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Bachelor of Commerce (B2001) | Level 3 • Part B Major | Monash University

Management accounting

Course Code: ACC3200 • Module 1 Notes

Module 1: Strategic Management Accounting, Value Chain Analysis & Competitive Positioning

1.1 Evolution and Scope of Strategic Management Accounting

Conventional management accounting developed during the early twentieth century to support internal cost control, inventory valuation, and short-term operational budgeting inside vertically integrated manufacturing firms. While standard costing, flexible budgets, and variance analysis remain foundational for operational efficiency, they suffer from two structural blind spots when applied in isolation: an inward-looking focus on internal factory processes and an emphasis on historical, single-period financial metrics. Strategic Management Accounting (SMA), a term formalised by Kenneth Simmonds in 1981 and expanded across contemporary Australian management accounting practice, reorients the accounting function outward toward the firm's competitive environment, external value network, and long-term strategic positioning.

In an Australian corporate context—characterised by concentrated retail and banking oligopolies, capital-intensive mining and agribusiness exports, and high domestic wage structures—management accountants cannot rely solely on historical product cost sheets. SMA integrates financial and non-financial data to monitor competitors' cost structures, evaluate customer and supplier economics across multi-year horizons, and align cost management directly with the enterprise's chosen source of competitive advantage. Under this paradigm, cost is no longer treated merely as a consequence of internal production volume; rather, cost behaviour is understood as a deliberate outcome of strategic choices regarding scale, scope, technology, product complexity, and external partnerships.

Analytical Dimension	Traditional Management Accounting	Strategic Management Accounting (SMA)
Primary Orientation	Internal operations, departments, and cost centres within the legal entity.	External market, competitors, upstream suppliers, and downstream customers.
Time Horizon	Short-term (monthly, quarterly, or annual reporting and budget cycles).	Multi-year product life cycles, customer relationships, and strategic investment horizons.
Cost Focus	Manufacturing cost control, standard cost variances, and absorption under AASB 102.	Structural and executional cost drivers, target costing, and total value chain cost optimisation.
Information Scope	Predominantly historical monetary data from the general ledger.	Integrated monetary and non-monetary data, forward-looking estimates, and market intelligence.
Decision Objective	Cost minimisation, operational variance compliance, and short-term profit maximisation.	Sustainable competitive advantage, value creation, and strategic positioning.

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1.1.1 Competitive Positioning and Porter's Generic Strategies

Strategic positioning defines how an organisation creates superior economic value relative to rivals in its industry. Drawing on Michael Porter's competitive strategy framework, management accounting systems must be tailored to support one of two fundamental sources of competitive advantage, pursued either across a broad market or within a narrow market segment (focus strategy):

- **Cost Leadership:** The firm achieves the lowest total delivered cost in its industry while maintaining acceptable product quality and parity in customer-perceived features. Australian examples include large-scale discount grocery chains or low-cost domestic carriers. Under cost leadership, SMA emphasises engineered cost standards, economies of scale, tight overhead discipline, target costing, and continuous Kaizen process improvement.
- **Product Differentiation:** The firm delivers unique product attributes, superior reliability, brand prestige, or customised service for which customers willingly pay a price premium. Under differentiation, SMA shifts away from rigid manufacturing cost minimisation toward tracking quality costs, research and development productivity, brand-building investments, customer retention metrics, and attribute-based profitability.

A strategic mismatch arises when an organisation attempts to compete via differentiation while retaining a control system designed exclusively for cost leadership, as rigid budget caps on customer service or R&D can erode the very attributes sustaining the price premium. Equally dangerous is being "stuck in the middle," lacking both the scale economies of a cost leader and the distinctive value proposition of a differentiator.

