



# **Context of Project Economic Analysis**



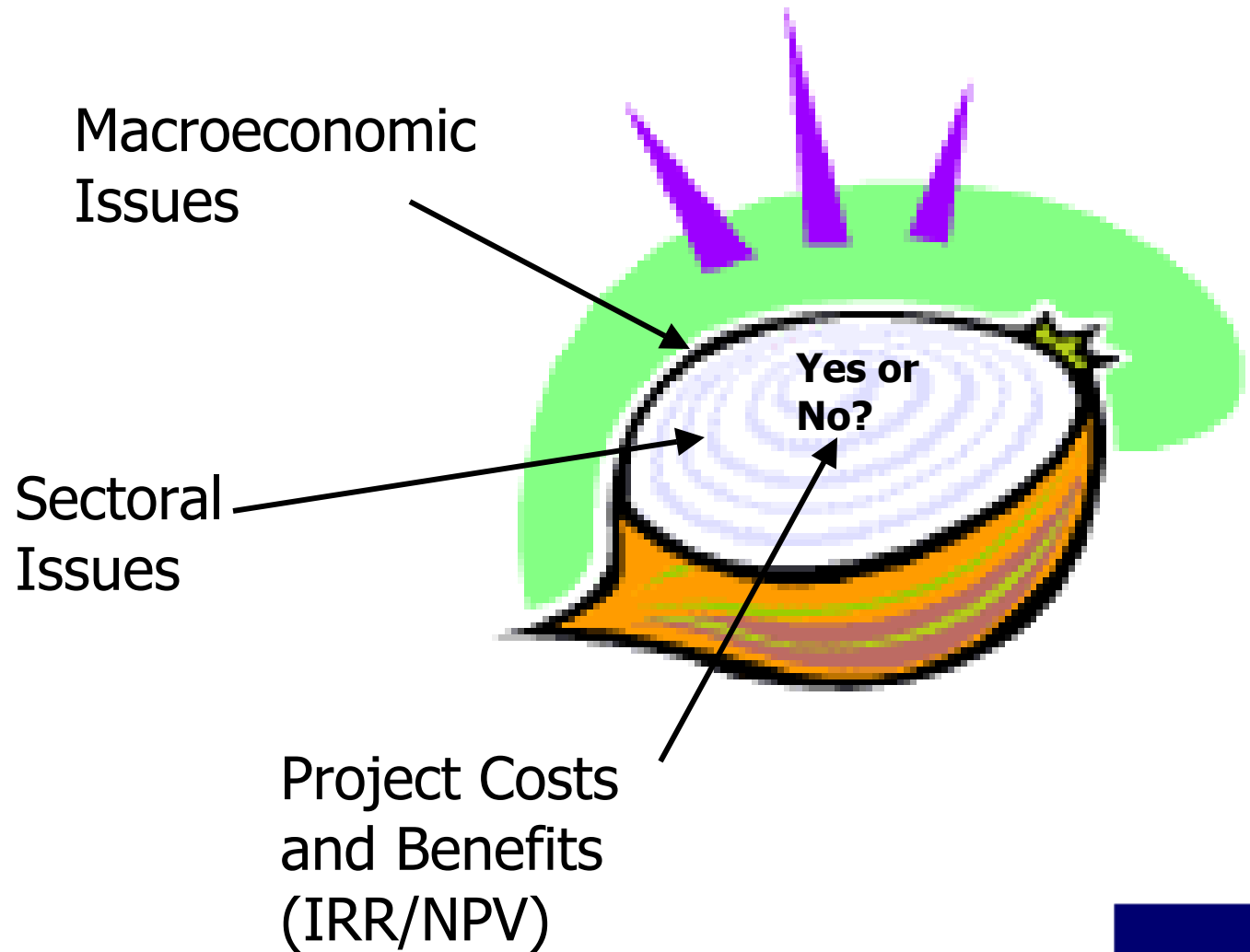
# Acceptance Criteria



Internal Rate of Return (IRR)

Net Present Value (NPV)

