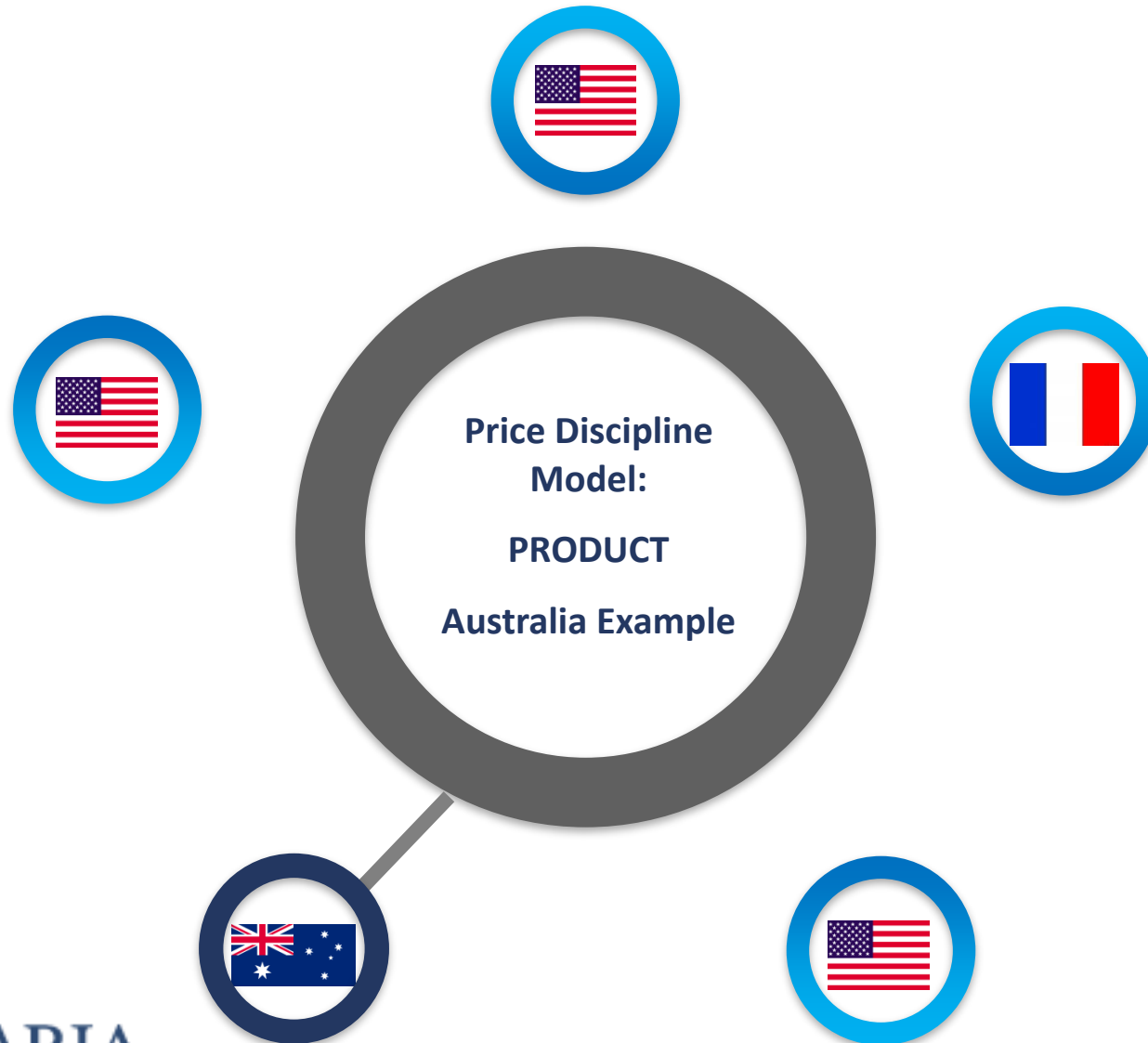


COST MODEL EXAMPLES



Scenario: Pumps Example

- A major Oil & Gas company is in the process of renegotiating a contract with its pump supplier located in Australia.
- The company currently spends approximately AUD 4 million annually with this supplier that is very strategic to its business.
- The supplier has proposed a price of **AUD 58,000 per pump for a volume of 100 units** compared to the previous year's price of **AUD 50,000 per pump for a volume of 80 units**.
- The analyst preparing for this negotiation decided to use Anklesaria's Price Discipline™ methodology to evaluate the fairness of the proposal.