1.1.2 Competitor Accounting and Strategic Pricing

Competitor accounting comprises three core analytical techniques that bring market intelligence into the management accountant's toolkit:

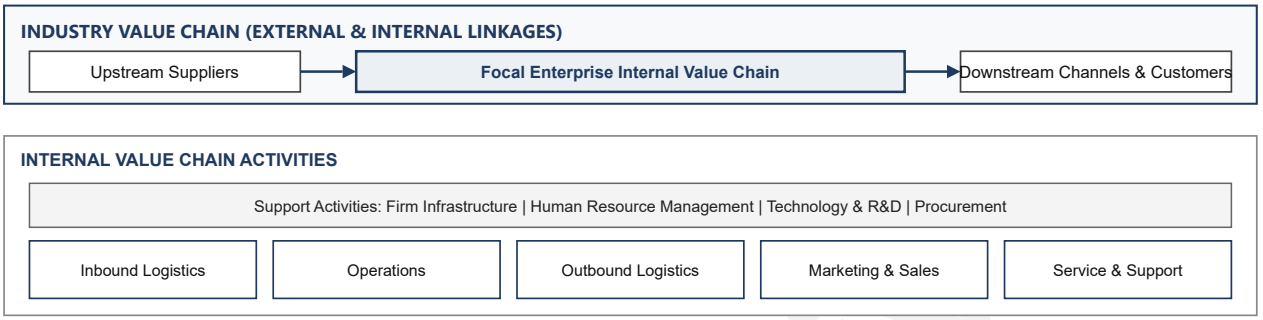
1. **Competitor Cost Assessment:** Estimating rivals' unit production and delivery costs using public financial disclosures (ASX annual reports, ASIC filings), physical product teardowns, wage awards, freight rate benchmarks, and technology comparisons. Understanding whether a rival's cost advantage stems from newer capital equipment, lower input prices, or superior capacity utilisation informs pricing and capital expenditure decisions.
2. **Competitive Position Monitoring:** Tracking competitors' market share, sales growth, operating margins, return on capital, and capacity expansions over multi-year intervals to detect emerging threats before they manifest in lost revenue.
3. **Competitor Performance Appraisal:** Interpreting rivals' published financial statements alongside strategic announcements to anticipate likely competitive responses—such as capacity pre-emption, aggressive discounting, or market exit.

Strategic pricing extends cost-plus pricing by incorporating competitor cost benchmarks, price elasticity of demand, and customer willingness to pay. Rather than mechanically adding a fixed markup to full absorption cost, management accountants model how price changes affect market share, capacity utilisation, and long-term industry profitability.

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1.2 Value Chain Analysis and Cost Driver Architecture

Value Chain Analysis (VCA), pioneered by Porter and operationalised for management accounting by Shank and Govindarajan, disaggregates the linked set of value-creating activities from basic raw materials through to end-use consumption and post-use disposal. Unlike conventional value-added analysis—which starts at payments to suppliers and stops at sales revenue—VCA captures the entire industry value chain, recognising that a firm's profitability depends critically on how effectively it manages linkages both inside its boundaries and across external partners.



1.2.1 Executing Value Chain Analysis

Applying VCA to a strategic decision follows a disciplined four-step methodology:

1. **Identify the Industry Value Chain:** Map every distinct economic activity from primary extraction or raw material synthesis through manufacturing, wholesale distribution, retail delivery, and end-of-life recycling. Only activities with separate cost drivers, significant cost proportions, or differentiation potential should be isolated.
2. **Assign Costs, Revenues, and Assets to Activities:** Reclassify general ledger expenses—often using Activity-Based Costing (ABC)—into value-creating activities and identify the operating assets employed in each stage. This reveals the return on assets earned at every link in the chain.
3. **Diagnose Cost Drivers for Each Activity:** Determine what structural and executional factors govern each activity's cost behaviour over the long run rather than relying solely on short-term output volume.
4. **Exploit Linkages to Build Advantage:** Redesign internal workflows or renegotiate external interfaces with suppliers and customers so that combined chain costs fall or customer-perceived value rises.

1.2.2 Structural versus Executional Cost Drivers

Traditional volume-based costing assumes unit output is the sole determinant of cost. Strategic cost management distinguishes between two broader categories of strategic cost drivers:

- **Structural Cost Drivers:** Derived from fundamental economic choices about the firm's underlying architecture. They include *scale* (investment size in manufacturing, R&D, or logistics), *scope* (degree of vertical integration across upstream/downstream stages), *experience* (cumulative learning curve effects), *technology* (process automation and digital integration), and *complexity* (breadth of product lines and SKU proliferation). Note that higher structural drivers are not

unconditionally desirable; excessive scale increases fixed-cost inflexibility, and excessive complexity inflates setup and scheduling overhead.

