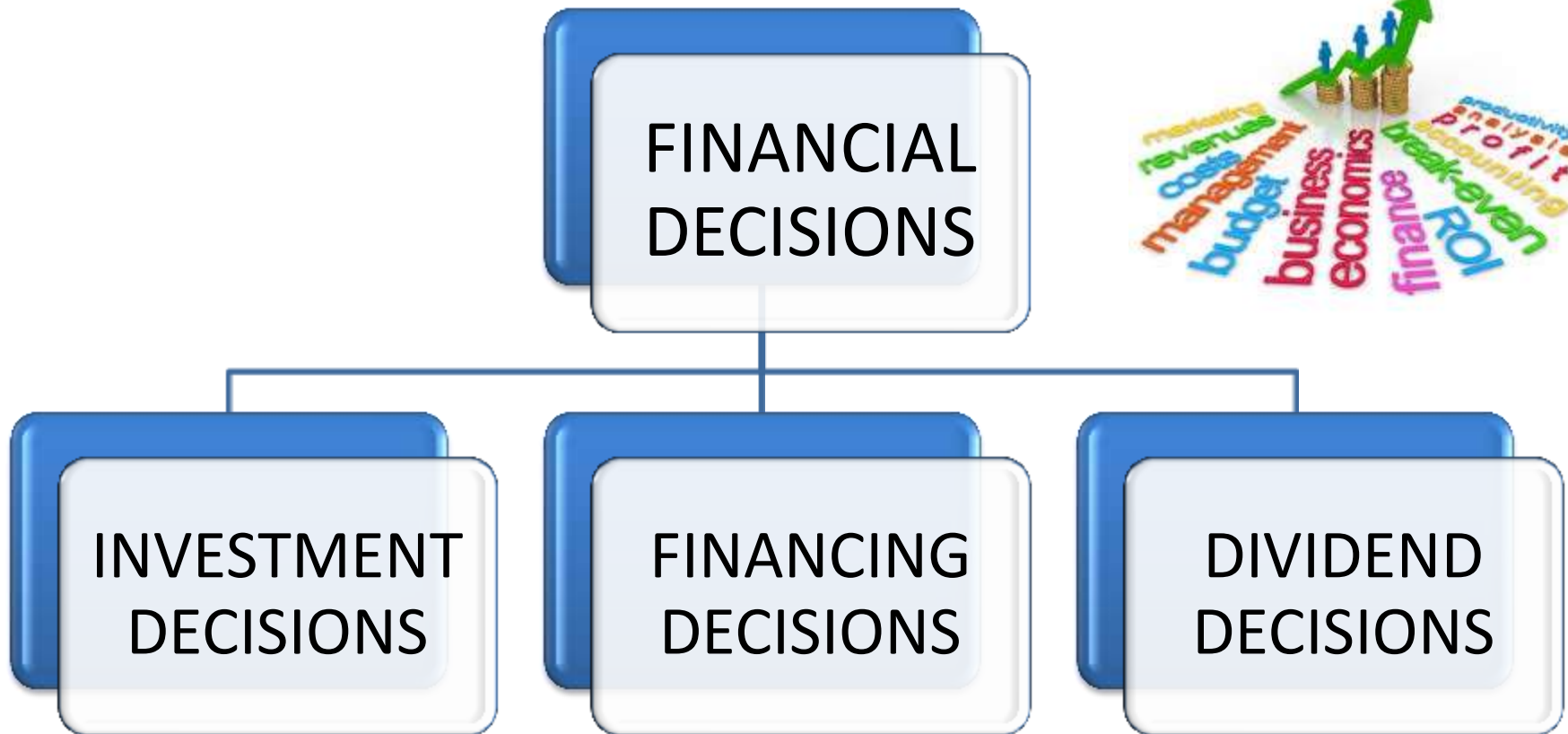


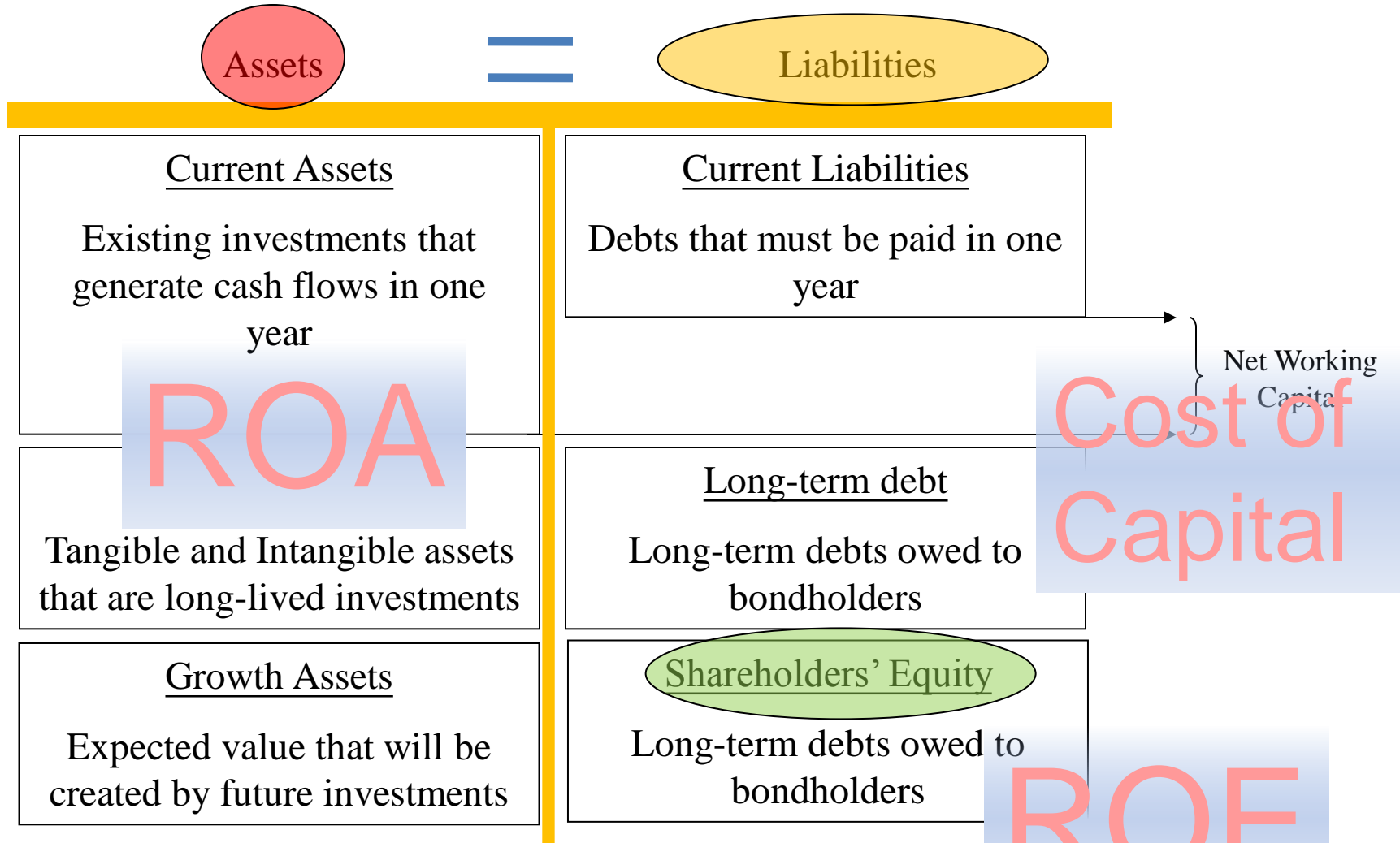
# Corporate Financial Management Operation FPG

Dr. Yih-Wen Shyu (Peter)  
College of Management  
Chang Gung University, Taiwan

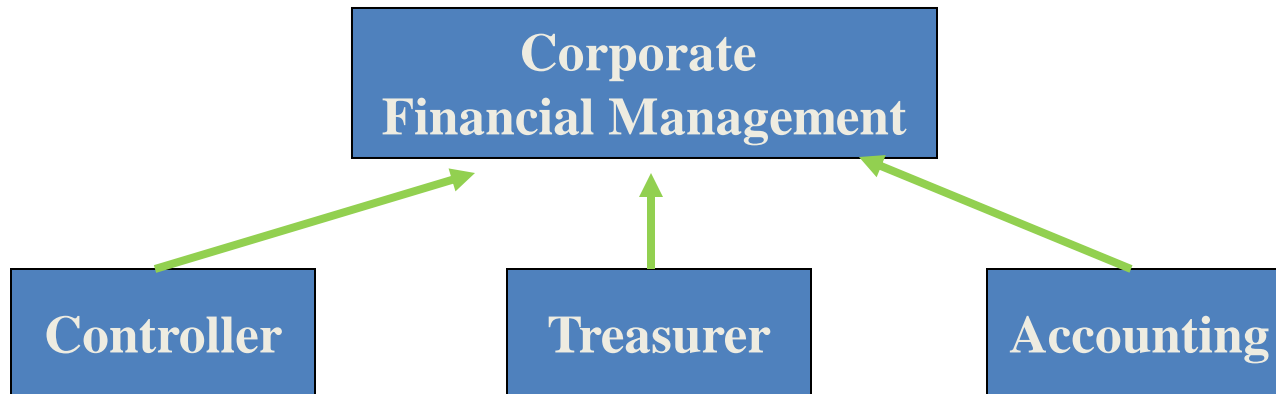
# Corporate Finance in FPG



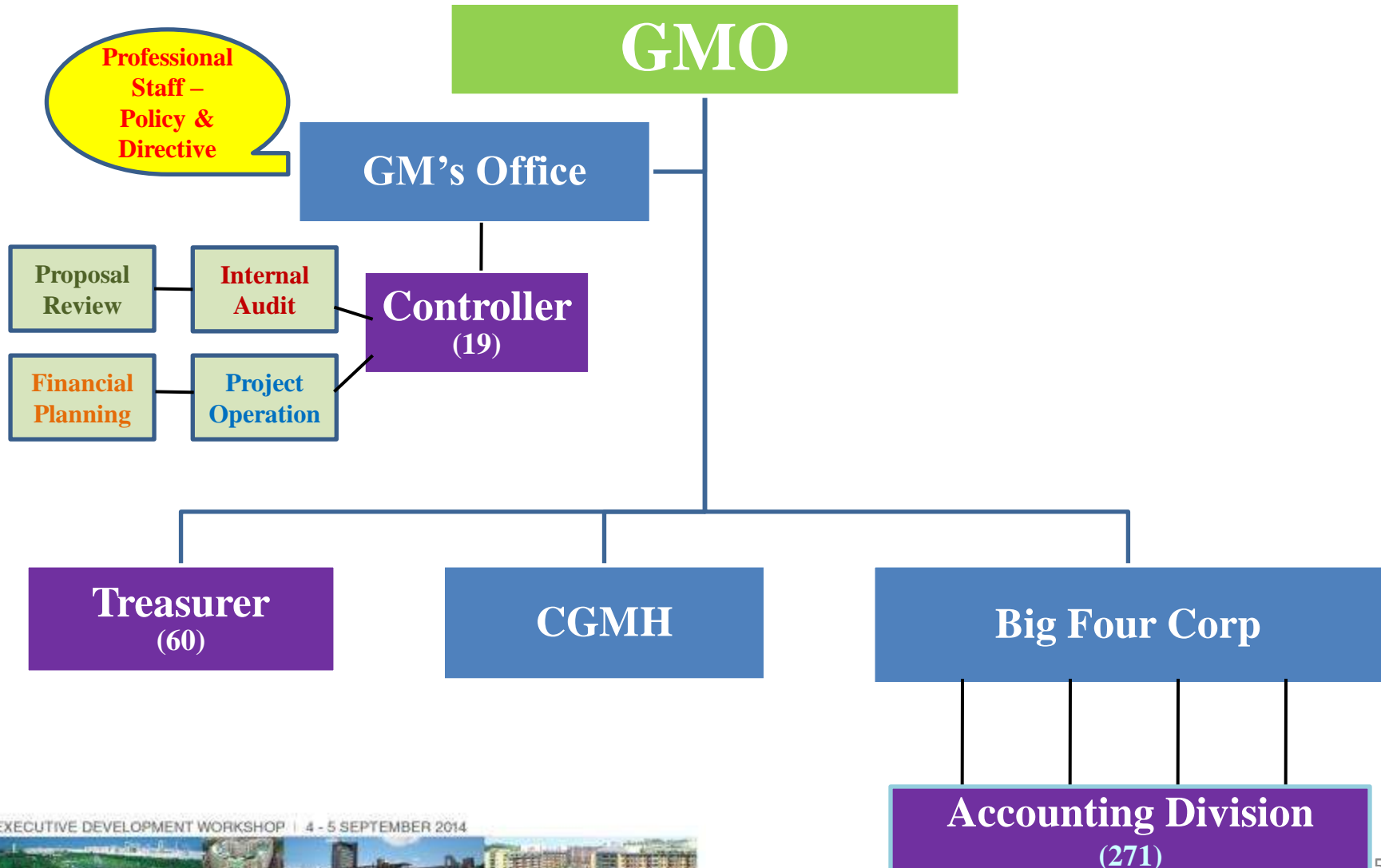
# Balance Sheet Model



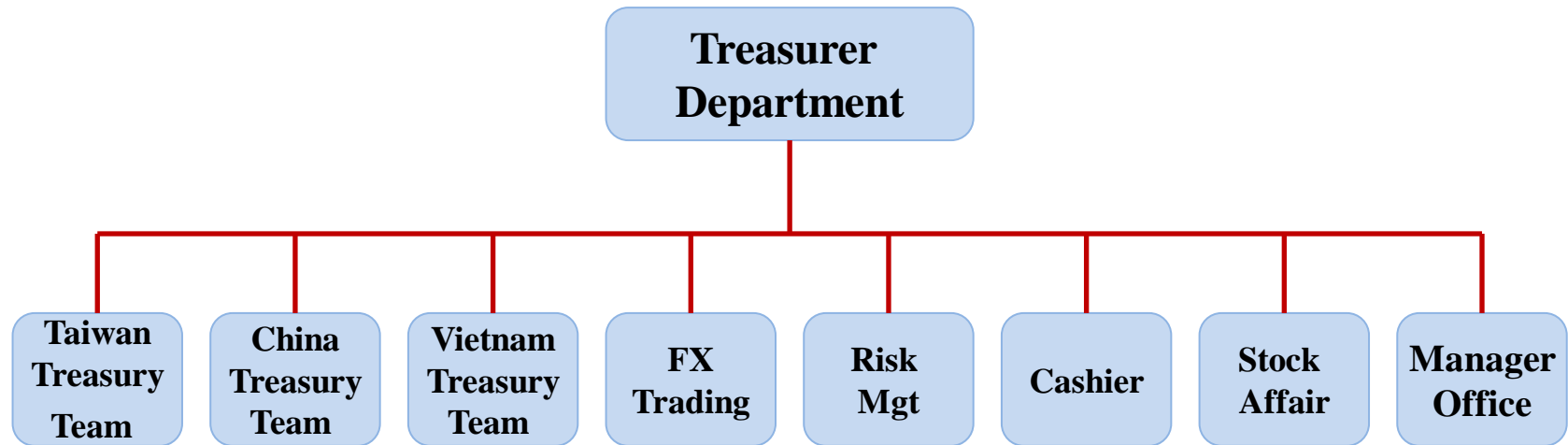
# What Really is it Anyway?