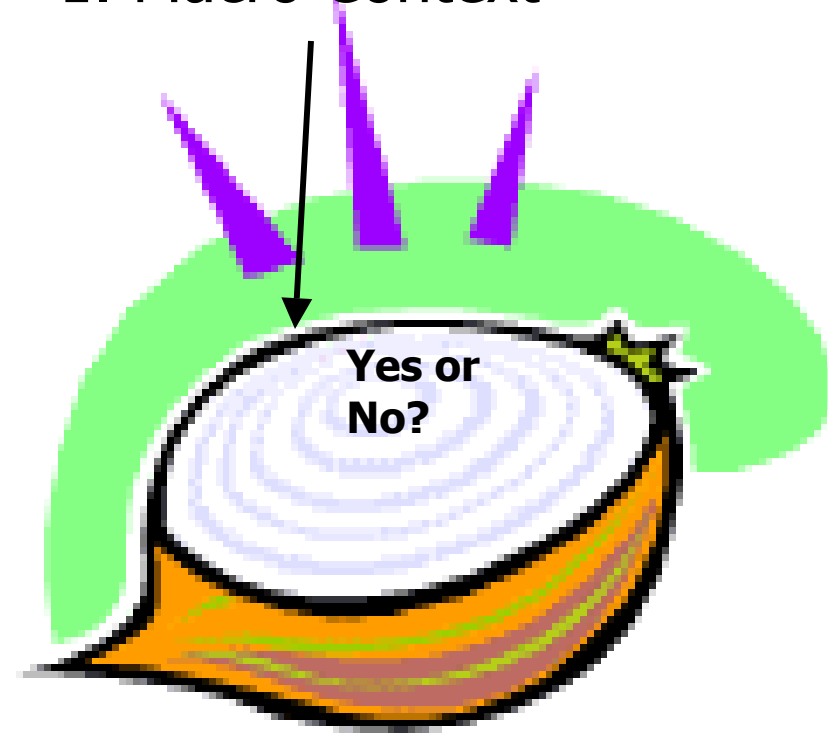
# PROJECT ECONOMIC ANALYSIS AS AN ONION



# The ONION Model and the 10 AAs

What macroeconomic factors influence target sectors and vice versa?