- **Executional Cost Drivers:** Reflect the firm's operational capability to execute its chosen strategic posture efficiently. They include *workforce involvement* (continuous improvement culture), *total quality management*, *capacity utilisation*, *plant layout efficiency*, *product configuration* (design for manufacturability), and *exploitation of external linkages* with suppliers and customers. Unlike structural drivers, more effective executional drivers nearly always reduce cost or enhance quality.

1.2.3 Upstream and Downstream Linkages: An Australian Example

Consider a Victorian dairy processor supplying UHT milk to a national supermarket retailer. Historically, the processor packaged milk in irregular carton dimensions that suited older filling lines, requiring retail store staff to manually restack shelves. By collaborating across the downstream linkage, the processor redesigned secondary packaging into shelf-ready trays compatible with automated palletisation and direct aisle placement. While the processor's packaging material cost rose by $0.04 per litre, retail shelf-replenishment labour fell by $0.11 per litre, generating a net $0.07 per litre chain saving shared through a long-term supply contract. Conversely, exploiting upstream linkages with dairy farms through shared cold-chain telemetry reduced milk spoilage and inbound tanker waiting times, demonstrating how value chain optimisation creates positive-sum economic gains.

1.3 Customer Profitability Analysis and Customer Lifetime Value

Not all revenue dollars are equally profitable. Two customers generating identical sales revenue can impose vastly different demands on order processing, customisation, expedited freight, credit terms, and post-sale technical support. Conventional accounting aggregates selling, general, and administrative (SG&A) costs into corporate overhead pools, obscuring customer-level economics. Customer Profitability Analysis (CPA) applies Activity-Based Costing to trace customer-specific revenues and service costs to individual accounts or customer segments.

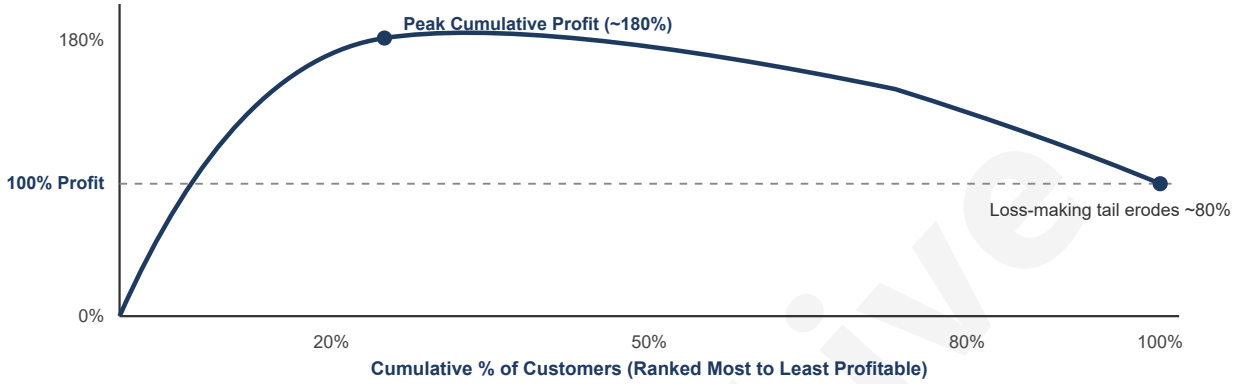
1.3.1 Customer Cost Hierarchy

To prevent arbitrary allocations, customer-related costs are structured across a four-tier hierarchy:

Hierarchy Level	Cost Examples	Typical Cost Driver
Order-Level Costs	Order entry, invoicing, credit checks, pick-and-pack, standard delivery setup.	Number of sales orders placed.
Unit / Batch-Level Costs	Product manufacturing cost, sales commissions, pallet freight, returns handling.	Units sold, cartons shipped, or number of returns.
Customer-Sustaining Costs	Dedicated account manager salaries, EDI portal maintenance, periodic visits, rebates.	Number of active customer accounts (independent of order volume).
Distribution Channel / Market Costs	National wholesale trade shows, regional warehouse leases, retail brand advertising.	Channel-specific allocation (not assigned to single accounts for drop decisions).