# Organization Chart



# Treasurer Department





# Investment Decision



**New Product Development**

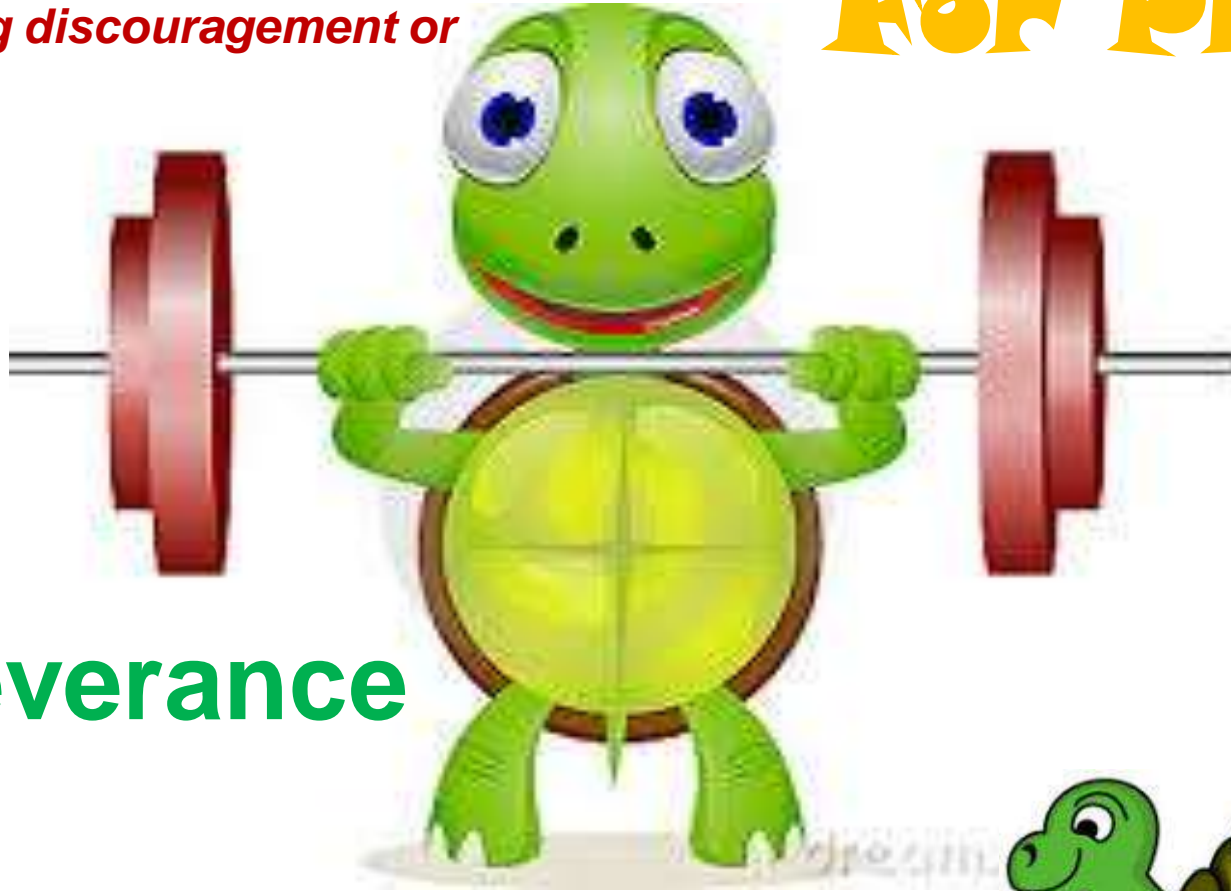
**Production Scale Expansion**



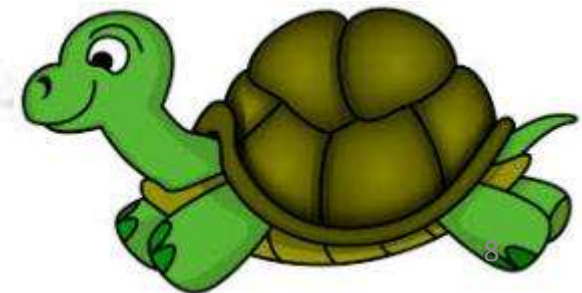
# No Short Cut to Success

*Continued steady belief and efforts  
withstanding discouragement or  
difficulty*

## For Profit

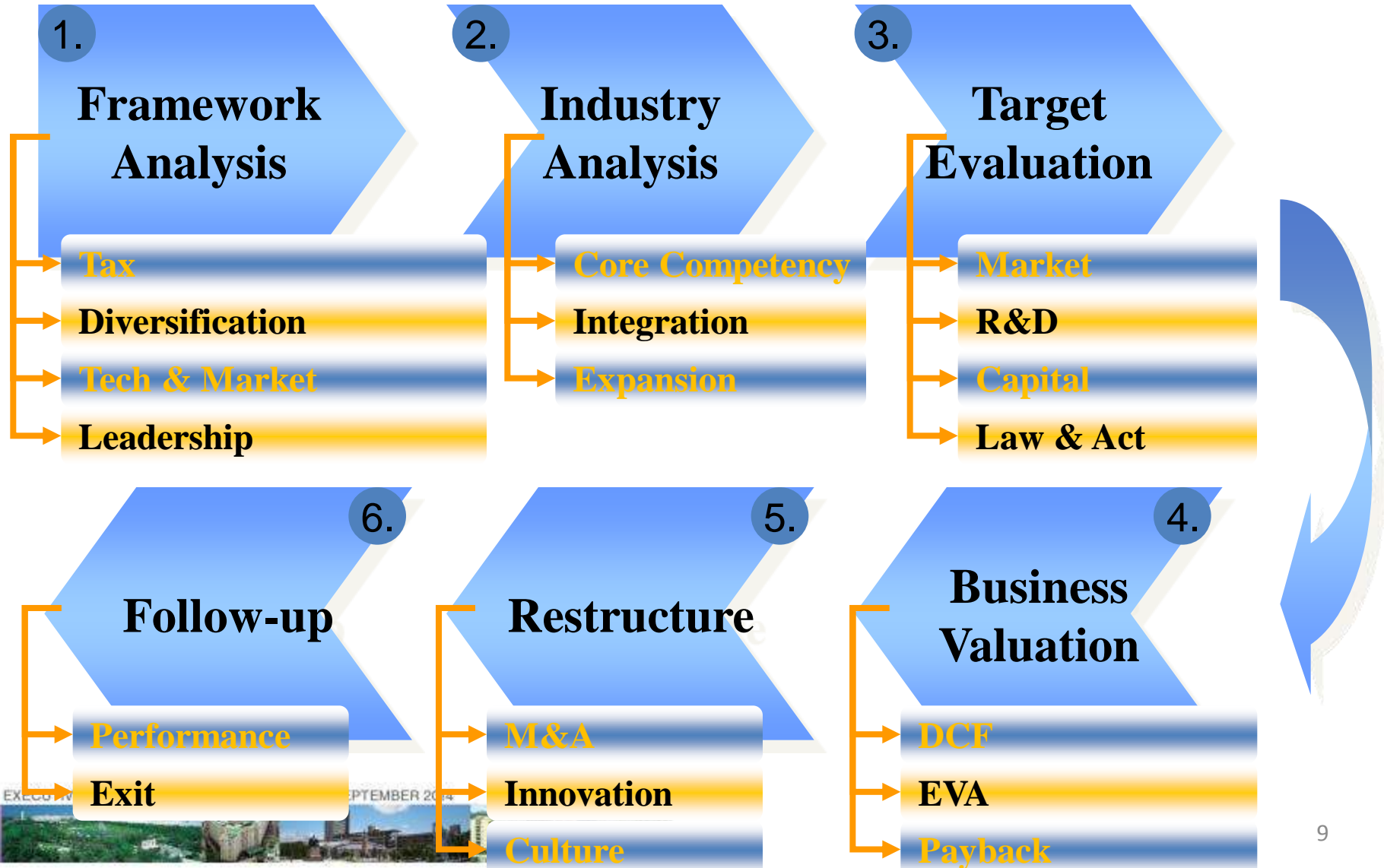


## Perseverance

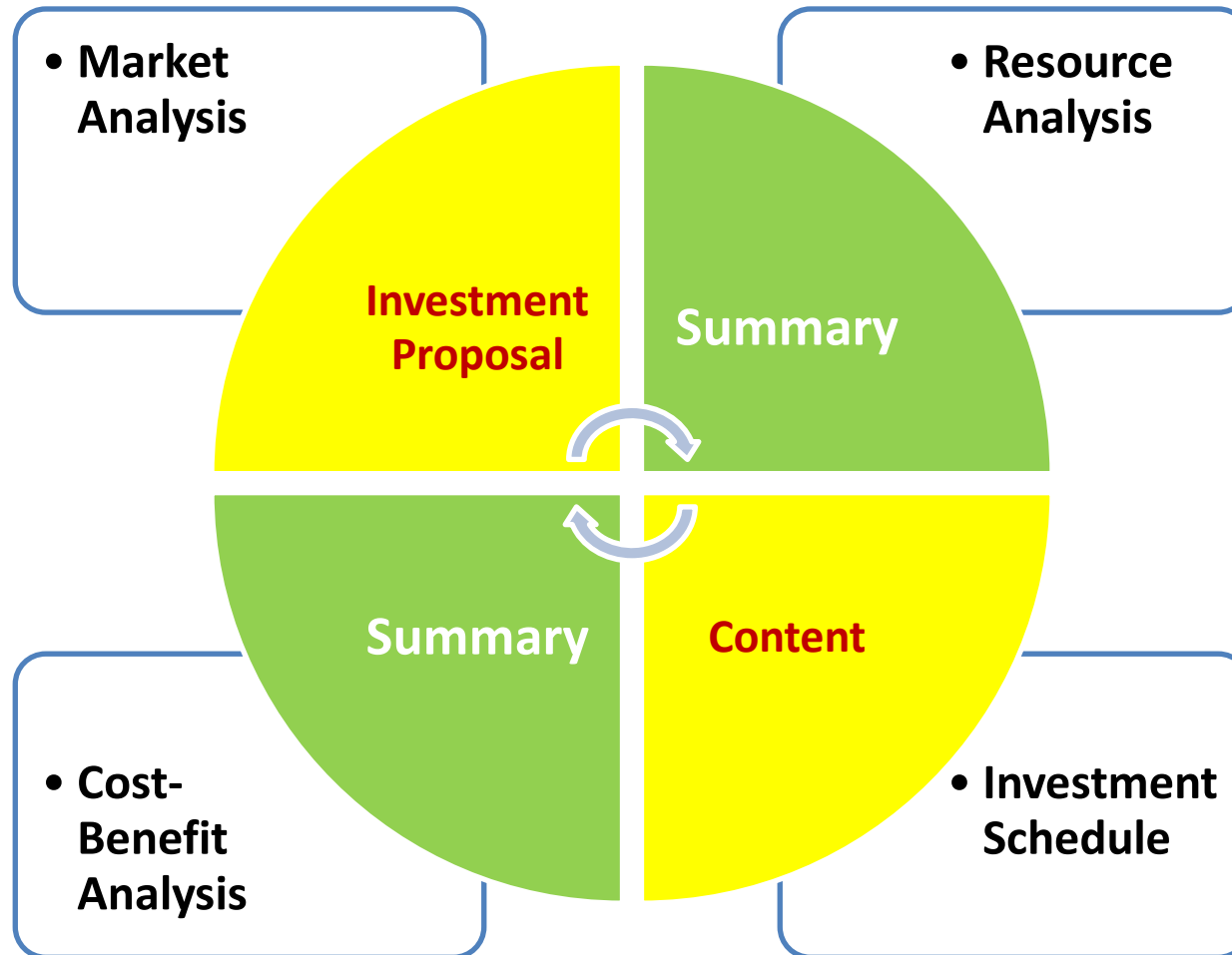




# Investment Management Process



# Investment Proposal

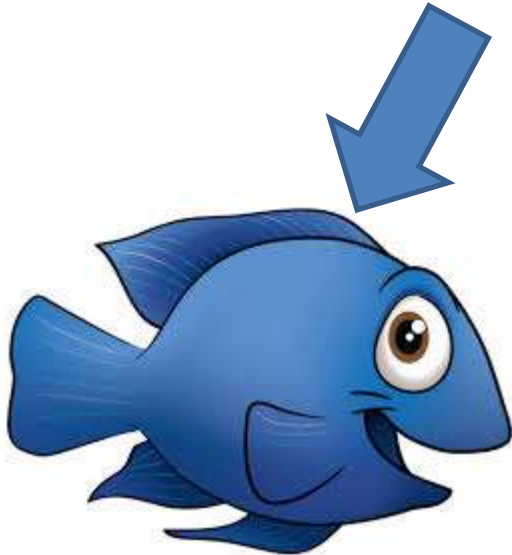


# Demo- Proposal Summary Table

案名	XXXX第XX廠擴建計劃			投資部門	XXXX股份有限公司						
投資動機	1. 以市場面觀之, 2002年DRAM位元(bit)需求之複合成長將為1997年之14倍 2. 以供給面觀之, 1998年美. 日. 韓等國大幅縮減對半導體之投資, 預估於供給面將趨不足			投資目的	因提高製程能力為降低成本之最主要方法, 預計1998至2001年產業界之技術將由0.25um提昇至0.18um, 擴建晶圓二廠之目的為建立一個以0.18um製程為主, 月產的30,000片之八吋晶圓廠, 以保持公司之競爭力。						
投資規模	產能	年產36萬片八吋晶圓		投資成效	時程	1999	2000	2001	2002		
	用人狀況	男:265人 女:457人 小計:722人			銷貨收入	830637	14840512	22182064	24177756		
	預計產銷量	每月三萬片八吋晶圓			製造成本	1104988	10774228	14760006	15539270		
	預定試車日	1999年6月			毛利	-274352	4066284	7422058	8638485		
投資概算	項目	金額	說明	效益分析	毛利率	-33%	27%	33%	36%		
	土地	(管理費用)	1. 廠房面積:		銷管財研	124595	2151874	3105489	3384886		
	廠房	2,004,785	FAB:16,000 M2		損益	-398947	1914410	4316569	5253599		
	機器設備	30,343,730	其他:24,000M2		損益率	-48%	13%	19%	22%		
	公共設施	5,269,875	合計:40,000M2		折舊費用	464337	3856574	5723021	5723021		
	技術費用	-	2. 設備數量:主要設備:377台其他設備:		邊際貢獻	65390	5700983	10039590	10976620		
	其他	-	備:377台其他設備:208台合計:585台		回收年限	4.25年					
合計	37,618,390		損益平衡點				9021825	(仟元/年)			
董事長			總經理			副總經理(協理)			經理		



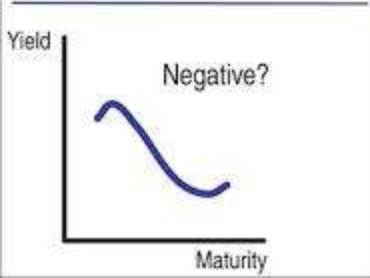
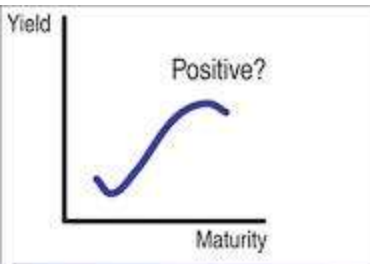
# Government Encouragement of Investment