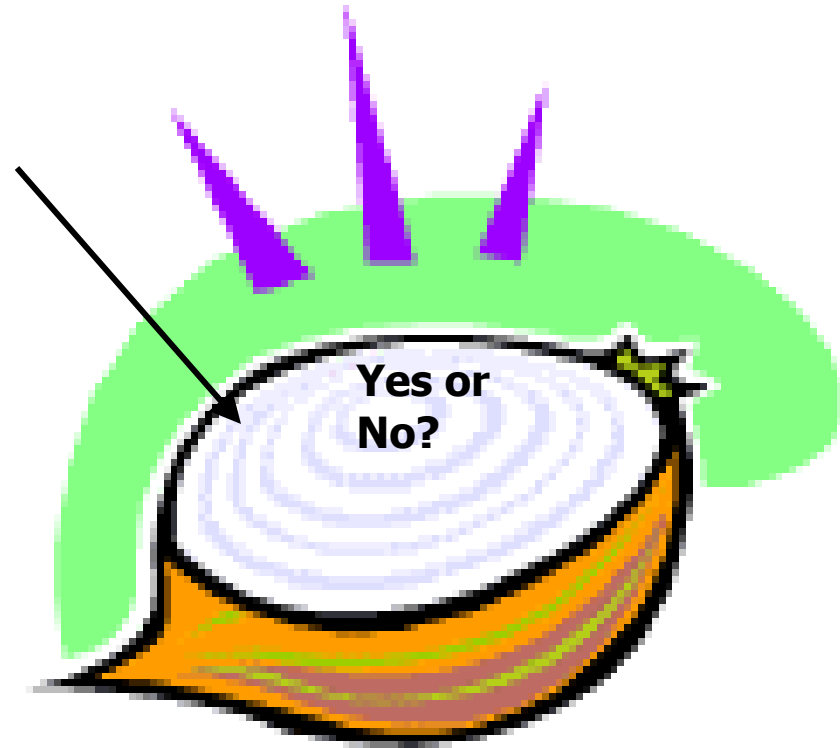
## 1. Macro Context



# The ONION Model and the 10 AAs

## 2. Sector Context

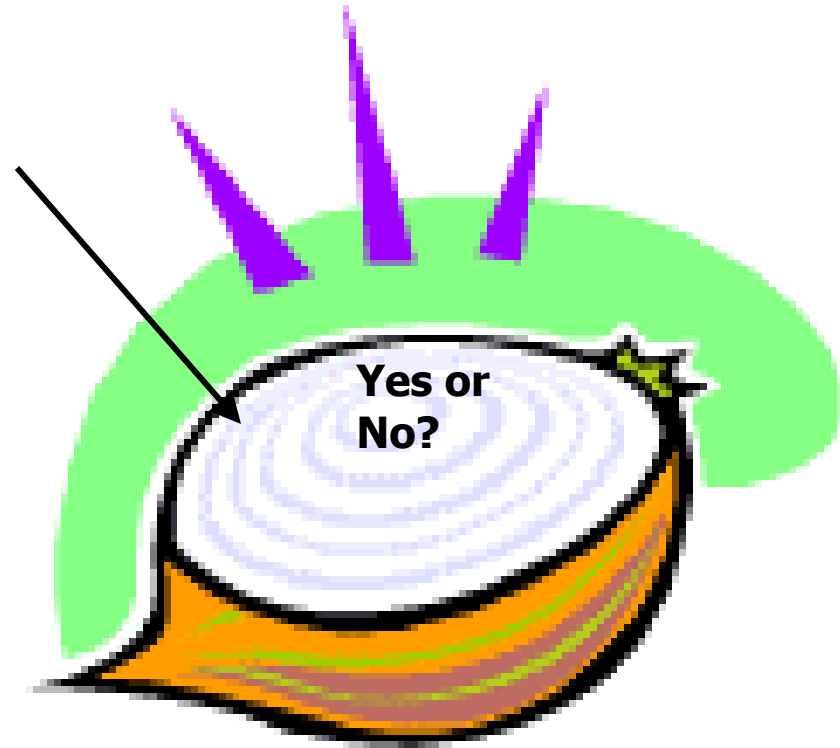
What are the binding constraints to the functioning of markets and efficient and equitable provision of public services?



# The ONION Model and the 10 AAs

## 3. Demand Analysis

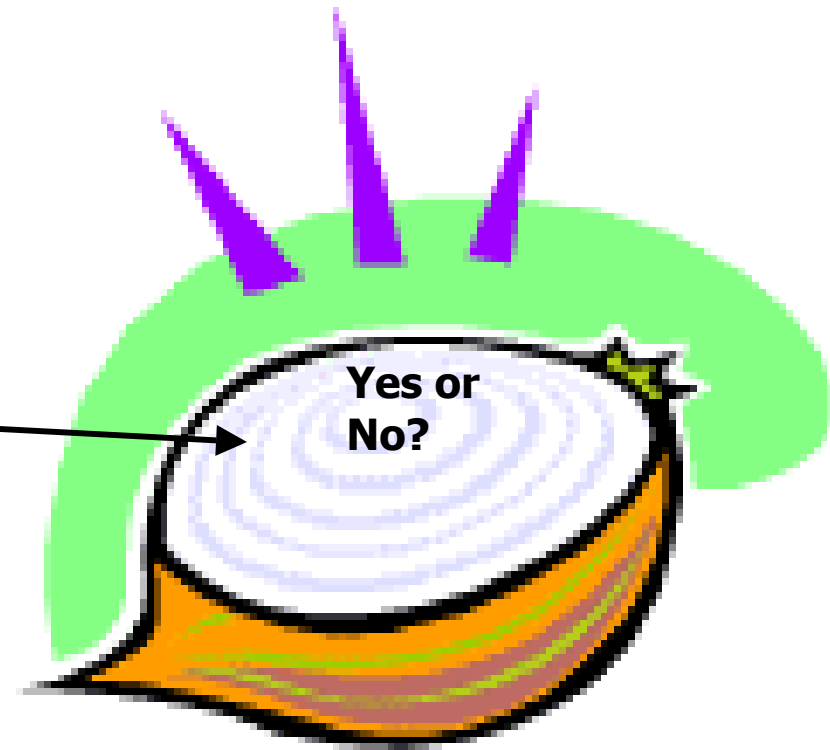
How much of the output is wanted? How much are the users willing to pay for the output?