1.3.2 The Whale Curve of Customer Profitability

When customers are ranked from highest to lowest operating profit and their cumulative profit is plotted against the cumulative percentage of customers, empirical studies consistently reveal a characteristic "whale curve." Typically, the top 20% of customers generate approximately 150% to 225% of total company profit, the middle 60% break roughly even, and the bottom 20% erode 50% to 125% of profits due to small frequent orders, excessive customisation, high return rates, and demanding service requirements.



1.3.3 Worked AUD Example: Customer Profitability Analysis

Southern Cross Industrial Supplies Pty Ltd (Melbourne) distributes safety equipment to commercial clients. Its standard gross margin is 30% of net sales revenue. Activity-based analysis identifies four customer-service activity rates: order processing at $110 per order, standard pallet delivery at $85 per delivery, expedited rush delivery at $260 per rush shipment, and technical return/support visits at $340 per visit. Account-sustaining administration is $1,800 per active customer per year. Compare two clients, Apex Construction and Bayside Civil, for the financial year:

Metric / Activity	Apex Construction	Bayside Civil
Gross Sales Revenue	$240,000	$220,000
Volume Rebate Granted (5% for Apex; 8% negotiated by Bayside)	$12,000	$17,600
Cost of Goods Sold (70% of Gross Sales)	$168,000	$154,000
Number of Sales Orders	24 orders	110 orders
Standard Pallet Deliveries	24 deliveries	80 deliveries
Expedited Rush Shipments	2 rush shipments	30 rush shipments
Technical Return / Support Visits	1 visit	14 visits

Step-by-Step Profitability Resolution:

1. **Net Revenue and Gross Profit:**
   - Apex Net Revenue = $240,000 − $12,000 = $228,000. Gross Profit = $228,000 − $168,000 = $60,000 (26.3% net margin).

- Bayside Net Revenue = \$220,000 − \$17,600 = \$202,400. Gross Profit = \$202,400 − \$154,000 = \$48,400 (23.9% net margin).

2. **Customer Service & Sustaining Costs:**
   - Apex: (24 × \$110) + (24 × \$85) + (2 × \$260) + (1 × \$340) + \$1,800 = \$2,640 + \$2,040 + \$520 + \$340 + \$1,800 = \$7,340.
   - Bayside: (110 × \$110) + (80 × \$85) + (30 × \$260) + (14 × \$340) + \$1,800 = \$12,100 + \$6,800 + \$7,800 + \$4,760 + \$1,800 = \$33,260.
3. **Customer Operating Profit:**
   - Apex Operating Profit = \$60,000 − \$7,340 = **\$52,660** (23.1% of net revenue).
   - Bayside Operating Profit = \$48,400 − \$33,260 = **\$15,140** (7.5% of net revenue).

Although both customers generated comparable top-line sales (\$240,000 vs \$220,000), Bayside Civil generated less than one-third of Apex's operating profit. Rather than terminating Bayside—which still covers its incremental costs—management should introduce minimum order thresholds, unbundle rush-delivery surcharges, and renegotiate rebates tied to scheduled monthly ordering.

1.3.4 Customer Lifetime Value (CLV)

Single-period CPA can misclassify newly acquired customers who incur high initial onboarding costs or long-term clients temporarily experiencing lower order volumes. Customer Lifetime Value evaluates the net present value of cash flows expected over the entire relationship horizon:

$$CLV = -AC + \sum_{t=1}^{n} \frac{M_t \times r^{t-1}}{(1+i)^t}$$

Where:

- CLV = Customer Lifetime Value in Australian dollars (present value of the net customer relationship).
- AC = Initial customer acquisition and onboarding cost incurred at $t = 0$.
- M_t = Expected net annual contribution margin (revenue minus direct product and service-to-serve costs) in year t, assuming retention.
- r = Annual customer retention probability ($0 \le r \le 1$).
- i = Annual risk-adjusted discount rate (weighted average cost of capital).
- n = Planning horizon in years.