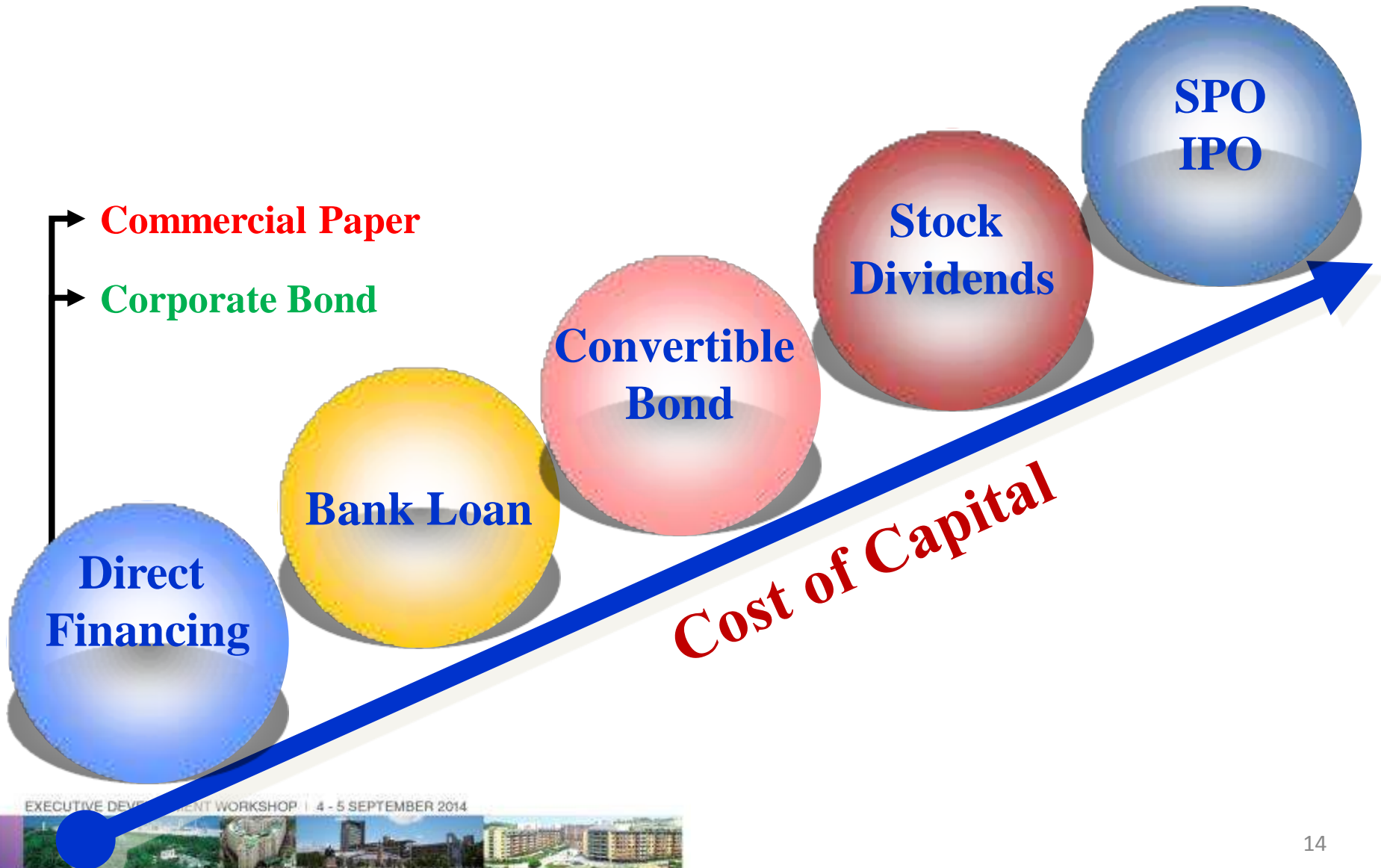
FPG tends to be the Policy Follower



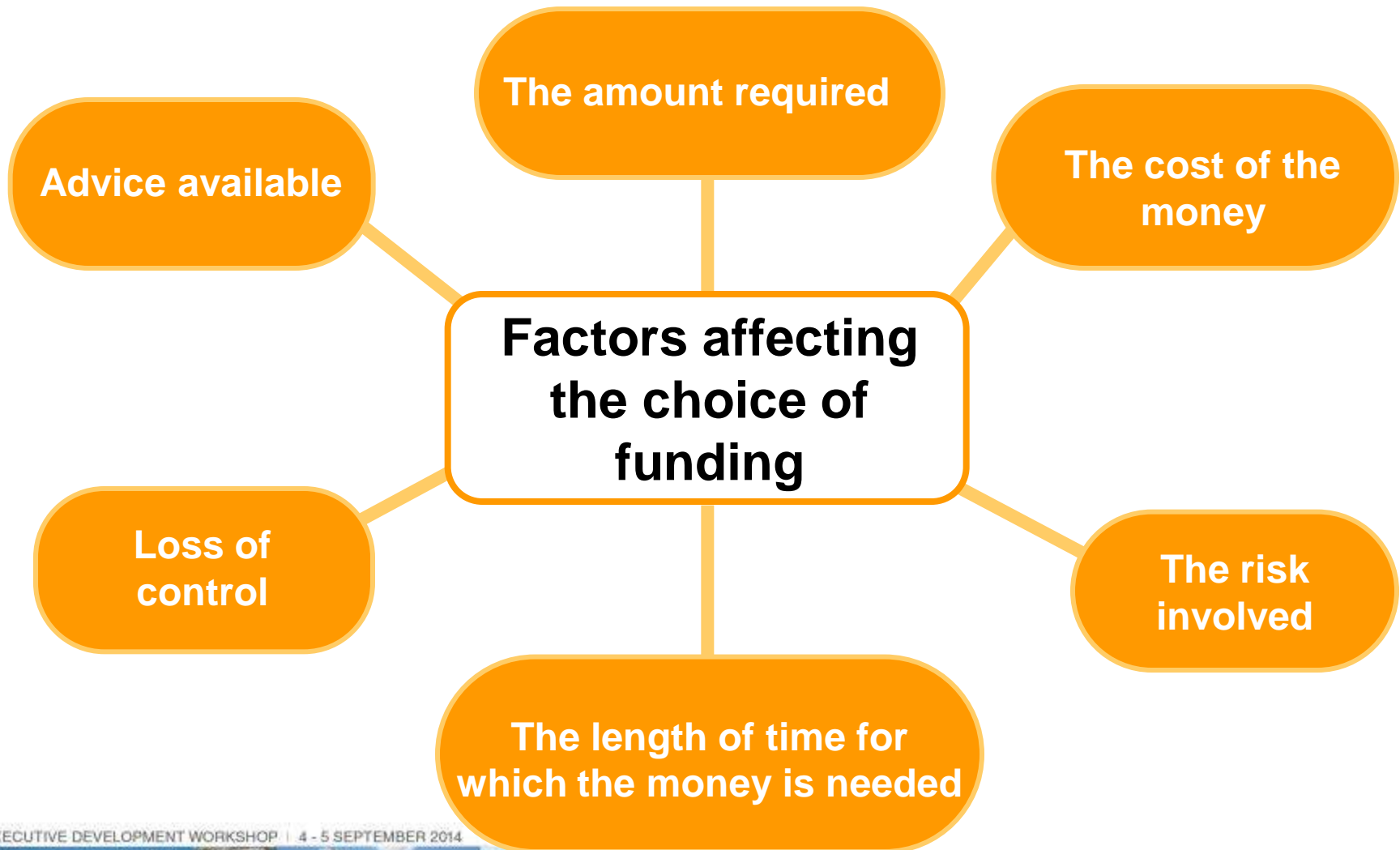
# Financing Decision



# Pecking Order of Financing in FPG



# Financing Choice



# Debt Information of Big Four

hundred of million NTD (2013.12.31)

Company		FPC	NYP	FCFC	FPC	Total	Ratio (%)
Item							
C / L	Short-term Loan	34.2	32.0	17.0	288.8	372.0	7.2
	Commercial Paper	31.0	45.0	-	33.0	109.0	2.1
	<b>Sum</b>	65.2	77.0	17.0	321.8	481.0	9.3
L / L	Long-term Loan	177.7	413.8	469.1	872.4	1,933.0	37.2
	<b>Corporate Bond</b>	<b>598.9</b>	<b>740.0</b>	<b>578.0</b>	<b>860.0</b>	<b>2,776.9</b>	<b>53.5</b>
	<b>Sum</b>	776.6	1,153.8	1,047.1	1,732.4	4,709.9	90.7
<b>Total</b>		841.8	1,230.8	1,064.1	2,054.2	5,190.9	100



# High Financial Leverage

## Big Four - rated 'twAA-'



Year	Financial Ratio	FPC	NYP	FCFC	FPC
2008	Current Ratio(%)	219.8	227.2	133.6	153.6
	Quick Ratio(%)	170.9	170.6	83.9	87.6
	<b>Debt ratio (%)</b>	<b>33.7</b>	<b>35.5</b>	<b>41.0</b>	<b>55.0</b>
2012	Current Ratio(%)	252.6	303.0	219.4	249.8
	Quick Ratio(%)	213.5	235.4	164.9	150.4
	<b>Debt ratio (%)</b>	<b>34.1</b>	<b>37.4</b>	<b>40.7</b>	<b>55.4</b>

You believe it?

Three month Libor

+

110BP

in 2012

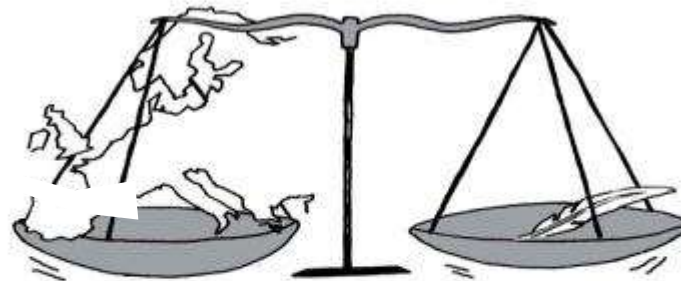


# Dividend Decision



# Policy

Strikes a **balance** between current dividends and future growth that maximizes the firm's stock price

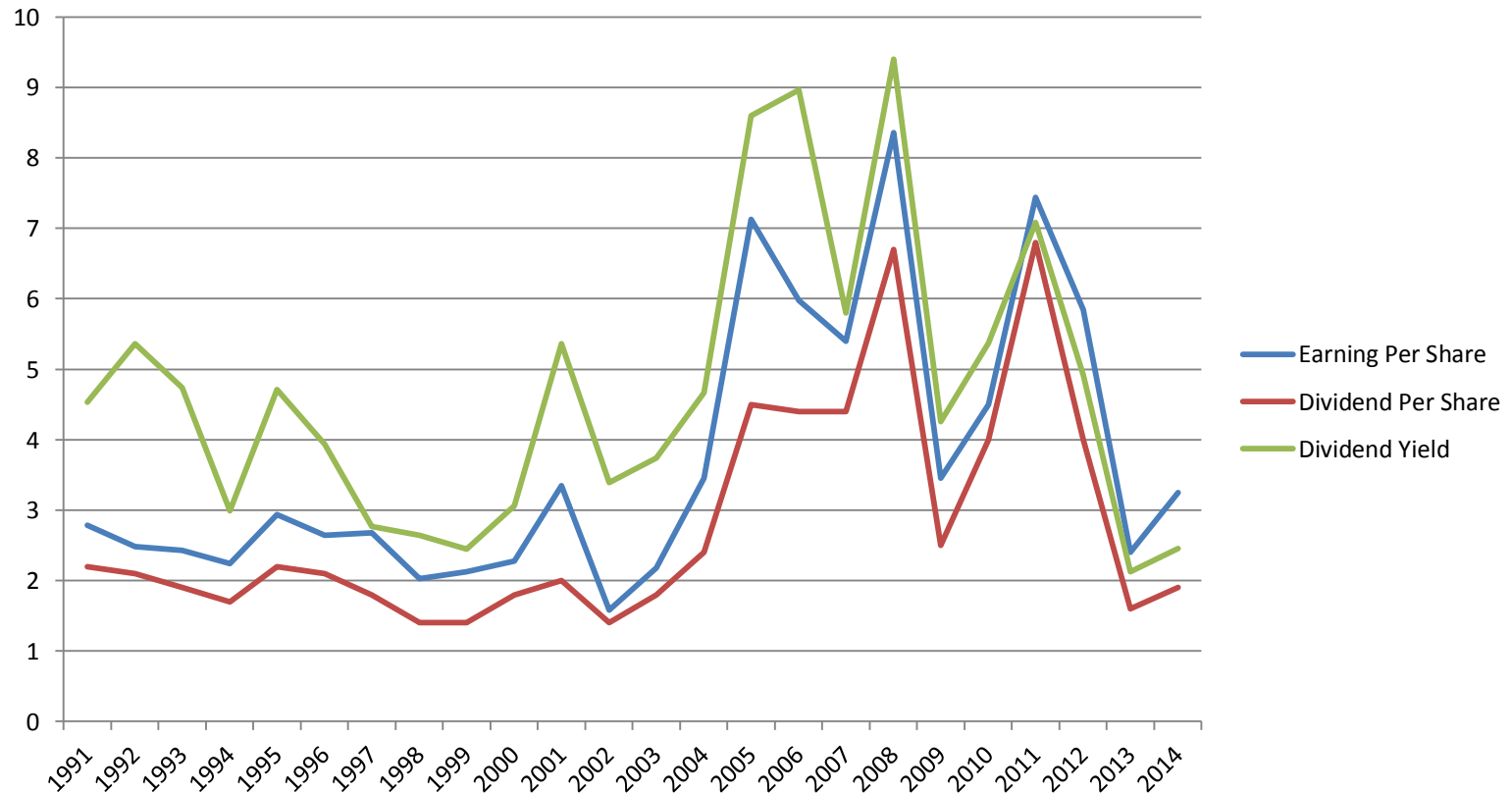


CONTRA

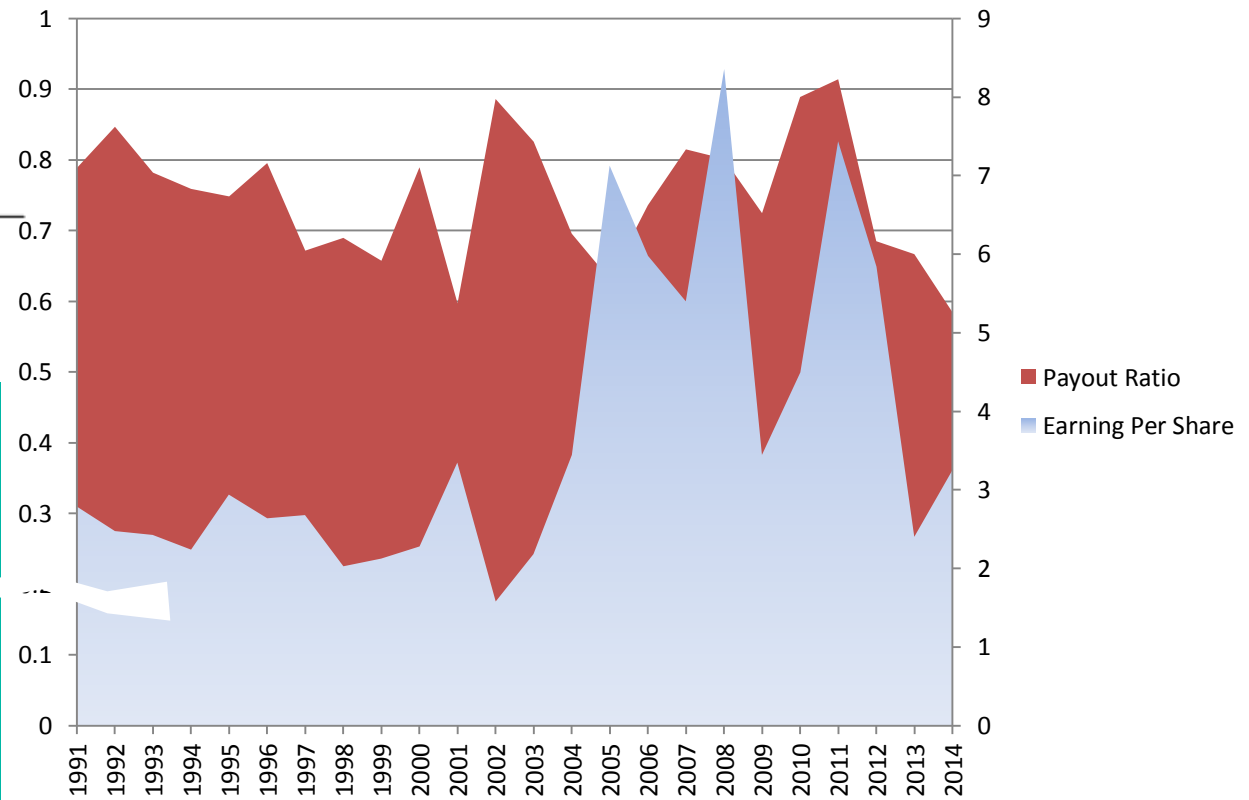
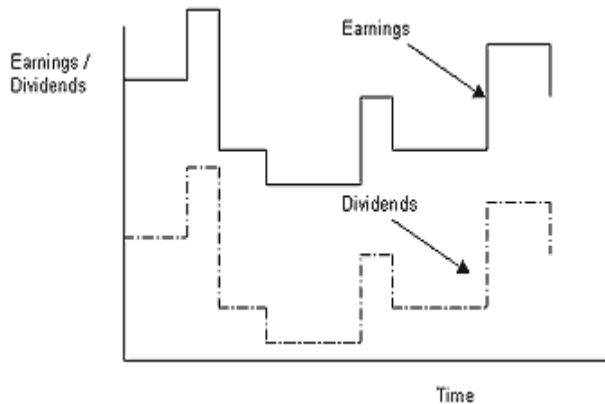
FINANCIAL STABILITY