Steps for building a Price Discipline™ Model

Select base period

1

Create industry cost profile

2

Breakdown the base year price (using cost profile)

3

Identify tracking mechanisms

4

Adjustment of Manufacturing Overhead (MOH) and GS&A Expenses

5

Create Industry Cost Profile

Industry Cost Profile – Pumps

Element	%
Direct Material	48.3%
<i>Steel</i>	40.4%
<i>Metal Fasteners</i>	1.9%
<i>Aluminum castings</i>	6.0%
Direct Labour	7.7%
Manufacturing Overhead	21.9%
<i>Cost of Goods Sold</i>	77.9%
GSA & Other Expenses	11.7%
Profit Before Taxes	10.4%
SHOULD COST	100%

Breakdown the base year price (using cost profile)

Element	%	AUD	Calculation
Direct Material	48.3%	24,150	50,000 * 0.483
Steel	40.4%	20,200	50,000*0.404
Metal Fasteners	1.9%	950	50,000*0.019
Aluminum castings	6.0%	3,000	50,000*0.06
Direct Labour	7.7%	3,850	50,000*0.077
Manufacturing Overhead	21.9%	10,950	50,000*0.219
Cost of Goods Sold	77.9%	38,950	50,000*0.779
GSA & Other Expenses	11.7%	5,850	50,000*0.117
Profit Before Taxes	10.4%	5,200	50,000*0.104
SHOULD COST	100%	50,000	Base Year Price

Identify tracking mechanisms

Direct Material

Steel

Metal Fasteners

Aluminum castings

List the factors that have impacted material costs over the given period and identify tracking mechanisms/indices to evaluate changes in each factor

Factor	Track Mech.
Price	Producer Price Index
Productivity	Quality audits
Supplier Competitiveness	Min Advantage Targets, Benchmarking studies

Identify tracking mechanisms

Material costs: Producer Price Indices

Iron smelting and Steel manufacturing	
Sep-2020	
	115.2
Sep-2021	
	148.4

} **28.8 %**

$$= (148.4/115.2) - 1 = 0.288 = 28.8\%$$

Fabricated Metal Product Manufacturing	
Sep-2020	
	138.3
Sep-2021	
	151.6

} **9.6%**

$$= (151.6/138.3) - 1 = 0.096 = 9.6\%$$

Alumina production	
Sep-2020	
	114.2
Sep-2021	
	115.8

} **1.4%**

$$= (115.8/114.2) - 1 = 0.014 = 1.4\%$$

Source: Australian Bureau of Statistics

Identify tracking mechanisms

Material costs: MAT and Productivity

Minimum Advantage Target (MAT)	= 3% on all materials
Estimate average change in productivity over the given period (for all materials)	= 1% improvement

Material costs: Calculated Adjustments

Element	2020	2021	Calculation
Direct Material	AUD 24,150	AUD 29,082	Steel+ Aluminum+ Metal fasteners
<i>Steel</i>	<i>AUD 20,200</i>	<i>AUD 25,157</i>	$20,200 * (1 + 0.288 - 0.03) * (1 - 0.01)$
<i>Metal Fasteners</i>	<i>AUD 950</i>	<i>AUD 1003</i>	$950 * (1 + 0.096 - 0.03) * (1 - 0.01)$
<i>Aluminum castings</i>	<i>AUD 3,000</i>	<i>AUD 2,922</i>	$3,000 * (1 + 0.014 - 0.03) * (1 - 0.01)$

Identify tracking mechanisms

Direct Labour

List the factors that have impacted labour costs over the given period and identify tracking mechanisms/indices to evaluate changes in each factor

Factor	Track Mech.
Wage rate	CPI for Industry workers; Australian Bureau of Statistics
Productivity	Quality audits

Identify tracking mechanisms

Wage Price Index for Manufacturing

Source: Australian Bureau of Statistics

Total Hourly Rates of Pay excluding Bonus	
Sep-2020	134.6
Sep-2021	137.3

} 2.01%

$$= (137.3 / 134.6) - 1 = 0.0201 = 2.01\%$$

Identify tracking mechanisms

Direct Labour costs: Productivity

Estimate average change in labour productivity over the given period

= 2% improvement

Direct Labour costs: Calculated Adjustments

Element	2020	2021	Calculation
Direct Labour	AUD 3,850	AUD 3,849	$3,850 * (1 + 0.0201) * (1 - 0.02)$

Identify tracking mechanisms

Manufacturing Overhead

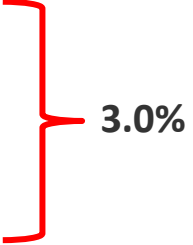
GSA & Other Expenses

List the factors that have impacted overhead costs over the given period and identify tracking mechanisms/indices to evaluate changes in each factor