# The ONION Model and the 10 AAs

## 4. Rationale

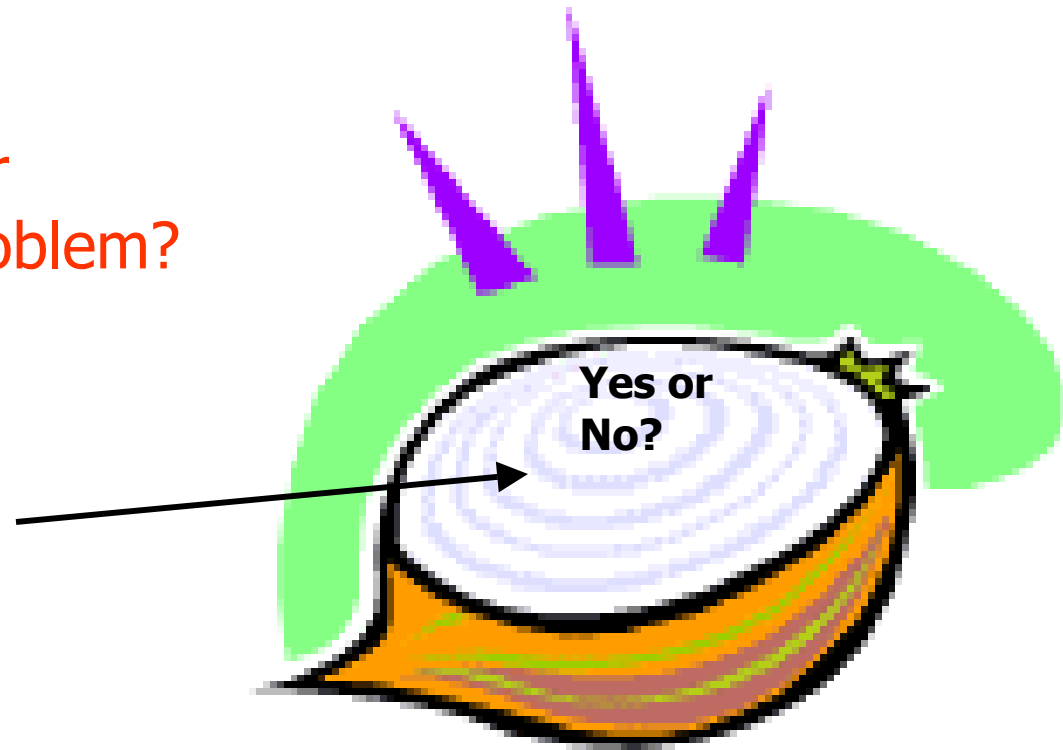
Why should there be public sector intervention?



# The ONION Model and the 10 AAs

What is the best way of addressing the market or institutional failure or problem?

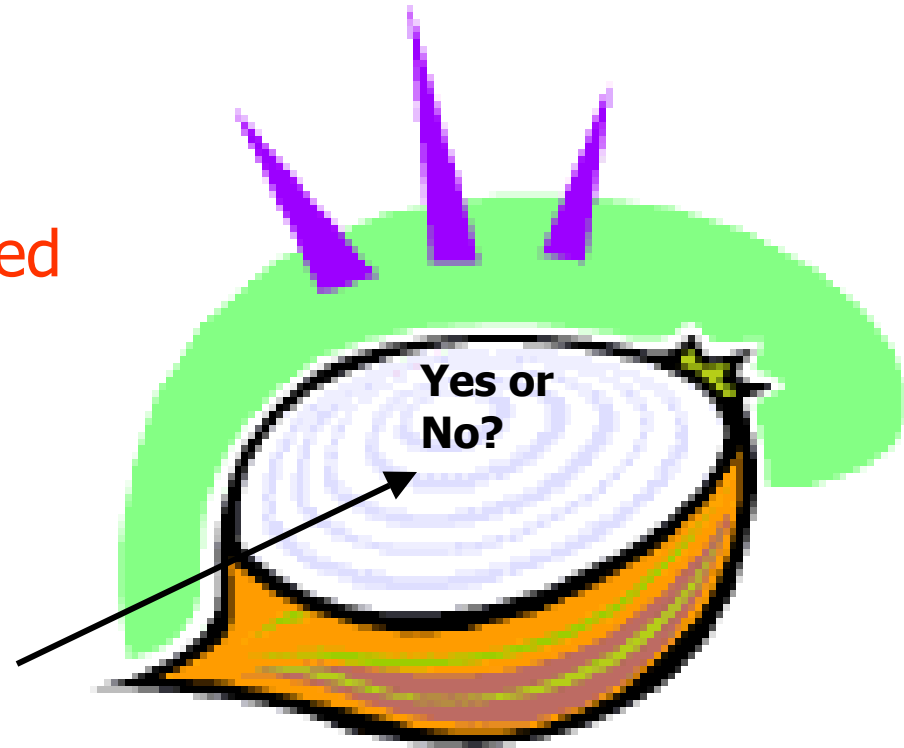
5. Alternatives and Least-Cost Analysis



# The ONION Model and the 10 AAs

Will the project benefits exceed project costs?