# Formosa Plastics – Dividend History



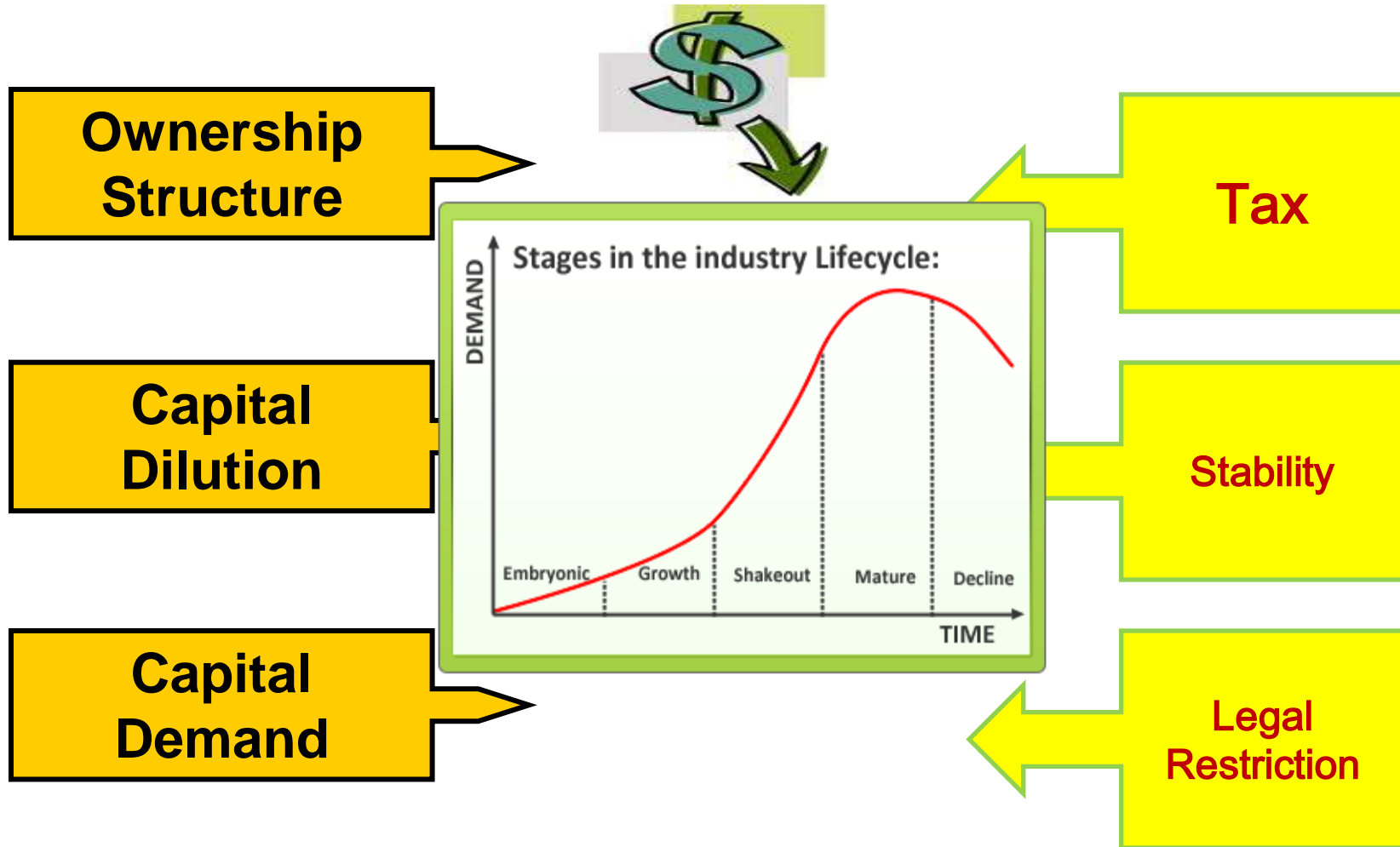
# Stable Dividend Payout Policy



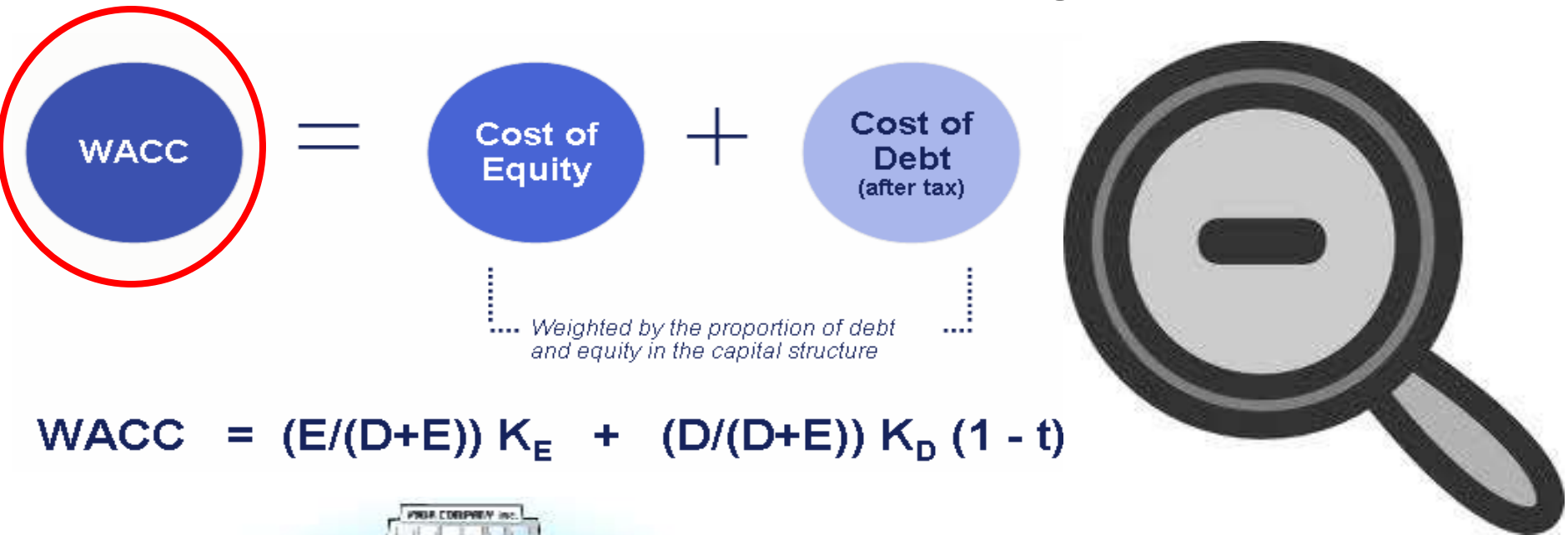
Income Statement	
Sales	\$3,000,000
Net Income	\$1,000,000
Dividends Paid	
Addition to RE	



# Dividend Decision Determinants



# Lower Cost of Capital



$$WACC = (E/(D+E)) K_E + (D/(D+E)) K_D (1 - t)$$



**Minimize**





# What's the "RULE"?

## ROIC

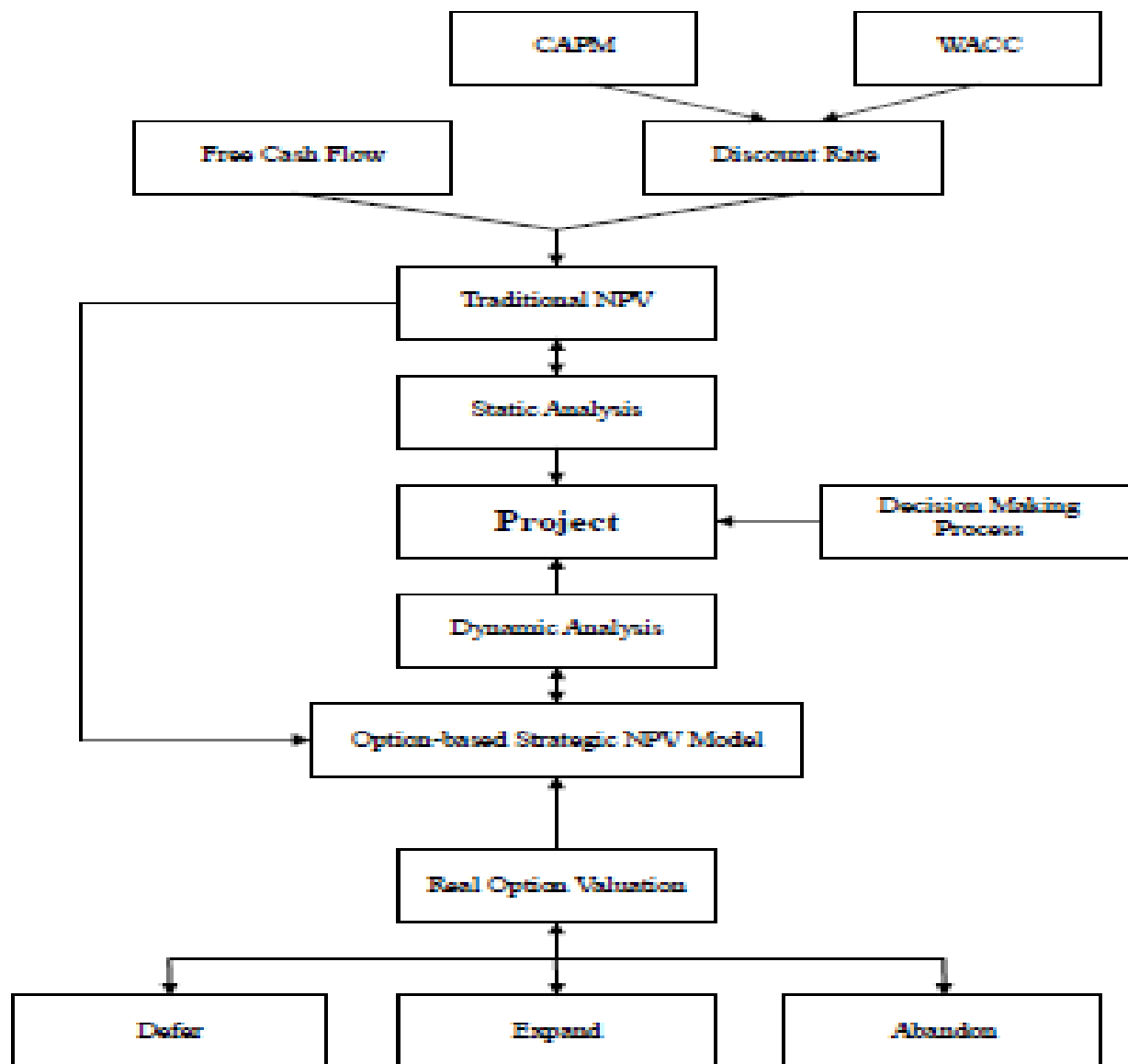


## WACC



# CASE STUDY SOLUTIONS





that debt and equity are the two main sources of capital available to project investment. Suppose that the 10-year government bond yield in 2004 was 2.66% while the market return was approximately 11% based on the past 10 years of market index return data. Thus, the cost of equity capital for Inotera is calculated using the CAPM formula, as follows, and equals 16.75%.

$$\begin{aligned}K_s &= R_f + \beta (R_m - R_f) \\ &= 2.66\% + 1.69 \times (11\% - 2.66\%) \\ &= 16.75\%\end{aligned}$$



where  $K_e$  is the cost of equity capital,  $R_f$  is the expected risk-free return,  $\beta$  is the sensitivity of the project to market risk, and  $R_m$  is the historical market return. After determining cost of debt and cost of equity, their combination (50% vs 50%), the weighted-average cost of capital (WACC), can be calculated. This WACC can be used directly in the discounted cash flow techniques as the discount rate, which is regarded as a financial cost of capital, that is, the cost of raising the funds needed to start the project and to keep it running.

$$\begin{aligned}
 \text{WACC} &= 0.5 (1-t) K_d + 0.5 K_e \\
 &= 0.5 \times 0.85 \times 1.55\% + 0.5 \times 16.75\% \\
 &= 9.03\%
 \end{aligned}$$

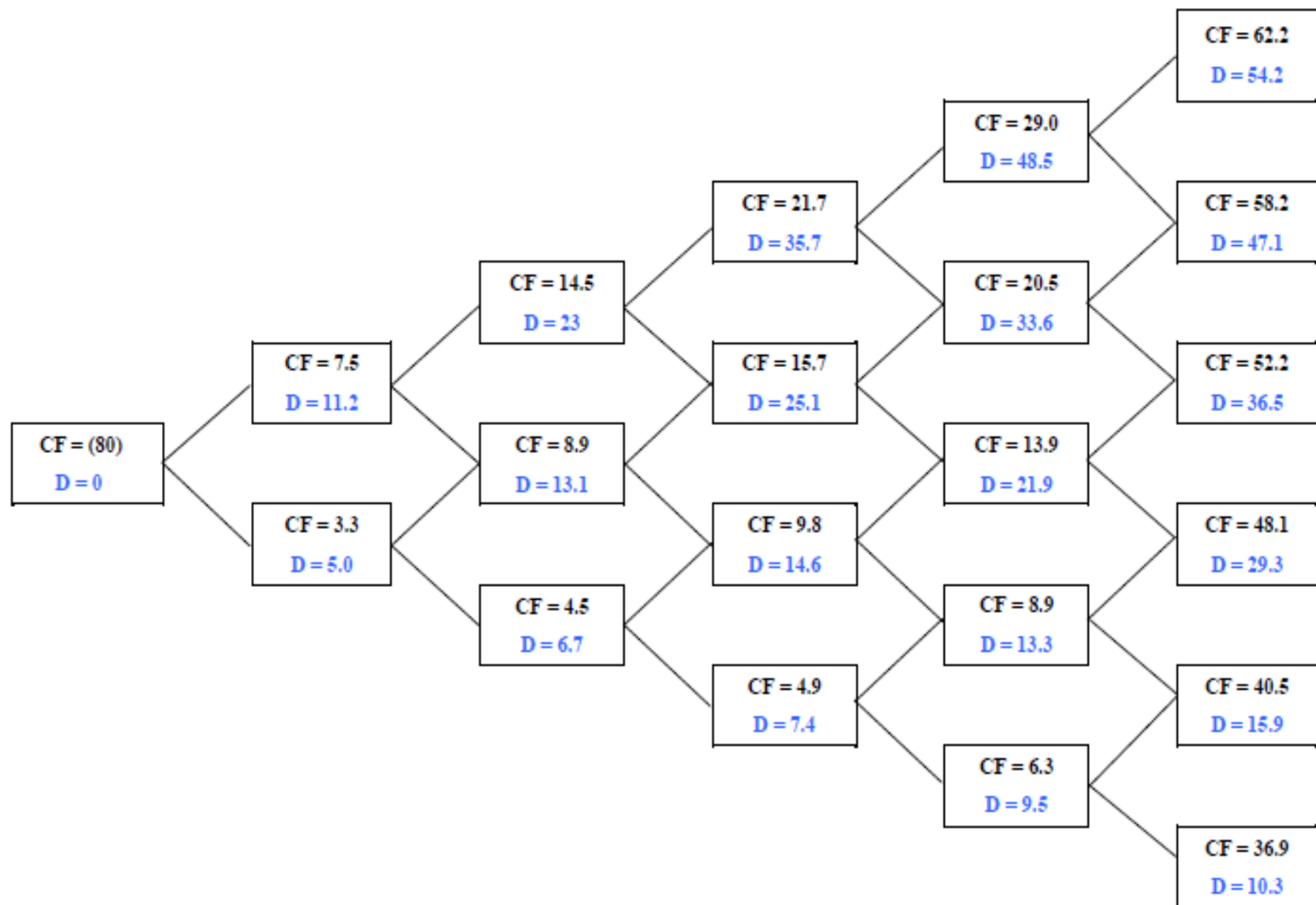


### Exhibit TN-1: Free Cash Flow from Investing Project

(billions)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Sales		7.7	12.9	18.4	21.1	29.3
Variable Cost (30% of Sales)		2.6	4.3	6.1	7	9.8
Depreciation		10	10	10	10	10
EBIT		(4.9)	(1.4)	2.3	4.1	9.5
Tax (15%)		0	0	0.3	0.6	1.4
EBIAT		(4.9)	(1.4)	1.9	3.5	8.1
Depreciation		10	10	10	10	10
Salvage Value						30
CAPEX	(80)	0	0	0	0	0
Free Cash Flow	(80)	5.1	8.6	11.9	13.5	48.1
Present Value	(80)	4.7	7.2	9.2	9.5	31.2
NPV at WACC	(18.2)					





Note: D denotes demand while CF represents cash flows (units in billions of NTD).