Worked CLV Calculation (Infinite-Horizon Approximation): When M is constant and $n \to \infty$, the series simplifies to:

$$CLV = -AC + \frac{M \times r}{1 + i - r}$$

Where M is the constant annual net margin earned at year-end if retained, r is annual retention rate, i is the discount rate, and AC is upfront acquisition cost. Suppose an Adelaide SaaS payroll provider incurs AC = \$1,400 to acquire a small-business subscriber generating M = \$950 per year in net contribution, with $r = 0.85$ (85% annual retention) and $i = 0.10$ (10% WACC):

$$CLV = -1,400 + \frac{950 \times 0.85}{1 + 0.10 - 0.85} = -1,400 + \frac{807.50}{0.25} = -1,400 + 3,230 = \$1,830$$

Even though Year 1 net cash flow (\$807.50 expected minus \$1,400 acquisition) appears negative under single-period accounting, the relationship creates \$1,830 in positive net present value.

1.4 Supplier Evaluation and Total Cost of Ownership (TCO)

Traditional procurement evaluates vendors predominantly on invoice purchase price. However, a low-quoted unit price often masks substantial downstream costs arising from late deliveries, defective batches, safety stock carrying costs, customs delays, and supplier administration. Total Cost of Ownership (TCO) quantifies every cost incurred across the procurement life cycle—pre-transaction, transaction, and post-transaction—to determine the true economic cost of dealing with each supplier.

TCO Cost Tier	Representative Cost Elements	Operational Impact on Focal Firm
Purchase Price	Quoted unit invoice price net of trade discounts, freight-in, import tariffs.	Direct material cost capitalised into inventory under AASB 102.
Quality & Inspection	Incoming batch sampling, lab testing, sorting defective units, rework, scrap loss.	Consumes QA technician labour and disrupts production scheduling.
Delivery & Lead-Time	Expedited airfreight, safety stock holding cost, line downtime from stockouts.	Inflates working capital tied up in buffer inventories.
Administrative & Risk	Purchase order reconciliation, dispute resolution, warranty claim recovery, FX hedging.	Increases procurement overhead and operational risk exposure.

1.4.1 Supplier Performance Index (SPI)

To express TCO in a normalised metric comparable across competing bids, management accountants compute the Supplier Performance Index (SPI):

$$SPI = \frac{\text{Total Supplier-Related Non-Purchase Costs}}{\text{Total Purchase Price Paid to Supplier}}$$

Where:

- SPI = Supplier Performance Index (dimensionless ratio expressing non-price activity costs per dollar of purchase spend).

- Total Supplier-Related Non-Purchase Costs = Sum of quality failure, inspection, expediting, late-delivery downtime, and procurement administration costs attributable to the supplier.
- Total Purchase Price Paid to Supplier = Unit invoice price multiplied by total quantity purchased during the evaluation period.

The **Effective Unit Cost (TCO per unit)** is subsequently computed as:

$$\text{TCO per Unit} = P_{\text{unit}} \times (1 + SPI)$$

Where P_{unit} is the quoted unit invoice price in AUD.

1.4.2 Worked AUD Example: Domestic vs Offshore Supplier Evaluation

Brisbane Precision Valves Ltd purchases 10,000 brass valve housings annually. Two suppliers submit quotes: Tasman Castings (Brisbane, local) quotes $42.00 per unit, whereas Pacific Rim Components (offshore) quotes $36.00 per unit (landed duty-paid). Management accounting extracts activity-based supplier support rates from the ERP system: incoming batch inspection ($400 per inspection), rework of defective units ($28 per defective unit), line stoppage from late delivery ($1,500 per late-delivery day), and additional working capital carrying cost for extended transit safety stock (10% per annum on average buffer stock). Period performance data are as follows:

- **Tasman Castings:** 10,000 units @ $42.00 = $420,000 purchase spend; 4 inspections required ($1,600); 50 defective units ($1,400); 1 late-delivery day ($1,500); $15,000 average buffer stock ($1,500 carrying cost).
- **Pacific Rim Components:** 10,000 units @ $36.00 = $360,000 purchase spend; 20 inspections required ($8,000); 650 defective units ($18,200); 18 late-delivery days ($27,000); $95,000 average buffer stock ($9,500 carrying cost); plus $12,000 in annual customs/FX administration.