6. Project Costs and Benefits



# The ONION Model and the 10 AAs

Are there enough resources to ensure the flow of project benefits?

7. Fiscal/Financial Sustainability



# The ONION Model and the 10 AAs

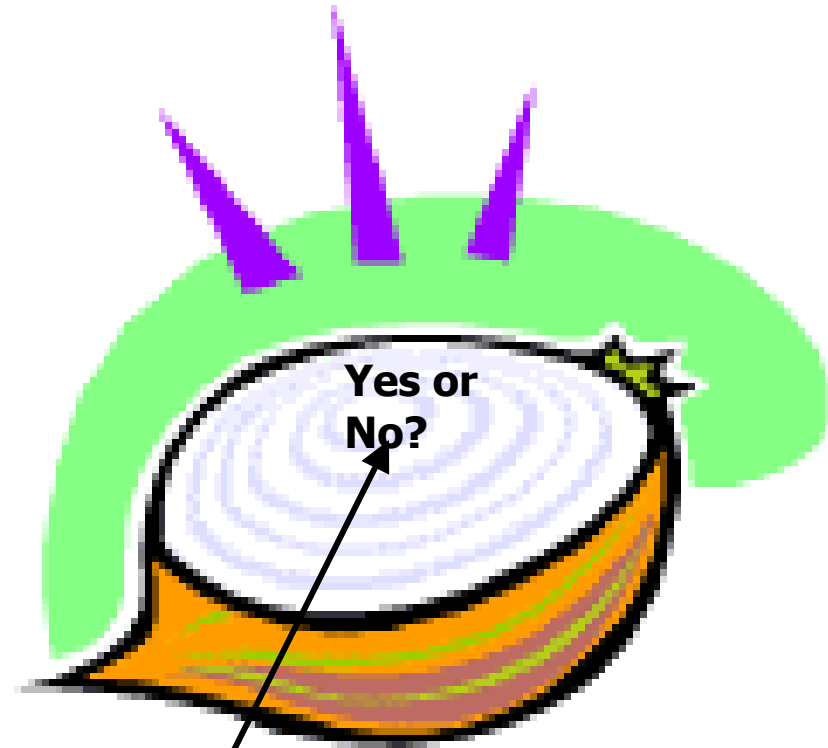
Who benefits from this project, and by how much?



8. Distribution Analysis

# The ONION Model and the 10 AAs

What are the chances that the benefits and costs will be realized as anticipated?