**Figure TN-1: Event Tree Showing the Cash Flows for the Precommitted Project**

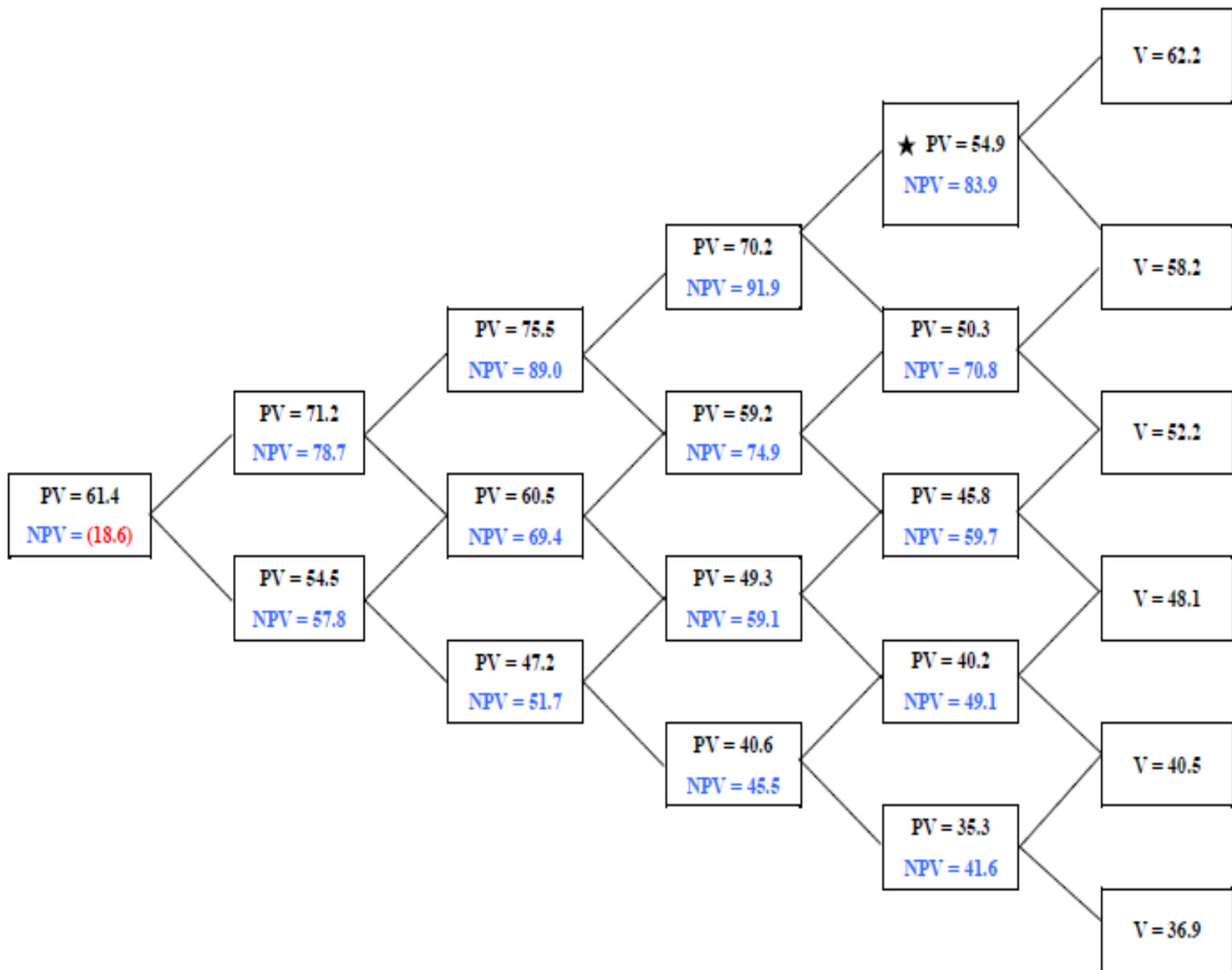


Figure TN-2: Event Tree Showing the Present Value and NPVs for the Precommitted Project



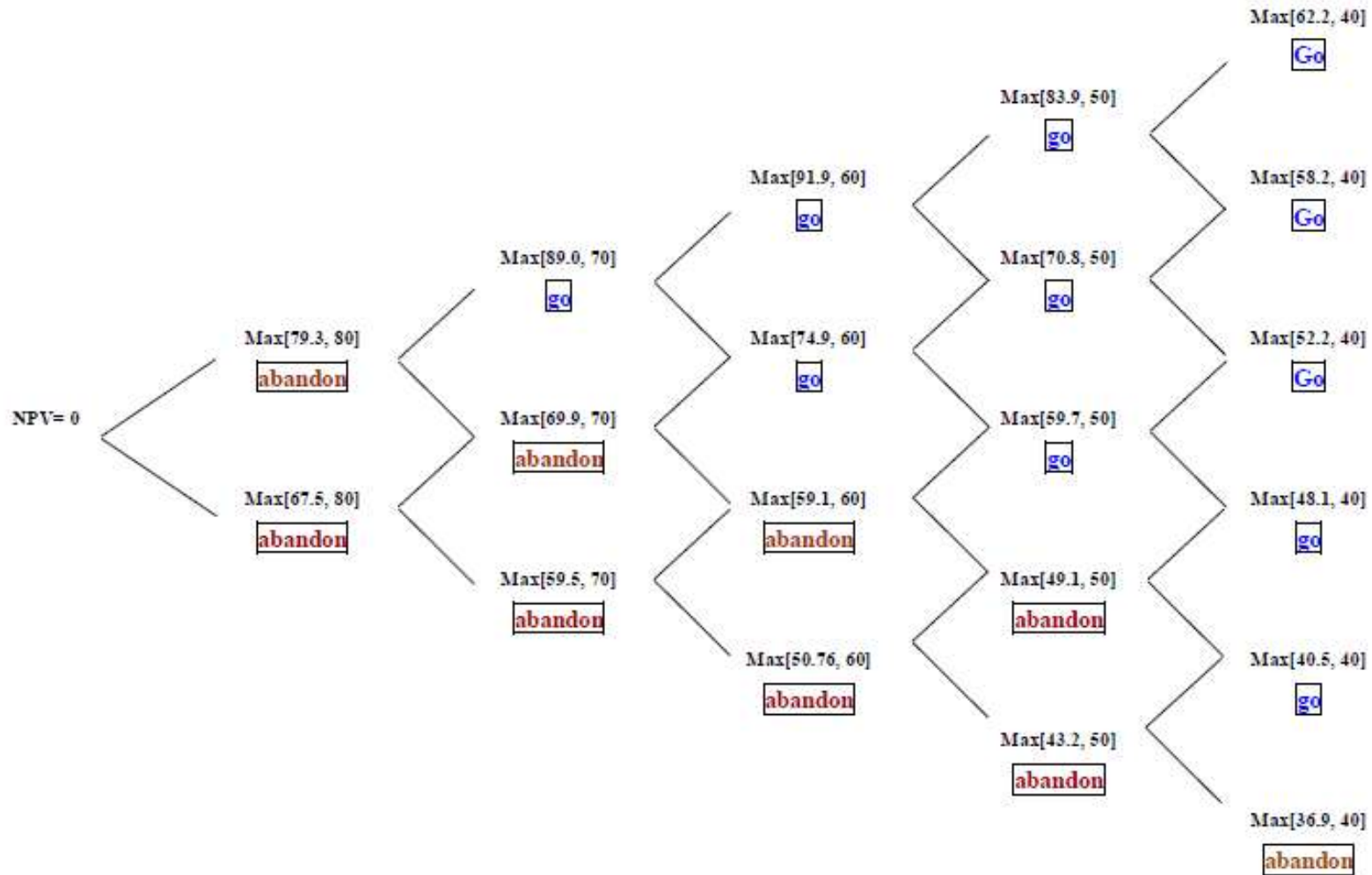


Figure TN-3: Valuing the Abandonment Option



# Analysis of Dan-Yuan Costing in FPG (Unit Element Cost)

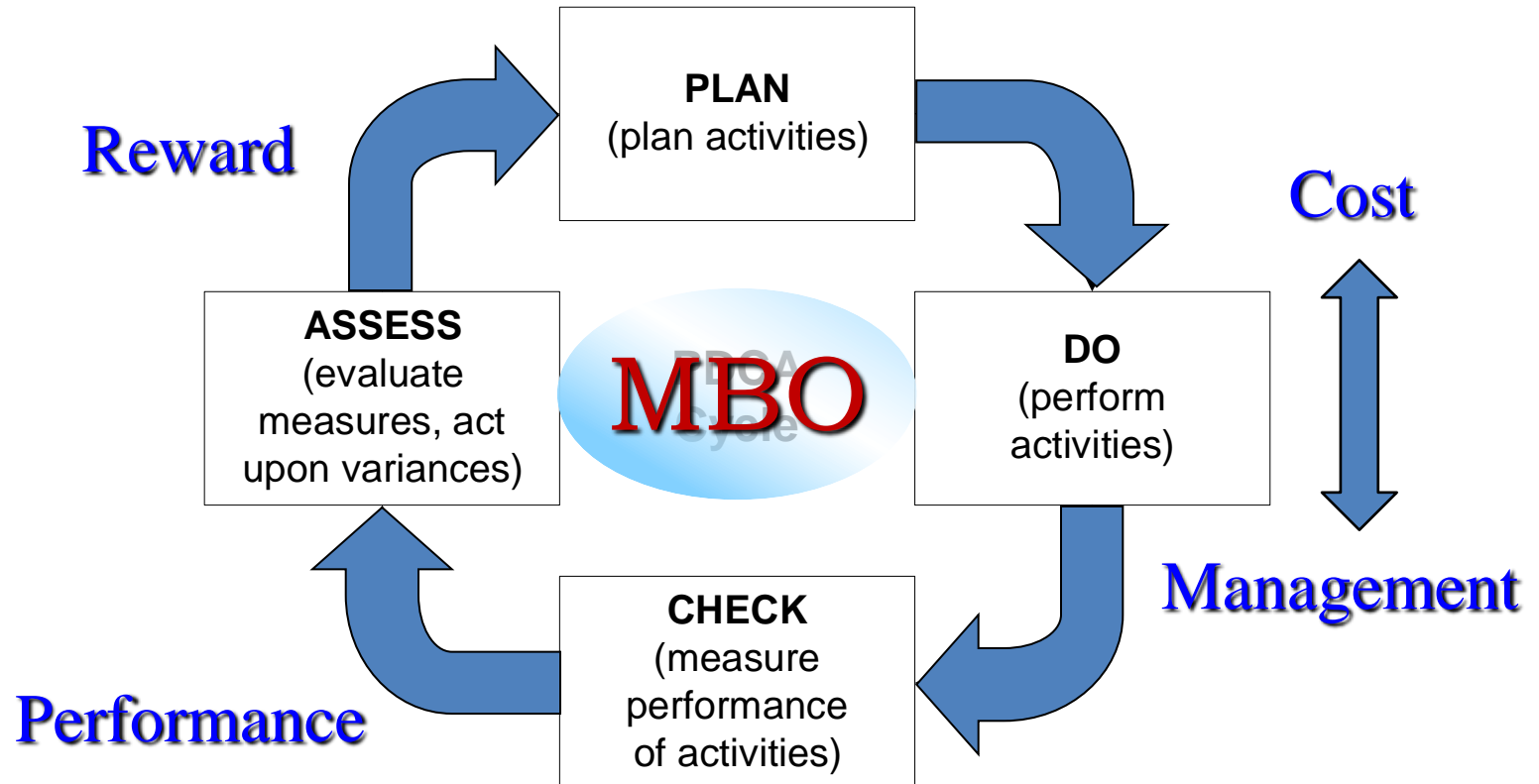
Dr. Yih-Wen Shyu (Peter)  
College of Management  
Chang Gung University, Taiwan