Factor	Track Mech.
Inflation	Consumer Price Index

Identify tracking mechanisms

All Groups CPI; Australia	
Sep-2020	116.2
Sep-2021	119.7



$$= (119.7 / 116.2) - 1 = 0.03 = 3.0\%$$

Source: Australian Bureau of Statistics

Adjustment of MOH and GS&A Expenses

Example: Fixed and Variable costs for a Smart Watch



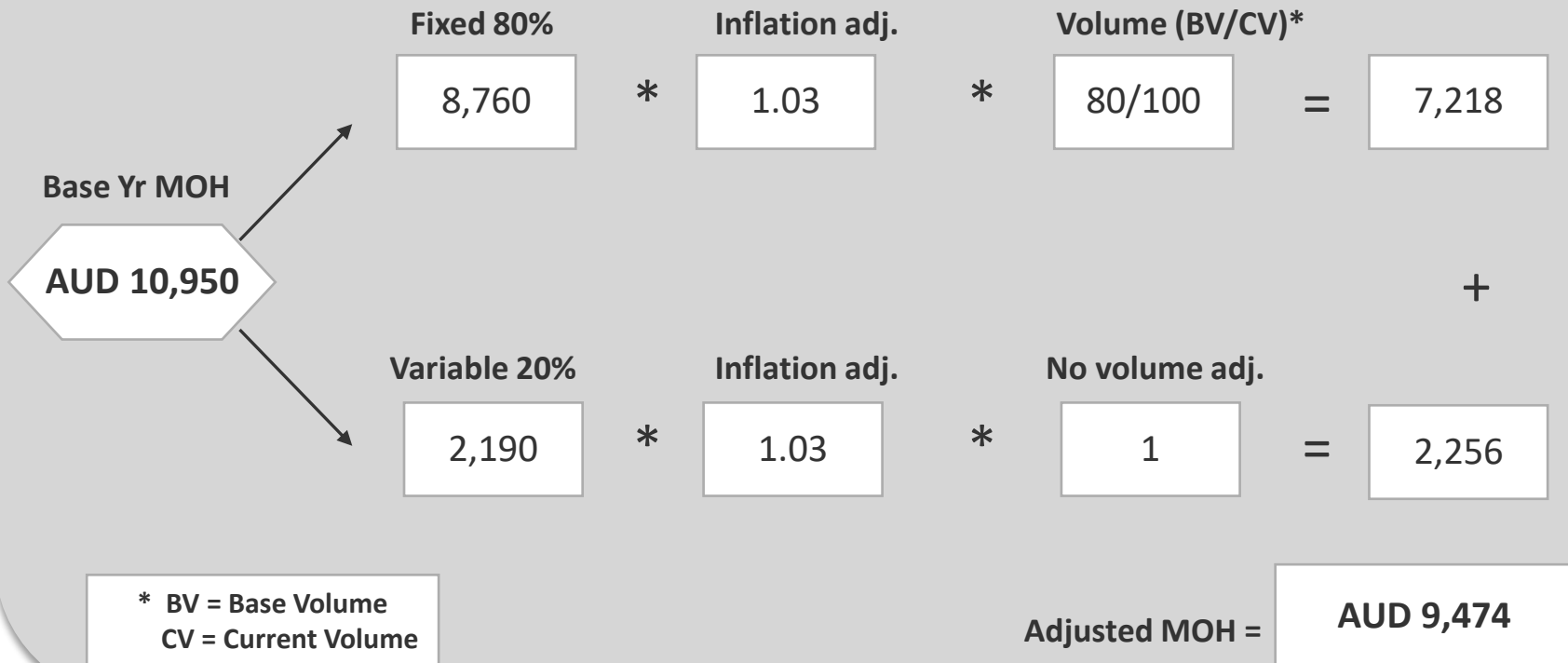
Typically
80% fixed
20% variable

Typically
90% fixed
10% variable

	Fixed	Variable
Direct Material		<ul style="list-style-type: none"> LCD panel Wrist band Processor Sim card
Direct Labor		<ul style="list-style-type: none"> CNC operator Assembly Testing
MOH	<ul style="list-style-type: none"> Facilities rent Depreciation Security Cafeteria GM QC Engineers Plant engineers Maintenance Electricity 	<ul style="list-style-type: none"> Electricity Use-based maintenance Logistics
GSA	<ul style="list-style-type: none"> Executives Marketing Corporate IT Procurement Sales salary Office leases 	<ul style="list-style-type: none"> Sales commissions Customer support