9. Sensitivity and Risk Analysis

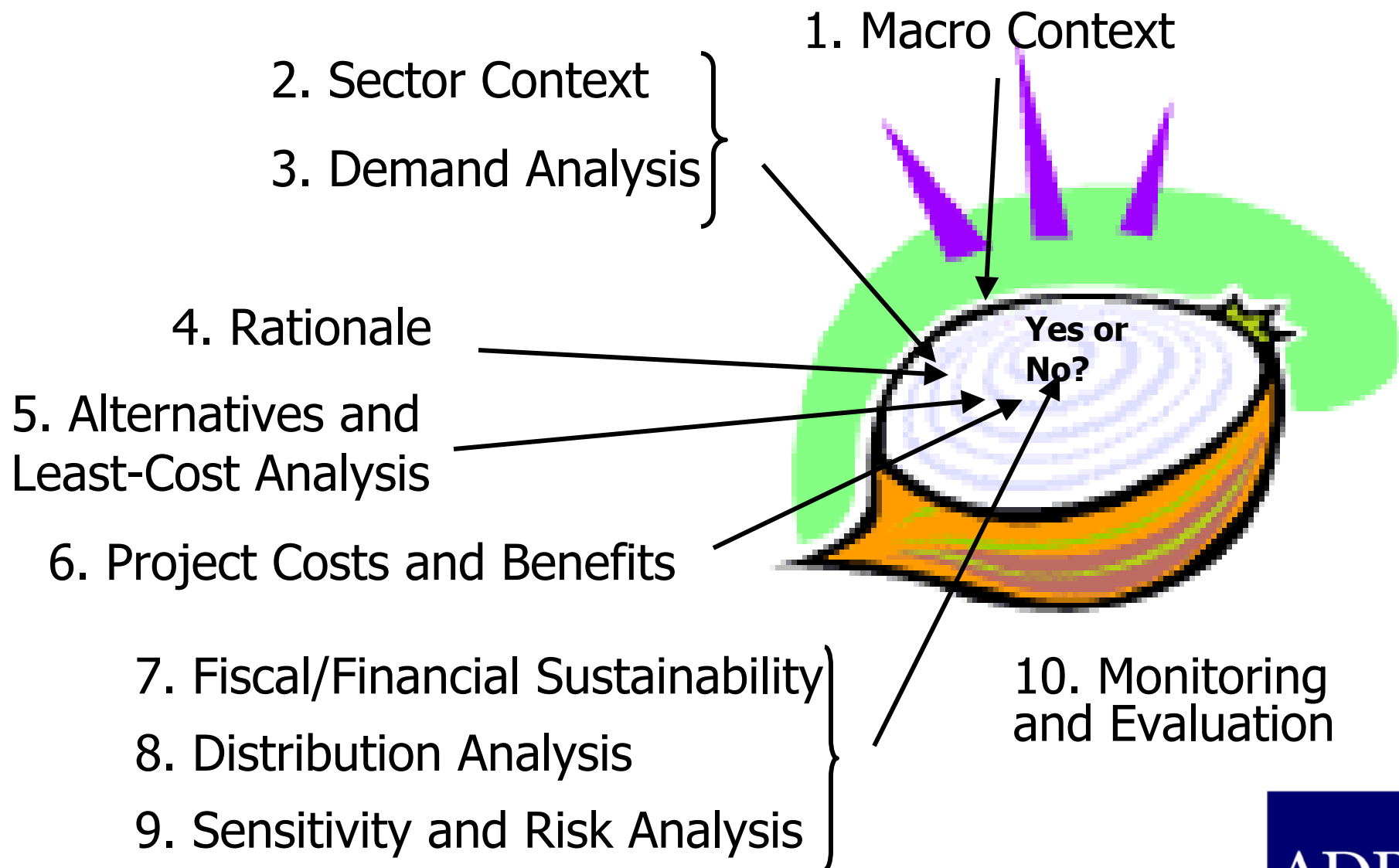
# The ONION Model and the 10 AAs



Do the initial assumptions  
maintain validity  
throughout the project life?