# Cost Is Everything in FPG

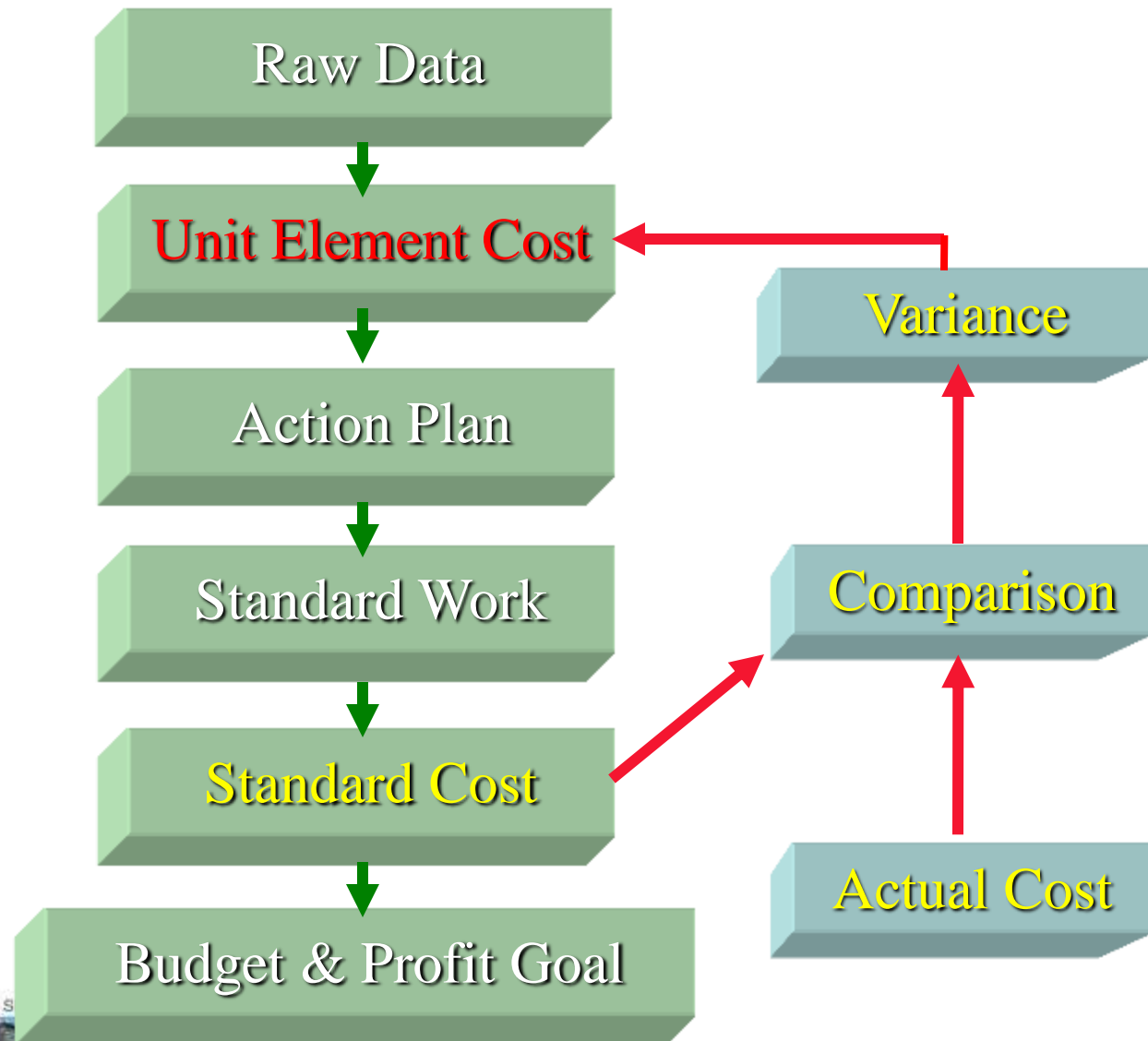


# Concept

## Standard Cost



# Process Flow of Cost Management



# *Dig Deep to Get the Truth Get to the Root of the Matter*



*Reasonable Cost?  
Trace it to its Source*



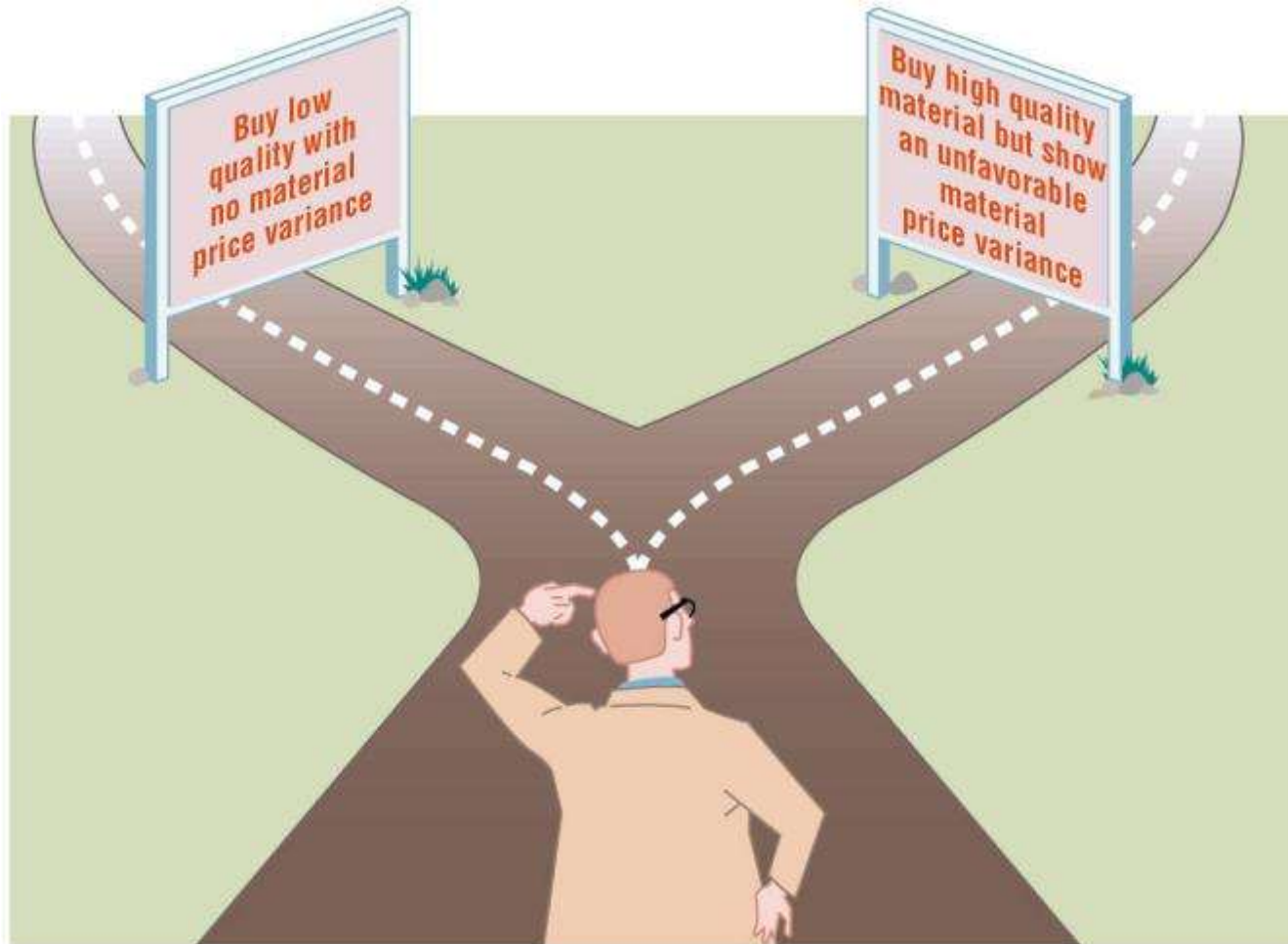


**Convert Waste Reduction  
into Cost Saving**



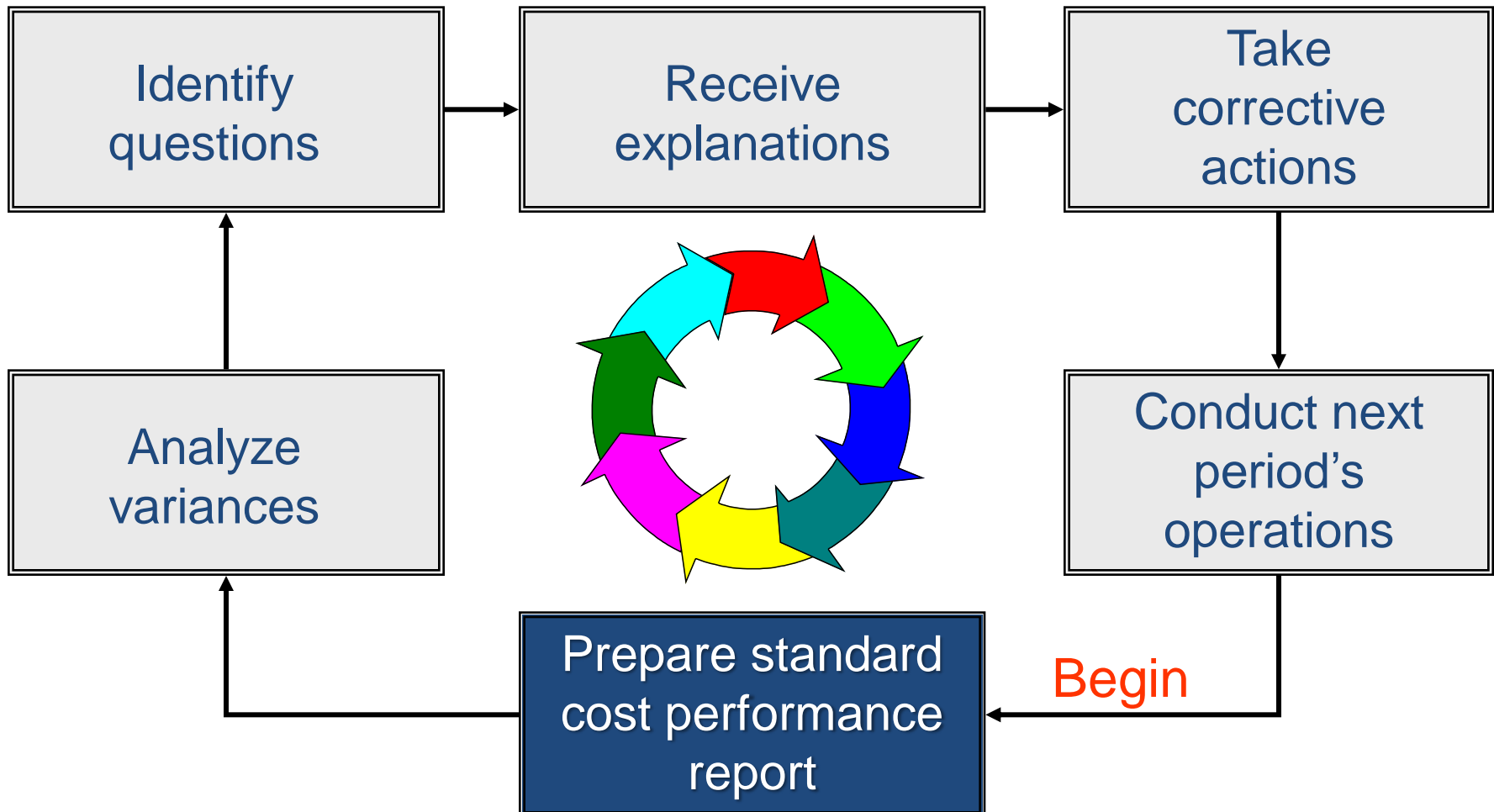
# You Get What You Measure

## Benchmark → Standard Cost



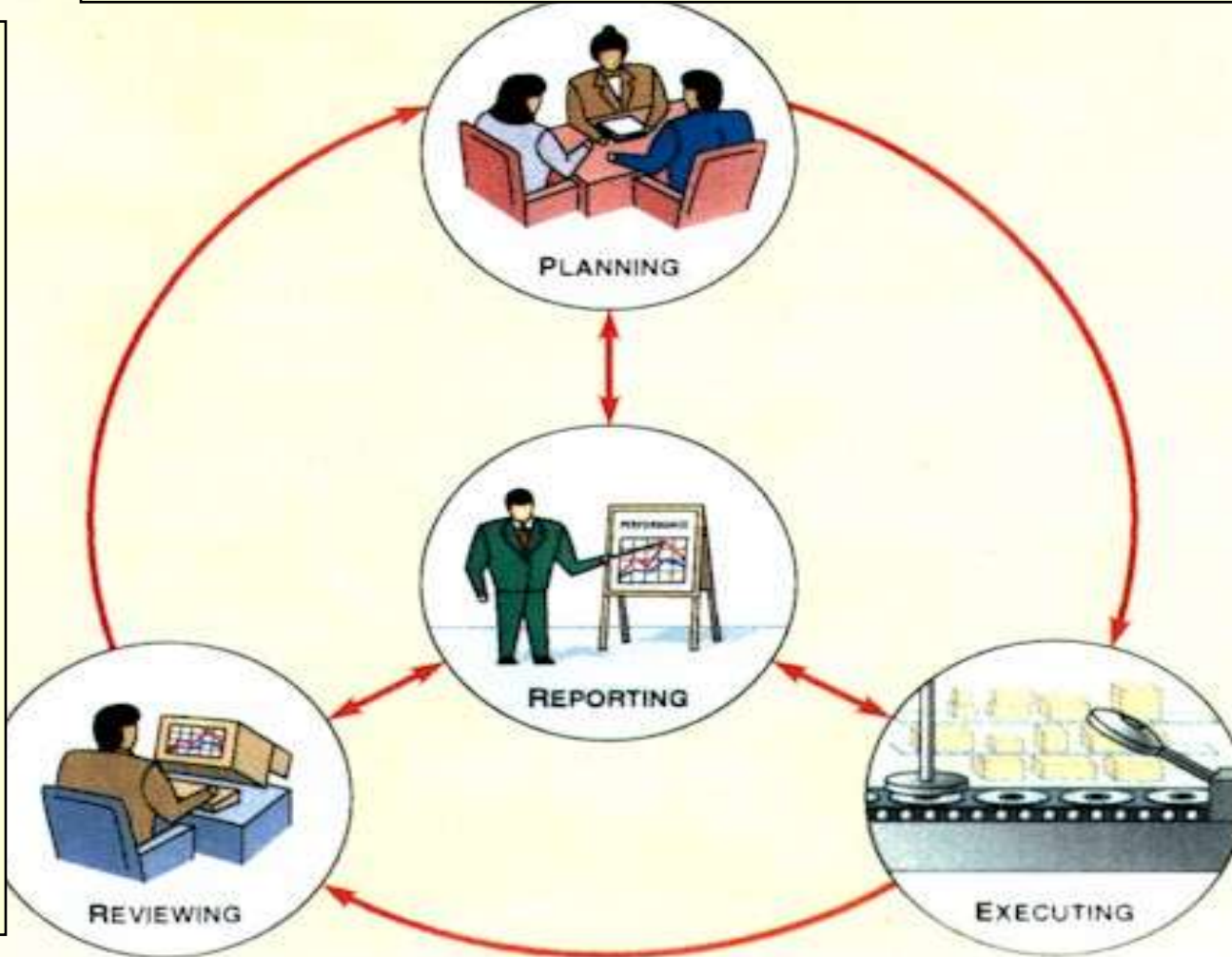


# Variance Analysis



Use standard costs to prepare budgets and establish goals for product costing.

Calculate variances between standard and actual costs, determine their causes, identify inefficient operations, and take corrective action. Use variances to evaluate managers' performance.



Use standard costs to report on operations and managers' performance.

Apply dollar, time, and quantity standards to work.



