revenue line item is the number of billable hours and the rate to be charged per hour or per service item.

Billable hours are total staff hours less non-billable hours, which include non-working hours such as for public and annual holidays and long service leave provision, as well as non-chargeable working hours such as down time and time for training and administration.

Billable hours and rates may further vary by particular employee, and according to the employee's qualifications, experience and role in the organisation.

For example, an administrative or support person will have a different billable hour rate to a driver, specialised freight planner or quarantine clearance specialist.

Different organisations will have different accounting conventions to address these issues. For example, the non-billable hours may be factored into the billable hours, by increasing the billing rate to be charged. Or the non-billable hours may be left out and absorbed as overhead within the operating expenses.

Sometimes, a budget will be prepared from scratch, ignoring all previous history and current performance. This is known as zero-based budgeting. It is a risky proposition and usually done for particular purposes which will be decided by senior management.

Assessing and Managing Risks, Contingencies

Assessing and Managing Risks

The main reason why budgets are not met is that organisations operate in dynamic environments that bring internal and external risks to the budget assumptions.

While some of these risks cannot be foreseen in advance, others can be and are to an extent predictable.

Therefore, efforts to manage risks in advance should reduce the number and size of budget variations.

Risk management is the process of:

- identifying all possible risks
- quantifying the impact of the risks occurring
- prioritising the most important and consequential risks to be managed
- developing strategies to manage priority risks.

These strategies range from removing a risk, to minimising the impact of the risk, to accepting some or all of the consequences of the risk, to transferring the risk to another party.

Larger organisations have sophisticated risk management capabilities while smaller organisations usually practice informal risk management.

Organisations usually focus on high-priority risks as a matter of using their resources most effectively. Ideally, the least amount of resources is used to manage risks while reducing the impact of risks as much as possible.

Contingency Plans

There are two types of contingency budget plans: line item contingencies that allow an extra percentage for the line item in case costs are higher-than-expected specific alternative scenarios to be followed should costs be exceeded, or should they be likely to be exceeded. These might include reducing inputs, seeking alternative suppliers or reallocating resources from other specified line items.

It will sometimes be possible to respond to variances by taking immediate action. On other occasions, the reasons for variances will indicate that longer term action is required.

Equally, the organisation's experience might suggest that certain variances are to be expected. In these cases, alternative courses of action need to be developed as contingency plans are implemented at a future time, when they are required.

Monitor The Budget

The point of developing a budget is to have targets against which to compare financial performance. Such comparison shows whether each employee and each responsibility centre is achieving the organisation's required financial objectives. The process of monitoring the budget is therefore as important as the budget development process.

Preparing to Monitor the Budget

What is Budget Monitoring?

Budget monitoring is the process of ensuring that actual financial performance meets budgeted financial performance for each monitoring period.

That is, has your responsibility centre generated your budgeted revenue? Has it spent only what it expected to spend? Does it have the amount of cash it expected to have?

Budget monitoring regularly checks income and expenditure against approved budgets at regular, predetermined intervals in order to answer these and other important financial questions to address your organisation's sustainability.

At a more sophisticated level, the monitoring process can examine deeper questions of sustainability. For example, internal financial reports might be used to calculate ratios, which provide further useful information about operations.

How will I Monitor the Budget?

Ideally, the budget monitoring process is the same as the budget development process – it takes a systematic approach with roles and responsibilities clearly allocated, draws on quality information that is readily available, is prompt and not resource intensive.

What is the Budget Monitoring System?

You need a system to make budget monitoring prompt, efficient and not resource-intensive. This will usually be a procedure statement covering the points below in this section of the guide.

It will also specify the software to be used to compare your budget with actual figures. Depending on the size and complexity of your organisation, this might be a part of your accounting software, a separate spreadsheet or specialist monitoring software such as time tracking software that tracks and monitors billable time and expenses on jobs.

You might also draw on other monitoring systems such as those provided by major credit card companies.

How often will the Budget be monitored?

The moral of this section is that a budget should never be put to one side once written. It needs to be closely followed and maintained. You must therefore decide how often information will be collected and analysed and performance reported on.

For a yearly budget, this usually occurs monthly. This enables variances to be promptly identified and acted on. On the other hand, you must have sufficient resources to be able to engage in monthly monitoring. It is bad financial practice, and bad for morale, to commit to monthly budget monitoring and for it not to be carried through.

Who will monitor the Budget?

As a team leader or manager, you will normally have responsibility for ensuring that the budget is monitored. However, this does not necessarily mean that you must do the monitoring work.