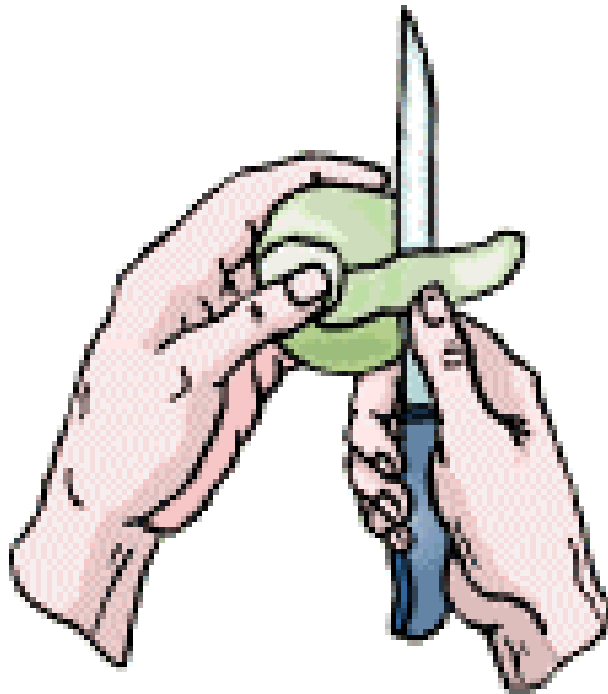
10. Monitoring  
and Evaluation

# The ONION Model and the 10 AAs



# Sequence of Analysis

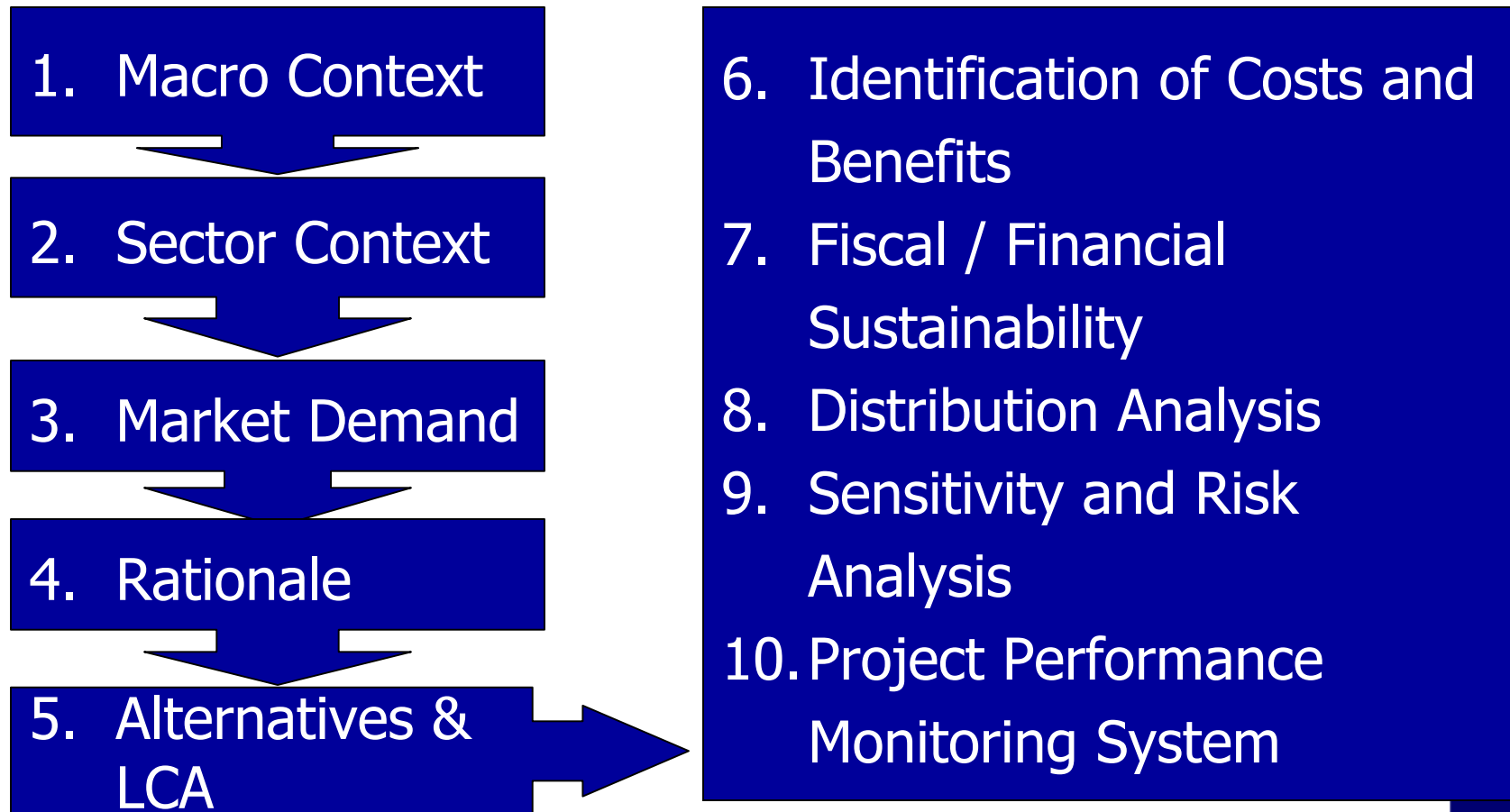
# How do you peel an onion?



From the outside  
going in!