Step-by-Step Resolution:

1. **Total Non-Purchase Costs:**
   - Tasman Castings: $1,600 + $1,400 + $1,500 + $1,500 = **$6,000**.
   - Pacific Rim Components: $8,000 + $18,200 + $27,000 + $9,500 + $12,000 = **$74,700**.
2. **Supplier Performance Index (SPI):**
   - $SPI_{\text{Tasman}} = \frac{6{,}000}{420{,}000} = 0.0143$ (or 1.43%)
   - $SPI_{\text{Pacific Rim}} = \frac{74{,}700}{360{,}000} = 0.2075$ (or 20.75%)
3. **Effective TCO per Unit and Total Cost:**
   - Tasman TCO per unit = $42.00 × (1 + 0.0143) = **$42.60** (Total TCO = **$426,000**).
   - Pacific Rim TCO per unit = $36.00 × (1 + 0.2075) = **$43.47** (Total TCO = **$434,700**).

Although Pacific Rim offered a 14.3% lower invoice price ($6.00 per unit cheaper), its inferior quality and lead-time reliability imposed $74,700 in hidden operational costs, making Tasman Castings $8,700 cheaper overall for the year.

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1.5 Life-Cycle Costing (LCC)

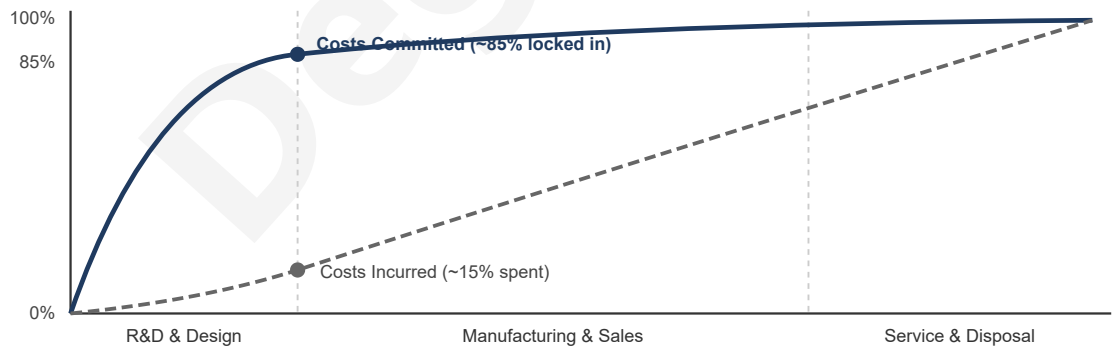
Conventional financial reporting under AASB 102 (*Inventories*) and AASB 138 (*Intangible Assets*) requires research outlays and most marketing expenses to be expensed in the period incurred, whereas manufacturing costs are attached to inventory. Consequently, annual profit statements often understate the profitability of products during heavy R&D launch phases and overstate profitability during mature production phases, while ignoring post-sale warranty and environmental decommissioning liabilities. Life-Cycle Costing (LCC) accumulates all revenues and costs associated with a product from initial concept development through final retirement and site remediation.

1.5.1 Phases of the Product Life Cycle

1. **Upstream Phase (R&D, Concept & Engineering Design):** Market research, prototyping, patent registration, tooling setup, and regulatory certification (e.g., TGA approval for medical devices in Australia).
2. **Manufacturing / Delivery Phase (Introduction, Growth & Maturity):** Direct materials, conversion costs, production ramp-up learning curve, logistics, and sales promotion.
3. **Downstream Phase (Customer Support, Warranty & End-of-Life):** Field warranty repairs, spare parts stocking, product recalls, dismantling, and environmental remediation obligations (recognised under AASB 137 *Provisions*).

1.5.2 Cost Commitment versus Cost Incurrence

A central strategic insight of LCC is the divergence between when costs are *committed* (locked in by design choices) and when costs are actually *incurred* (recorded as cash outflows or journal entries). Empirical studies in manufacturing demonstrate that by the end of the product design phase—when only 10% to 15% of cumulative cash costs have been spent—approximately 80% to 85% of total life-cycle costs have already been committed through material specifications, component count, tolerances, and assembly architecture.