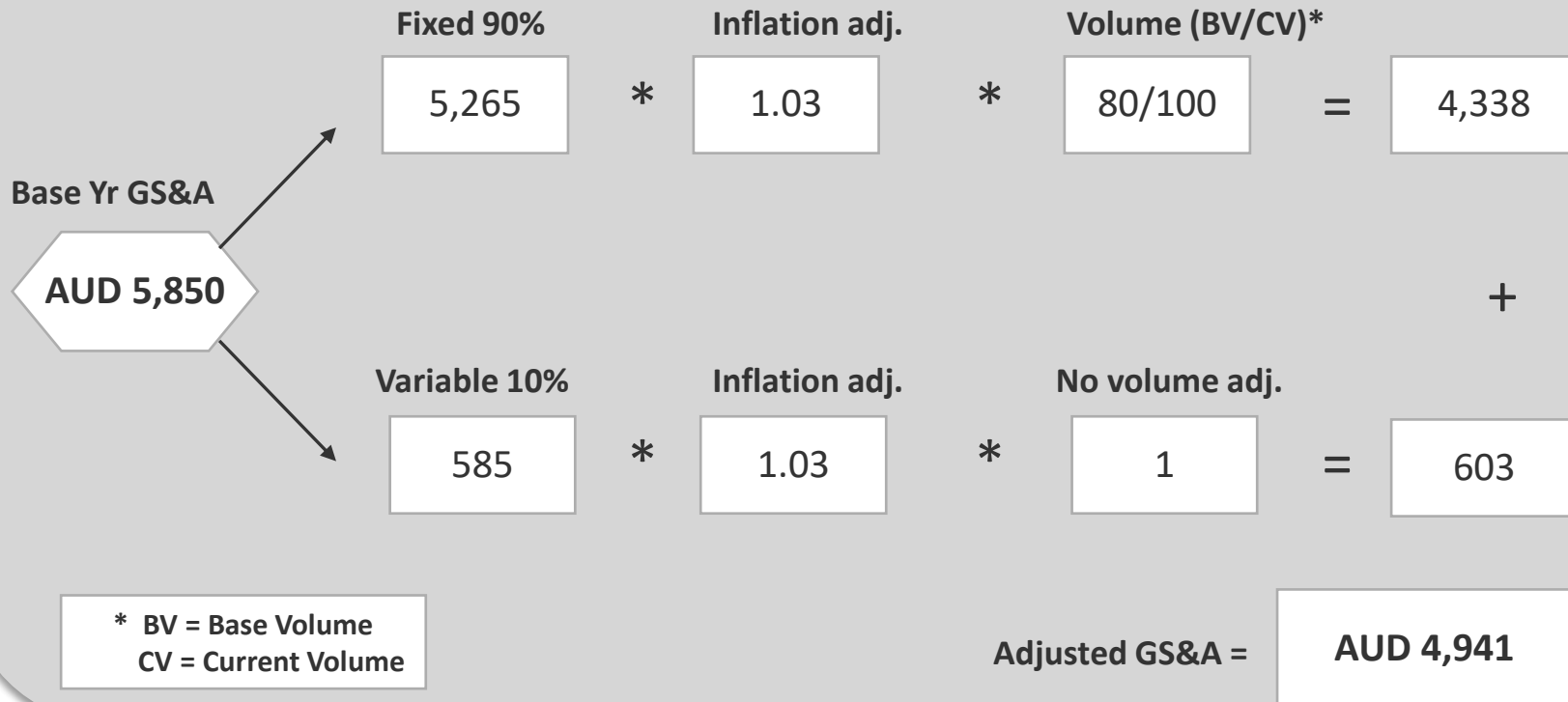
Adjustment of Manufacturing Overhead

Manufacturing Overhead Adjustment



Adjustment of GS&A and Other Expenses

General, Selling & Admin and Other Expenses Adjustment



Price Discipline Model: Pumps

Element	2020 (AUD)	2021 (AUD)	Adjustments made
Direct Material	24,150	29,082	Adjusted for price, productivity changes, and MAT
<i>Steel</i>	20,200	25,157	
<i>Metal Fasteners</i>	950	1003	
<i>Aluminum castings</i>	3,000	2,922	
Direct Labour	3,850	3,849	Adjusted for changes in wage rates and productivity
Manufacturing Overhead	10,950	9,474	Adjusted for inflation, Fixed OH for volume
Cost of Goods Sold	38,950	42,405	
GSA & Other Expenses	5,850	4,941	Adjusted for inflation, Fixed OH for volume
Profit Before Taxes	5,200	5,496	Profit % kept constant at 10.4%
SHOULD COST	50,000	52,842	$(COGS+SGA)/(1-.104)$

Supplier Proposal = AUD 58,000

Potential Savings = 9.76%

Profitability is the key to competitiveness

- Acknowledge the need for suppliers to make a reasonable profit early in the process
- Profit should be discussed when it becomes a “critical” cost
- Profit should be based on risk and/or value added
- Select appropriate profit option:
 - Current supplier profit margin
 - Industry margin
 - Industry margin plus premium
 - Current absolute per unit dollars
 - Current total dollars (ROI/KPI)