In previous sections, we have explained the importance of involving employees in the development of the budget that controls their work.

For this involvement to be effective, employees must be sufficiently financially literate to understand and monitor the aspects of budgets that affect their work. As a manager, you are responsible for ensuring that they have the information and training to do so. If they have been involved in the budget development process, employees will usually have the necessary understanding to monitor it.

For example, those who are authorised to approve purchases will usually know how to keep accurate records, how to communicate with suppliers to ensure the correct goods and services are purchased and how to keep inventory records.

If they do not know these things, then budgets might not be achieved simply because an employee cannot act on the assumptions that underlie the budget.

Determining Expenditure Approvals

It follows from the previous point that a key aspect of successful budgeting is to ensure that those authorised to make purchases are completely clear about the limits to their authority.

That is:

- the dollar amounts up to which they are authorised to make purchases
- the types of purchases they are authorised to make
- the policies and procedures they are required to follow when making purchases

- any latitude they have to interpret their authority
- any other limits they have to their authority (such as the requirement to have particular purchases approved by another person)
- the procedure to follow if they want to make purchases that are outside the limits of their authority.

These are all crucial aspects of budgetary control. They should be documented in policy and procedure statements, and clearly communicated to authorised employees.

What Reports and Data are needed to monitor the Budget?

Earlier, we saw that internal reports are important sources of information for the development of budgets. Equally, they are also an important resource for monitoring budgets.

Before the budget can be monitored, you must identify the required reports and ensure that they can be made available within the required monitoring time-frame.

If they cannot, then you will need to consider whether other forms of data can be obtained to use for budget monitoring.

A profit and loss statement is a financial statement that lists revenues and expenses, and thus net income, over a given period.

The information in the profit and loss statement can also be used to calculate ratios, which provide further useful information about operations. Two common ratios are:

- gross profit margin (which is sales minus the direct costs of sales all divided by the value of sales, and expressed as a percentage)
- net profit margin (which is sales minus the direct cost of sales minus other organisational expenses all divided by the value of sales, and expressed as a percentage).

Which are the Most Important Items to Monitor?

Although all budget line items should ideally be monitored, we do not live in an ideal world and the busy organisation has many other things to do. The most important items to monitor are:

- the largest items, because variances in these will have the greatest impact on the whole budget
- the items with the greatest degree of variability, because swings in these items will often be based on important operating assumptions such as seasonability or fluctuations in demand, and if these assumptions are not correct it may have a major effect on the whole budget
- the bottom line – total sales, total revenue and total operating position – because these are key indicators of the organisation's sustainability, and significant variances should cut to send a responsible manager looking for the reasons for them.

Many organisations have rules of thumb such as, 'investigate all variances of more than 5% of the budgeted amount'.

Monitoring Expenditure

It is generally easier to control costs than revenue. Revenue comprises the resources provided to you by others and is substantially controlled by their decisions.

Costs, on the other hand, are what your organisation pays others for resources, and you have much greater control over these.

The organisation's budget is an important mechanism for cost control. Budgets determine the overall levels of allowable costs, and cost targets.

More comprehensively, the budget process can include rethinking every single expenditure from the ground up. This might result in:

- asking clients and suppliers for helpful advice about high cost areas
- using the internet and buyers' guides for savings
- recycling consumables and supplies
- collecting outstanding debts more quickly (thus reducing interest costs).

The suggestions above are provided as examples only. Almost all businesses have plenty of opportunities to cut their costs, but they must think carefully about their operations in order to identify the best opportunities for them.

Timely reports of budget variances are another valuable tool for cost control. They will enable you to examine cost issues such as higher -than-expected:

- raw material usage (such as fuel)
- subcontractor charges
- internal use of labour
- depreciation and maintenance costs.

Although cost control is an important part of any organisation's activities, it must not become such a concession that costs are cut excessively or needlessly.

Any business must have costs, as a consequence of providing a service. An operating budget should never be cut so deeply as to affect the quality of the products and services provided.

However, it is good business sense to cut waste and inefficiency and look for suppliers of comparable quality but lower cost – that is, other organisations that have become more efficient rather than lower their quality.

Year after year, the business press is full of stories of major companies that have lost sight of product quality and customer service because they have cut costs too deeply. Make sure your organisation doesn't follow the same regrettable path.