# Procedure

- 1.Cause and Effect Analysis**
- 2.Exploration**
- 3.Corrective Action**
- 4.Benefits from Improvement**
- 5.Report**
- 6.Implementation and Follow-up**



# Cause and Effect Analysis

- Identify the Problem
- Work Out the Major Factors Involved
- Identify Possible Causes
- Analyze Your Diagram

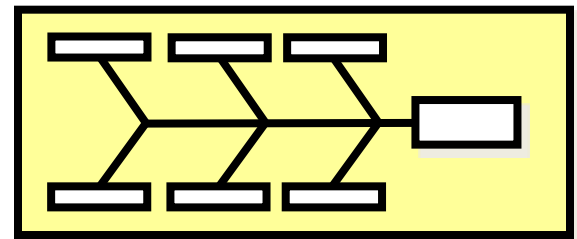


*What can be done better*

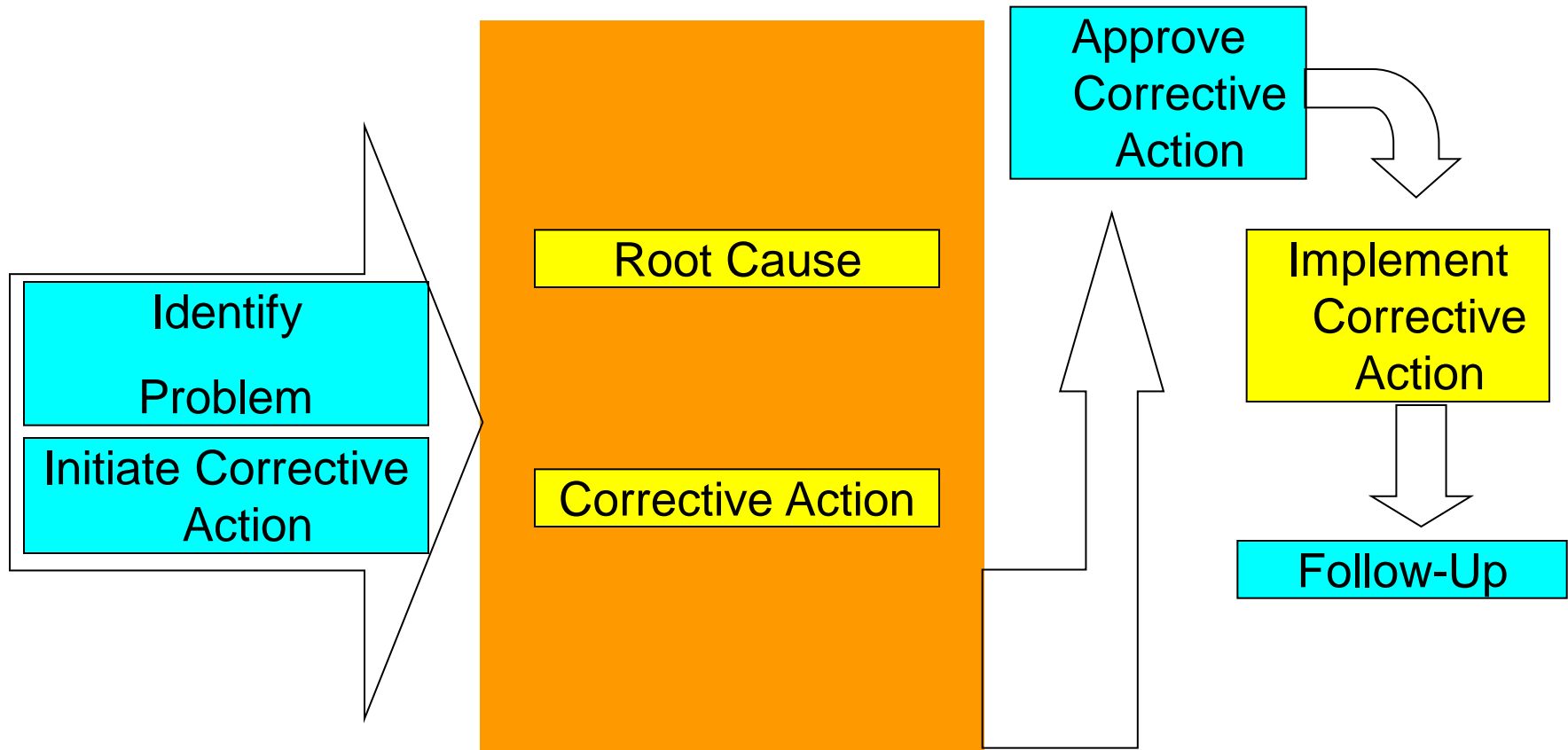


# Cause and Effect Diagram (Fishbone)

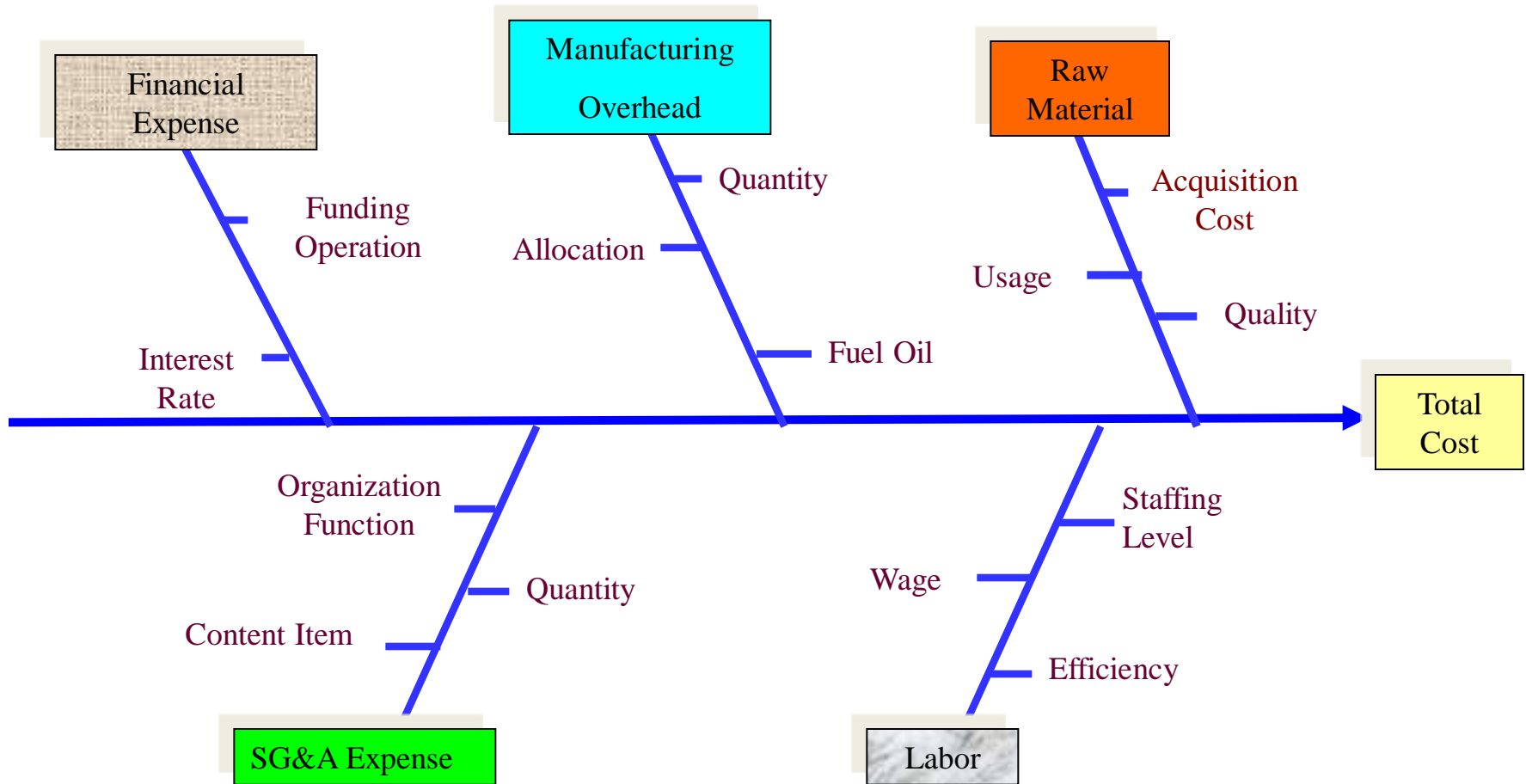
- What
  - A tool to represent the relationship between an effect (problem) and its potential causes by category type.
- When
  - Carried out when a root cause needs to be determined.
- Why
  - To help ensure that a balanced list of ideas have been generated during brainstorming.
  - To determine the real cause of the problem versus a symptom.
  - To refine brainstormed ideas into more detailed causes.