This gap explains why cost reduction efforts focused purely on the factory floor achieve limited savings: once engineering blueprints and tooling are finalised, management can influence only the remaining 15% to 20% of committed cost.

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1.5.3 Worked AUD Example: Life-Cycle Profitability Budget

TasSolar Storage Pty Ltd is evaluating a commercial battery inverter with a 4-year market life and total projected sales of 5,000 units at an average price of $2,400 per unit (Total Revenue = $12,000,000). Cost projections across the full life cycle are:

- **Upstream (Year 0):** R&D and firmware design $1,450,000; AS/NZS safety certification and tooling $550,000.
- **Manufacturing (Years 1–4):** Direct materials and assembly $1,320 per unit ($6,600,000 total); batch and sustaining production overhead $900,000.
- **Downstream (Years 1–5):** Marketing and dealer training $650,000; estimated 5-year warranty servicing at $140 per unit ($700,000); end-of-life battery recycling levy at $60 per unit ($300,000).

Life-Cycle Profit Evaluation (Undiscounted Summary):

- Total Life-Cycle Revenue = 5,000 × $2,400 = $12,000,000
- Less Upstream Costs = $1,450,000 + $550,000 = $2,000,000 (16.7% of revenue)
- Less Manufacturing Costs = $6,600,000 + $900,000 = $7,500,000 (62.5% of revenue)
- Less Downstream & End-of-Life Costs = $650,000 + $700,000 + $300,000 = $1,650,000 (13.75% of revenue)
- **Total Life-Cycle Costs** = $11,150,000 ($2,230 per unit)
- **Total Life-Cycle Operating Profit** = $12,000,000 − $11,150,000 = **$850,000** ($170 per unit; 7.08% life-cycle ROS).

Notice that a traditional manufacturing-only gross margin calculation ($2,400 − $1,500 = $900 per unit, or 37.5%) would severely overstate product profitability by omitting $3,650,000 ($730 per unit) of upstream R&D and downstream warranty/recycling costs.

1.6 Target Costing and Value Engineering

Because approximately 80% of a product's life-cycle cost is locked in during design, proactive cost management must occur before production begins. Target costing—originating in Japanese automotive manufacturing (Toyota) and widely adopted across competitive global industries—reverses the traditional cost-plus pricing equation. Instead of designing a product, summing its estimated costs, and adding a profit margin to set a selling price, target costing treats market price as an external constraint dictated by customers and competitors.

1.6.1 Mathematical Formulation of Target Costing

$$TC = P_{\text{market}} - \Pi_{\text{target}}$$

$$\text{Cost Gap} = C_{\text{drifting}} - TC$$

Where:

- TC = Allowable Target Cost per unit (maximum permissible life-cycle or manufacturing cost).
- P_{market} = Target selling price determined by market research, customer willingness to pay, and competitive benchmarking.
- Π_{target} = Target operating profit margin per unit required to deliver the firm's hurdle return on invested capital.
- Cost Gap = Required cost reduction to achieve strategic profitability without sacrificing market price.
- C_{drifting} = Current estimated ("drifting") cost based on preliminary engineering specifications and existing supplier processes.

1.6.2 Value Engineering, Functional Analysis, and Kaizen Costing

Closing the cost gap relies primarily on **Value Engineering (VE)**—a systematic, cross-functional examination of every component and function during the design stage to deliver required customer functionality at the lowest possible life-cycle cost. Value engineering teams use three principal tools:

1. **Functional Analysis (QFD Alignment):** Customers evaluate products based on functions (e.g., durability, aesthetic finish, battery endurance) rather than internal components. Management accountants allocate component costs to product functions and compare each function's share of cost against its share of customer-perceived importance. Components whose cost percentage substantially exceeds their customer value percentage are primary targets for redesign.
2. **Design for Manufacturability and Assembly (DFMA):** Reducing total part counts, standardising fasteners across product families, eliminating unnecessary tolerances, and designing snap-fit assemblies that lower factory cycle time and defect rates.
3. **Tear-Down Analysis (Reverse Engineering):** Disassembling competing products to benchmark material choices, module integration, and assembly simplicity.