Once budgets are approved, the cost control task is then to ensure that expenditure is monitored in line with budget, and other opportunities for cost minimisation are acted on. For organisations with well-established procedures, the monitoring of expenditure is essentially a job of ensuring that expenditure controls are enforced. Such controls will usually require:

- quotes to be obtained or standing orders to be used in line with the conditions of the standing order
- formal approval to purchase to be gained from an authorised officer, probably with different procedures for different maximum dollar values of purchases

- purchase orders to be used
- checking of goods received, including checking against purchase order.

Additional to such controls, staff training and regular auditing of the purchasing process will be included.

Identifying and Analysing Variances

It is almost the nature of the world things do not always go to plan. Circumstances change, and events sweep the organisation from its intended path. Consequently, more is spent or less is raised than what was budgeted, resulting in variances to the budget.

It is therefore very important to regularly monitor budgets to determine variances and their causes. This involves:

- gathering information
- analysing the information to determine causes and sizes of impacts on a budget
- working with others to draw conclusions, based on your analysis
- making recommendations about changes to the budget.

Preparing a Budget Performance Report

The budget performance report may take various forms but its main features will not change. The report compares budgeted and actual amounts for the current period and the cumulative total from the beginning of the budget period.

It also clearly indicates whether the variance is favourable (F) or unfavourable (UF). Recall that variance is favourable if it increases profit and unfavourable if it decreases profit.

A budget performance report should be prepared for each responsibility centre's budget. That way, the centre's manager can take responsibility for addressing variances identified by the report.

Budget performance reports should be:

- prepared promptly at the end of the review period. The longer the delay in providing information about variances to managers and relevant employees, the less effective is the information
- issued more, rather than less frequently – a performance report issued every quarter that contains disturbing variations might mean that months have passed since the reasons for the variation emerged
- easy-to-understand, simple and informative, particularly for the person who is not a qualified accountant
- prominently note the key variances that are controllable by the reader of the report acted on by yourself and by senior management if necessary. If no action is taken to address variances, then there is little point in compiling reports.

Determining the Type of Variance

A budget variance is the difference between actual results and budgeted amounts. There are two main types of variances:

- favourable variances (that increase operating income or decrease operating costs relative to the budgeted amount)
- unfavourable variances (that decrease operating income or increase operating costs relative to the budgeted amount).

The two main types of variances used in flexible budgeting are price variances and efficiency, or quantity, variances.

Price variances are the differences between the budgeted and actual cost of line items in the cost of sales or operating expenses budgets, multiplied by the actual quantity of inputs. Two key types of price variance are:

- supplies variance, which is a change in the price of supplies, for example, in the cost of fuel. It can only be controlled if you can obtain the same supplies at a lower price by negotiating discounts or by switching to another supplier
- staffing rate variance, which is a change in the per hour salaries and wages paid to staff. It might be controlled by better rosters or keeping overtime within budget limits.

Efficiency variances are the differences between the budgeted and actual number of items underlying the budget line, rather than differences in the costs of inputs.

For example, a reduced volume of sales will result in an unfavourable budget variance irrespective of whether or not prices have changed. Some of these variances can be controlled, and some cannot.

For example, more efficient warehousing arrangements may reduce the total amount of warehouse space to be provided. More efficient route planning can reduce the number of kilometres travelled. Also, staff training and better supervision can reduce waste or other excessive use of supplies including damage or theft.

Determining the Reasons for Variances

It is all very well for a performance report to identify a budget variance, but the information is of little use unless the reason for the variance is known.

Managers who regularly monitor their budgets soon learn that some reasons for variances, such as cost overruns or revenue shortfalls, can be controlled and others can’t.

Generally, significant variances will result from:

- the assumptions underlying the budget item being unrealistic or unachievable, or having changed since the budget was developed
- calculation errors in budget items
- changes in external factors outside the organisation’s control such as changes in interest rates, economic conditions influencing demand, new offers from competitors and legislative changes
- those within the organisation not acting in line with the assumptions underlying the budget item such as departure of key personnel, resources being allocated away from your unit or changed management directions.

More specifically, the reasons for budget variances must be expressed in terms of the assumptions or data used to develop the budget. For example, did revenue fall because the total number of sales was not achieved? Or because rates were discounted? Or because general economic conditions deteriorated and led to less client activity?

To further complicate matters, variances are often not due to one reason but a combination of reasons, sometimes even interrelating with themselves. To make sense of the performance report, these reasons need to be identified and, if necessary, the interrelationships between them identified too.