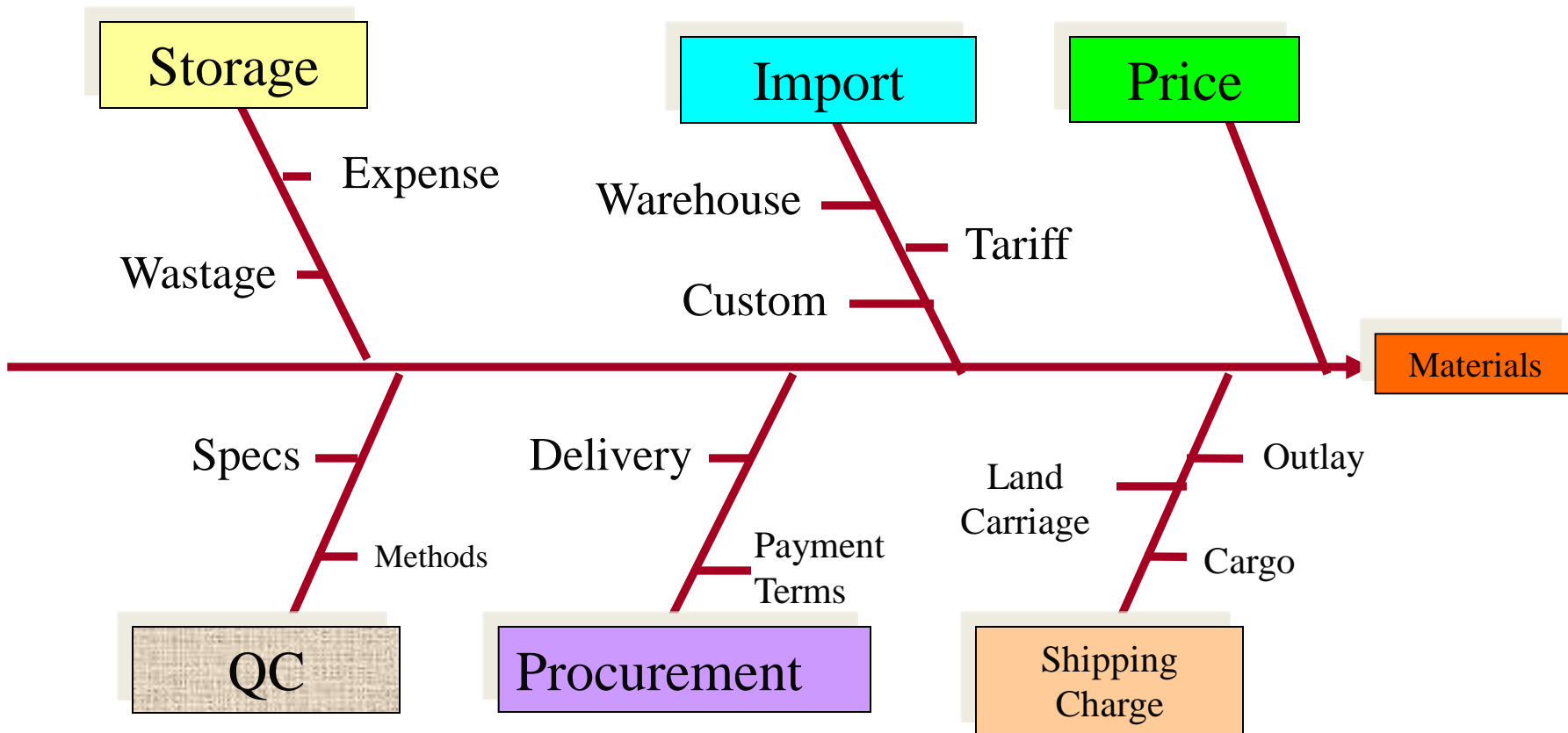
# Process



# Example(1)

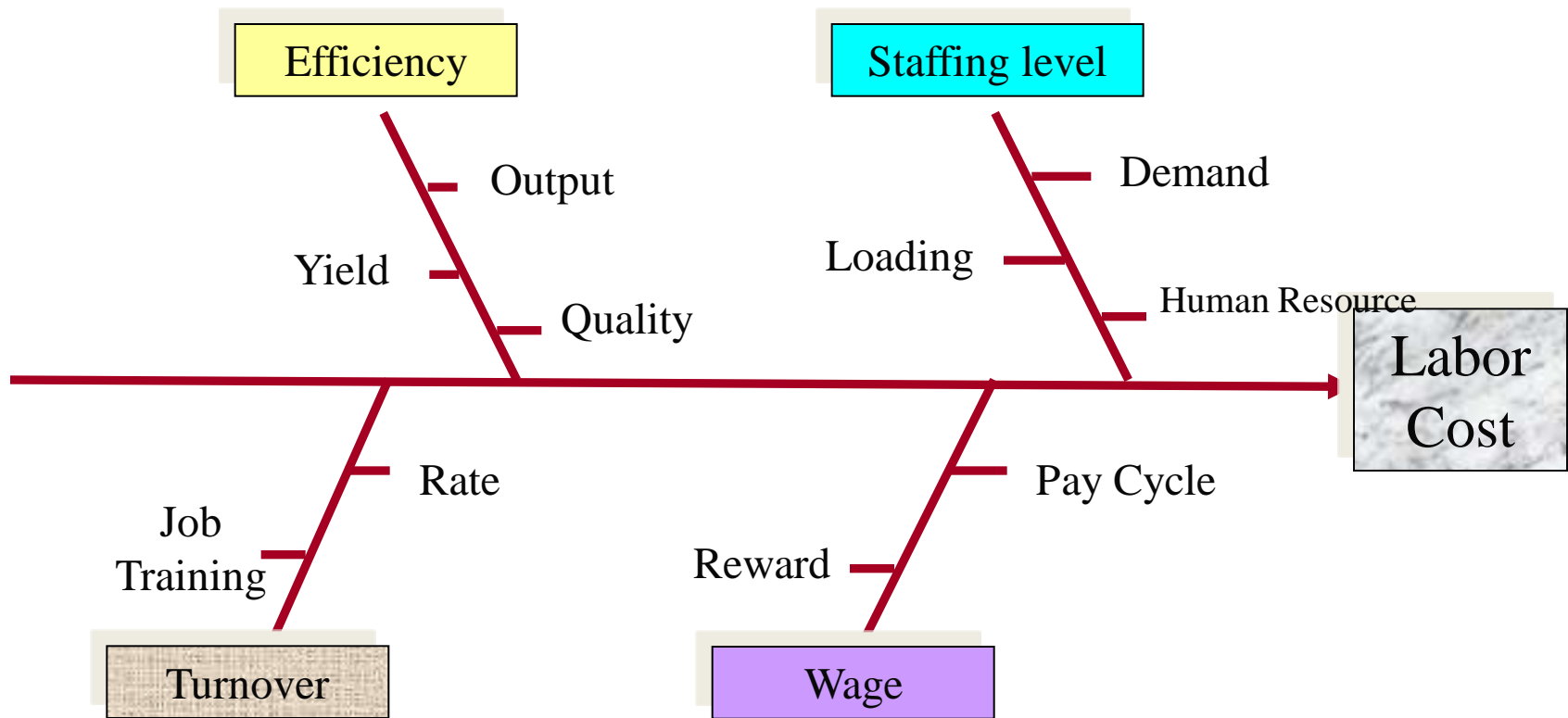


# Example(2)

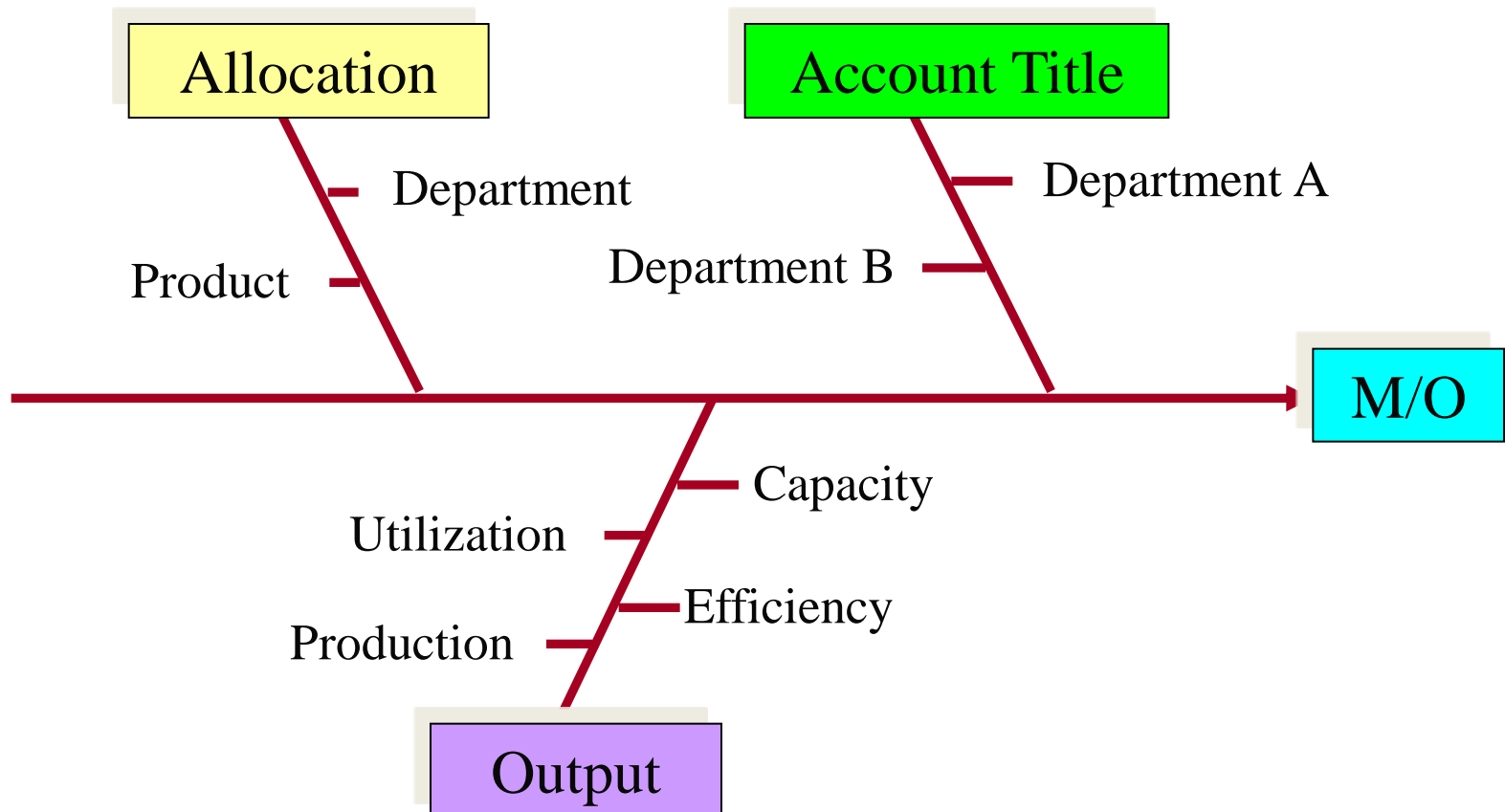




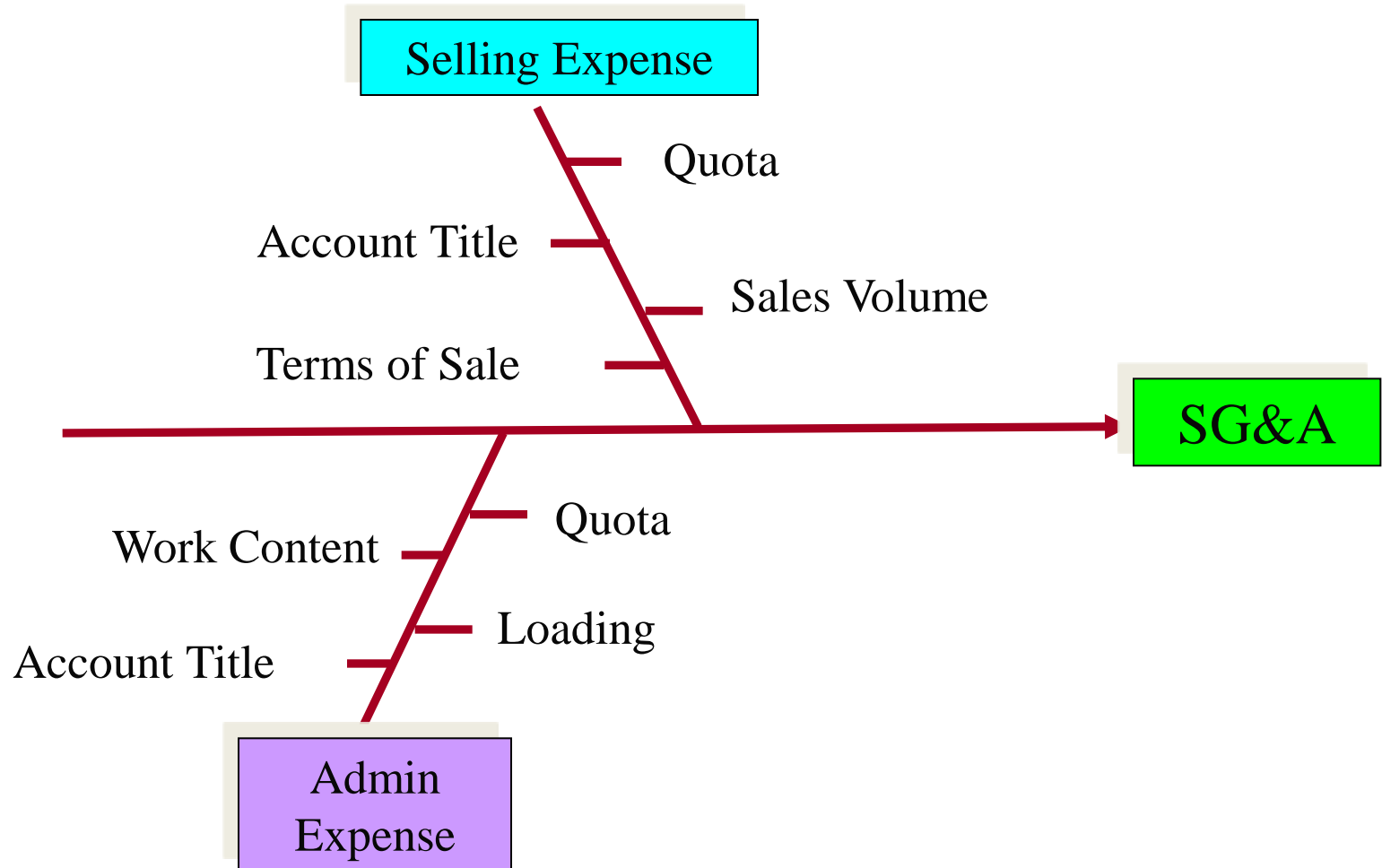
# Example(3)



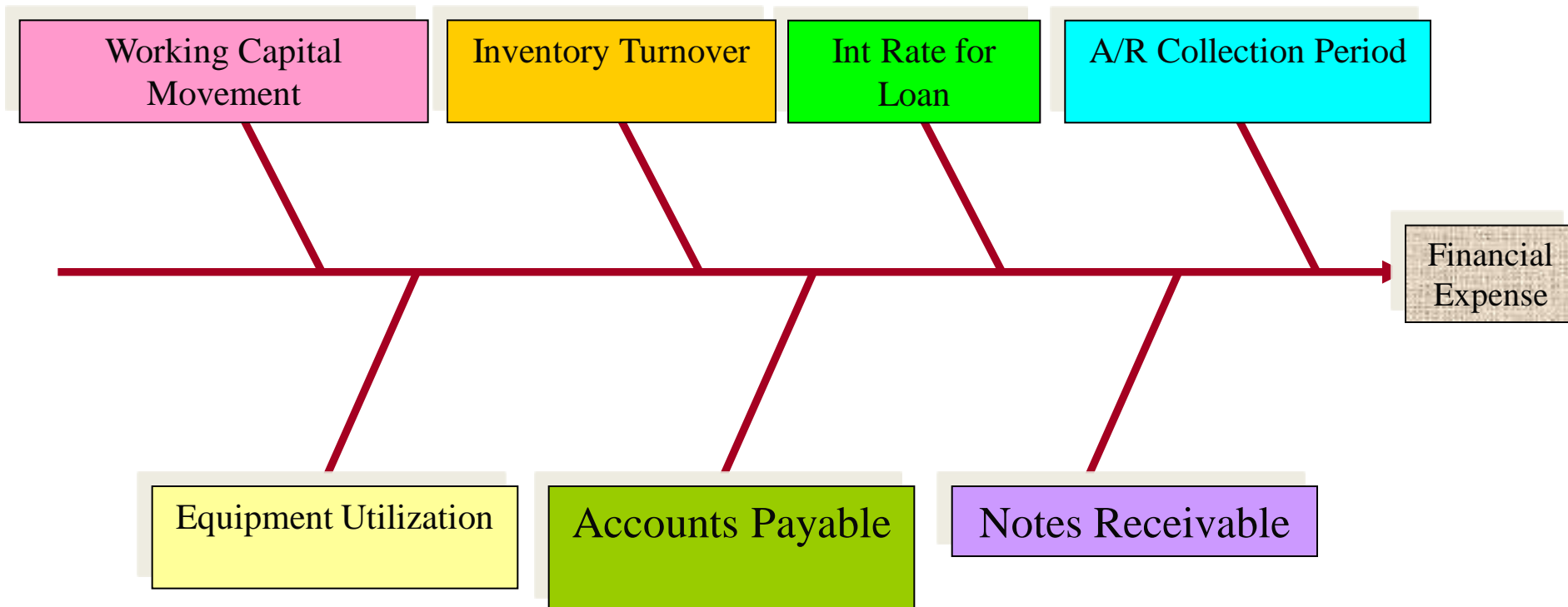
# Example(4)



# Example(5)



# Example(6)



# Demo

- Cost Summary of Polyester Textured Yarn

Item	2012	2013
Total Cost	100,233(Thousands)	100,087
Output	3,012 ton	2,846 ton
Unit Cost	\$33.28/kg	\$35.17/kg

What're the Differences?



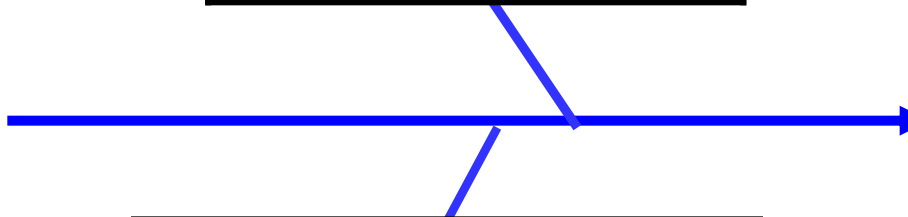
# Example of Unit Element Cost

## Output Analysis

Item	Normal
Output	2,846
%	95

Item	Ton
Normal	2,846
Defective	138
Output	2,984

Item	Defective
Output	138
%	5



# Detective – Cause and Effect Analysis

Item	Hardness
Quan	3,099 KG
%	2.2%

Item	Aberration
Quan	22,871 KG
%	16.6%

Item	Fluff
Quan	64,690 KG
%	46.8%

Item	Defective
Quan	138,300 KG
%	100%

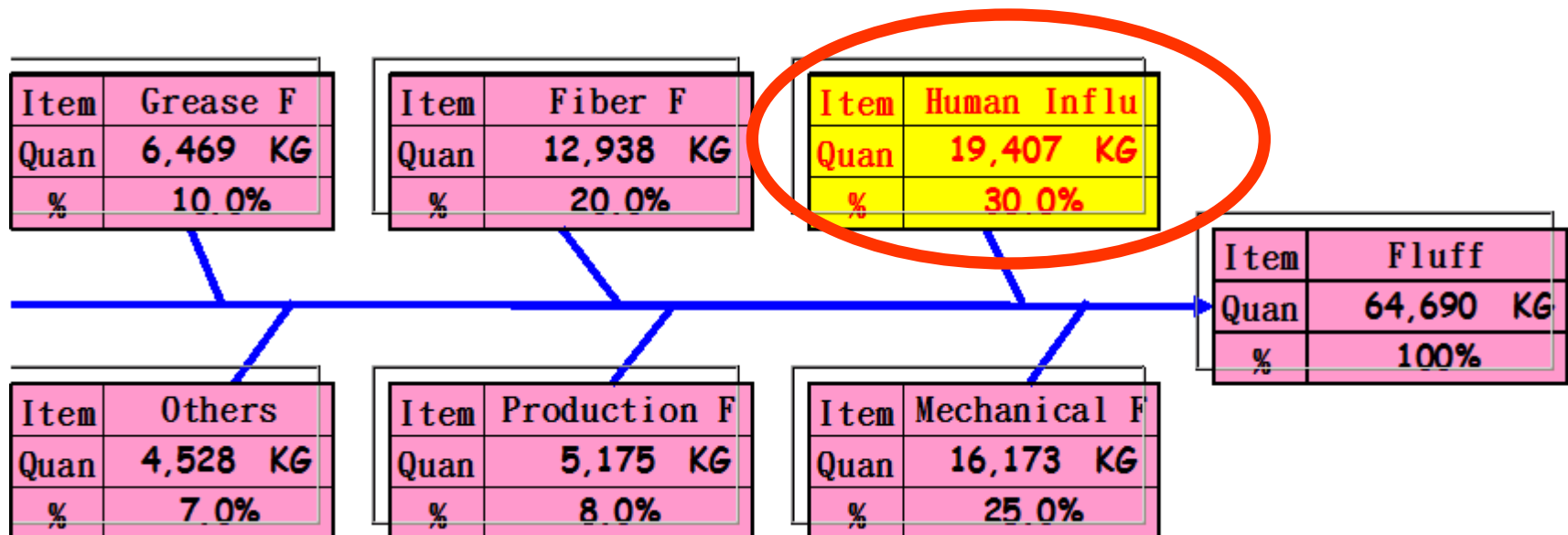
Item	Dye Speck
Quan	118 KG
%	0.1%

Item	Contamination
Quan	18,450 KG
%	13.3%

Item	Connector
Quan	29,072 KG
%	21.0%

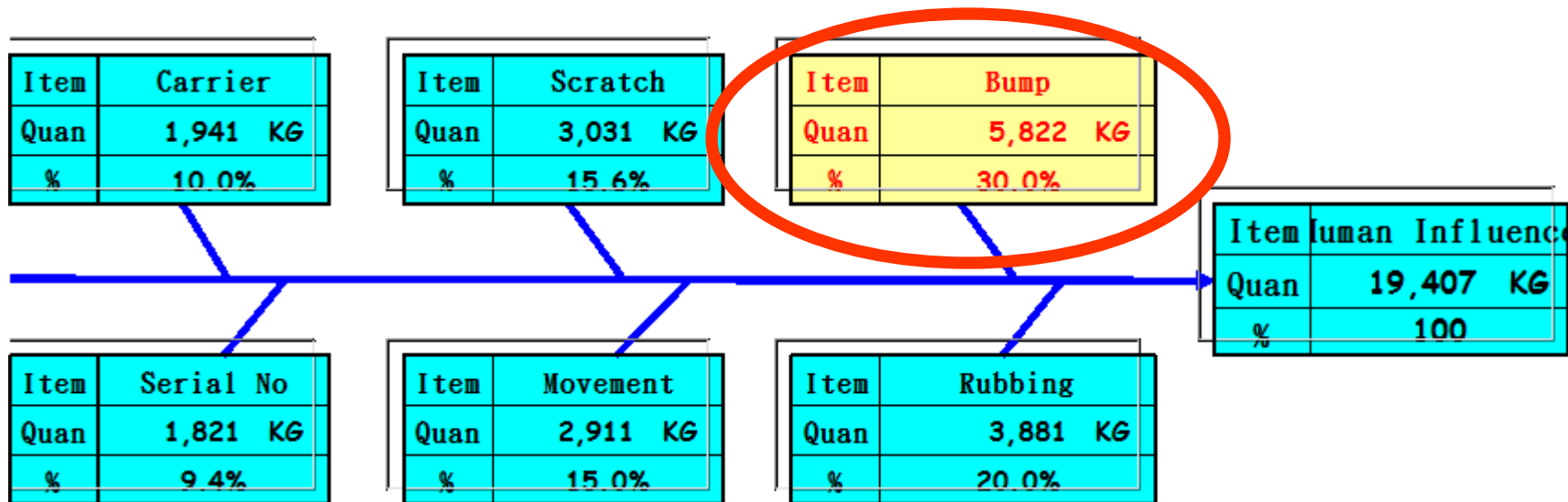


# Fluff – Cause and Effect Analysis





# Human Influence – Cause and Effect Analysis

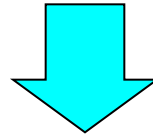


# Action Initiation

Item	Quantity		%
Hand Rub	5,822	KG	30%
Fingernail Scratch	3,031	KG	15.6%

Sum Up

$$(15.6\% + 30\%) \times 30\% \times 46.8\% = 6.4\%$$



Wearing  
Gloves

Follow the Above Process