Once production commences, major design changes become prohibitively expensive. Cost management therefore transitions from target costing to **Kaizen costing**—continuous, incremental operational cost reductions achieved during manufacturing through employee suggestions, setup-time reduction, and waste elimination.

1.6.3 Worked AUD Example: Target Costing and Value Engineering

Yarra Appliances Pty Ltd is developing a smart commercial coffee grinder for Australian hospitality venues. Market intelligence indicates competitors sell comparable grinders for $1,150, and hospitality buyers will pay $1,200 only if noise reduction and digital dosing precision are preserved. Yarra requires a 25% target return on sales (ROS) to fund R&D and earn its cost of capital. Preliminary engineering estimates a drifting unit cost of $995, broken down across four functional subsystems:

Subsystem / Function	Drifting Cost ($/unit)	% of Drifting Cost	Customer Value Weight (%)	Value Index (Value % / Cost %)
Burr Grinding & Motor Drive	$418	42.0%	45.0%	1.07

Subsystem / Function	Drifting Cost ($/unit)	% of Drifting Cost	Customer Value Weight (%)	Value Index (Value % / Cost %)
Digital Load-Cell Dosing	$219	22.0%	30.0%	1.36
Acoustic Enclosure & Chassis	$258	25.9%	15.0%	0.58
LCD Touchscreen & Packaging	$100	10.1%	10.0%	0.99
Total	**$995**	**100.0%**	**100.0%**	—

Step-by-Step Target Costing Resolution:

1. **Compute Target Cost (TC):**
   - P_{market} = $1,200; Π_{target} = 25% × $1,200 = $300.
   - TC = $1,200 − $300 = **$900** per unit.
2. **Identify the Cost Gap:**
   - $\text{Cost Gap} = C_{\text{drifting}} - TC$ = $995 − $900 = **$95** per unit (a 9.55% cost reduction required before launch).
3. **Diagnose Value Engineering Priorities via Value Index:**
   - A Value Index below 1.00 indicates cost exceeds customer-perceived importance. The *Acoustic Enclosure & Chassis* has a Value Index of only $0.58 (15%/25.9%), *absorbing* 258 per unit despite driving only 15% of customer value. Conversely, *Digital Load-Cell Dosing* has a Value Index of 1.36 and must not be degraded.
4. **Apply Value Engineering Redesign:**
   - By replacing a custom CNC-machined aluminium housing with high-density die-cast recycled alloy plus moulded internal acoustic baffles, enclosure cost falls from $258 to $178 ($80 saving) without raising decibel output.
   - Replacing bespoke display connectors with a standardised off-the-shelf OLED module and simplifying foam packaging cuts LCD & packaging cost from $100 to $82 ($18 saving).
   - Revised unit cost = $995 − $80 − $18 = **$897**, eliminating the $95 cost gap and securing a $303 unit margin (25.25% ROS) at launch.

1.7 Integrating SMA Tools into Strategic Decision-Making

Effective strategic management accounting does not deploy Customer Profitability Analysis, Supplier TCO, Life-Cycle Costing, Value Chain Analysis, or Target Costing as isolated exercises. Instead, they operate as an integrated decision architecture across the enterprise's strategic planning cycle. During product conception, Target Costing and Life-Cycle Costing ensure engineering teams design offerings that satisfy market price points while covering upstream R&D and downstream warranty and environmental obligations. During procurement and production scaling, Supplier TCO and Value Chain linkages guide make-or-buy decisions, supplier co-design, and elimination of non-value-added logistics

friction. Once products reach commercial maturity, Customer Profitability Analysis and Customer Lifetime Value redirect sales incentives away from sheer revenue volume toward sustainable, net-positive customer relationships.

In Australian industries exposed to intense global trade, volatile commodity prices, and rising labour and energy costs, management accountants act as strategic business partners who translate operational drivers into long-term economic value. Mastery of these external and forward-looking analytical frameworks lays the foundation for designing divisional structures, performance measures, and incentive systems—the central focus of Modules 2, 3, and 4.

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