To investigate the reasons for variances, you might ask:

- what precisely was the main event or events that underlie the variance?
- was the event within or outside the control of the organisation?
- if it was within the control of the organisation, who was responsible? Were they aware of its impact on your budget? If so, do they accept responsibility?
- how can the impact on your budget be minimised or prevented should similar events occur in future?
- How can situations like this be avoided or better managed in future?

Sometimes, you might identify reasons that have implications beyond the budget development process to the operations of the whole organisation. These might include:

- client complaints
- employee absenteeism or high turnover
- excessive use of fuel or lubricants due to poor work practices or inadequately maintained equipment.

In general, external sources of budget variance are usually less controllable than internal sources.

Significant variances and particularly those that have a negative, rather than a positive, impact on the operating result should be investigated immediately.

It is only natural that a very busy manager might overlook small variances which have no significant effect on profits or cash flow. Some small degree of variance is only natural.

However, you must be careful to ensure that small variances do not become large variances with time, or that you are overlooking significant issues which only show up initially in small amounts. Identifying and addressing the problems early is the whole point of monitoring budgets.

Neither should you ignore favourable variances. If you investigate the reasons for favourable variances, you may be able to do something to make them even more favourable.

Taking Corrective Action

Whatever the reason for the budget variances, the end result is that corrective action of some kind needs to be taken to either increase revenue or reduce expenditure.

You may have authority to take these corrective actions, or you may need to make recommendations to senior managers.

The precise corrective action taken will depend on the reasons for, and size of, the variance. It is important that corrective actions address the identified reasons for the variance and do not make things worse. Some corrective actions can be implemented in the short term. Some will take longer to plan and implement, and longer to impact on the budget.

For example, possible strategies to increase sales in response to a budget shortfall might be:

- price increases
- more contact with customers to improve service and customer satisfaction
- offering of new products and services
- more stock held, to ensure prompt delivery
- increase advertising and public relations efforts.

Each of these strategies would need to be carefully considered for their applicability to, and impact on, the variance. For example, there would be little point in increasing the quantity of stock held if deliveries have been prompt and the downturn in sales is due to the price charged.

In the same situation, it would be counter-productive to increase prices to try to make up for a sales budget shortfall.

Possible strategies to decrease expenses might be:

- reducing the size of office premises, or looking for some tenants for existing premises
- outsource some administrative activities for less cost than they are being provided
- reduce the base salary of sales staff and increase commissions
- improve productivity to enable fewer staff to do the same amount of work.

Again, any of these strategies might have unforeseen consequences and must be clearly justifiable as a measured response to the reason for the variation.

Waste and Fraud

Insofar as variances contain an element of commentary on the performance of individual managers, they are one tool to guard against fraudulent misuse of assets or wasteful operation.

You should however be wary of relying too much on the budgetary process to prevent fraud or waste. The budget may have originally been prepared by, or at least influenced by, the manager concerned.

The budget can only be an effective control against fraud and waste if the budget assumptions and calculations were carefully reviewed by an independent person outside of the responsibility centre concerned.

Taking Quick Action

It is important that corrective action be taken quickly to address variances. To ensure this, the organisation should have procedures in place to communicate the results of analyses of variances to relevant employees, and require them to act on them.

Where action on variances will have a significant effect on operations, the organisation also requires a process to ensure that action is managed, monitored and evaluated to ensure that the net result is beneficial to the organisation.

This will commonly call for ongoing training which could also:

- show managers how to effectively and properly communicate the action required about variances to their teams
- encourage managers and employees to think about possible problems and contingencies, rather than waiting for problems to occur
- improve budgeting skills so as to reduce variations in the longer term, and to enable managers to prepare more sophisticated budgets
- improve the ability of managers to control budgets day-by-day, and thus reduce the number and size of variations.

Modifying the Budget

A budget it is not a static, once-only document. As we have seen above, budgets change due to a wide variety of circumstances. To continue to be useful and accurate planning documents, they need to be modified in light of changed circumstances.

Because budgets are key control tools, most organisations will have requirements about who modifies them and how. For example, large organisations will commonly have a formal process for modifying a budget, which might:

- have guidelines about when a budget must be modified such as when the variation is greater than 5%)
- nominate the person responsible for approving budget modifications
- require a written narrative about any variations that are required to the budget, and the reasons for the variations
- require the calculations you made to show how the proposed modifications were arrived at
- require a line item budget worksheet that shows the entire original budget for the period, all approved amounts, the requested change, the new proposed budget and expenses incurred against each line item to date
- allow very small changes to be made verbally.

Congratulations!

You have now finished the unit ‘Manage a Transport and Logistics Business Unit’