# Like the 10 Areas of Analysis



# **The Context in Your Worksheet**

# Consider a Toll Road Project...

Microsoft Excel - Toll Road Project

File Edit View Insert Format Tools Data Window Help

A19 =

	A	B	C	D	E	F	G	H	I
1	<b>FINANCIAL ANALYSIS</b>								
2	<b>TOLL ROAD PROJECT</b>								
3	(In Mn Rupees)								
4		0	1	2	3	4	5	6	7
5	<b>FINANCIAL INFLOWS</b>								
6	Revenues								
7	Freight		95.81	98.69	101.65	104.70	118.89	122.46	126.13
8	Passenger		60.23	63.24	66.40	69.72	76.86	80.71	84.74
9									
10	<b>FINANCIAL OUTFLOWS</b>								
11	Financial Project Cost	492.75							
12	Maint. and Oper. Cost		24.64	24.64	24.64	24.64	24.64	34.49	34.49
13									
14	Net Inflows	-492.75	131.40	137.29	143.41	149.78	171.12	168.67	176.38
15									
16	FIRR		32%						
17	NPV @ 12%	892.35							
18									
19									
20									
21									
22									

Ready

EIRR \ FIRR \ VOC \ Revenue \ Cost /

NUM

Start

Microsoft PowerPoint - [C...]

Microsoft Excel - Toll R...

8:32 AM



Institutional capability to maintain project

Impact on fiscal position if toll rates are not accepted

If it's so profitable, why is the private sector not in it?

# Revenue Flows

Microsoft Excel - Toll Road Project

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A24 =

	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>REVENUE COMPUTATION</b>											
2												
3			1	2	3	4	5	6	7	8	9	
4	<b>Volume of Traffic Per Day</b>											
5	Freight		700	721	743	765	788	811	836	861	887	
6	Passenger		1,100	1,155	1,213	1,273	1,337	1,404	1,474	1,548	1,625	1,700
7												
8	<b>Toll Rates Per Km (Rupees)</b>											
9	Freight		25.0	25.0	25.0	25.0	26.3	26.3	26.3	26.3	26.3	27.0
10	Passenger		15.0	15.0	15.0	15.0	15.8	15.8	15.8	15.8	15.8	16.0
11												
12	<b>Average Length Travelled/Vehicle/Day</b>											
13	Freight		15.0	15.0	15.0	15.0	15.8	15.8	15.8	15.8	15.8	16.0
14	Passenger		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
15												
16	<b>Total Revenues Per Year (Mn Rupees)</b>											
17	Freight		95.81	98.69	101.65	104.70	118.89	122.46	126.13	129.92	133.81	151.0
18	Passenger		60.23	63.24	66.40	69.72	76.86	80.71	84.74	88.98	93.43	103.0
19												
20												
21												
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26												
27												
28												
29												

Based on demographic and economic forecasts

Based on demand analysis

Based on industry analysis

EIRR / FIRR / VOC / Revenue / Cost

Ready

NUM

Start

Microsoft PowerPoint - [C...]

Microsoft Excel - Toll R...

8:36 AM

# Costs

Microsoft Excel - Toll Road Project

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E26 =

	A	B	C	D	E	F	G
1	<b>PROJECT COST ESTIMATES</b>						
2		<b>Financial</b>		<b>Adjustments</b>	<b>Economic</b>		
3	<b>Item</b>	<b>Cost in Mn \$</b>	<b>Cost in Mn Rupees</b>		<b>Cost in Mn Rupees</b>		
4	<b>A. Base Cost</b>						
5	1. Construction						
6	<i>Materials and Equipment</i>	4.00	300.00	SERF = 1.2		360.00	
7	<i>Labor</i>						
8	<i>Scarce</i>	0.20	15.00	OCSCS = 1.0		15.00	
9	<i>Surplus</i>	0.80	60.00	OCSL = 0.8		48.00	
10	Total Construction	5.00	375.00			423.00	
11	2. Project Management	0.25	18.75			18.75	
12	<b>B. Contingencies</b>						
13	1. Physical Contingencies	0.50	37.50			42.30	
14	2. Price Contingencies	0.82	61.50			0.00	
15							
16	<b>Total</b>	<b>6.57</b>	<b>492.75</b>			<b>484.05</b>	
17							
18	Exchange Rate: 1 \$ = 75 Rupees						
19							
20	SERF = Shadow Exchange Rate Factor						
21	OCSCS = Opportunity Cost of Scarce Labor						
22	OCSL = Opportunity Cost of Surplus Labor						
23							
24	<b>Maintenance Cost</b>	5% of Project Cost	Years 1-5				
25		7% of Project Cost	Years 6-10				
26		10% of Project Cost	Years 11-15				
27		12% of Project Cost	Years 16-20				
28							
29							
30							

Ready

NUM

Microsoft

Start

Microsoft Excel - Toll Roa... Microsoft PowerPoint - [C...

1:34 PM

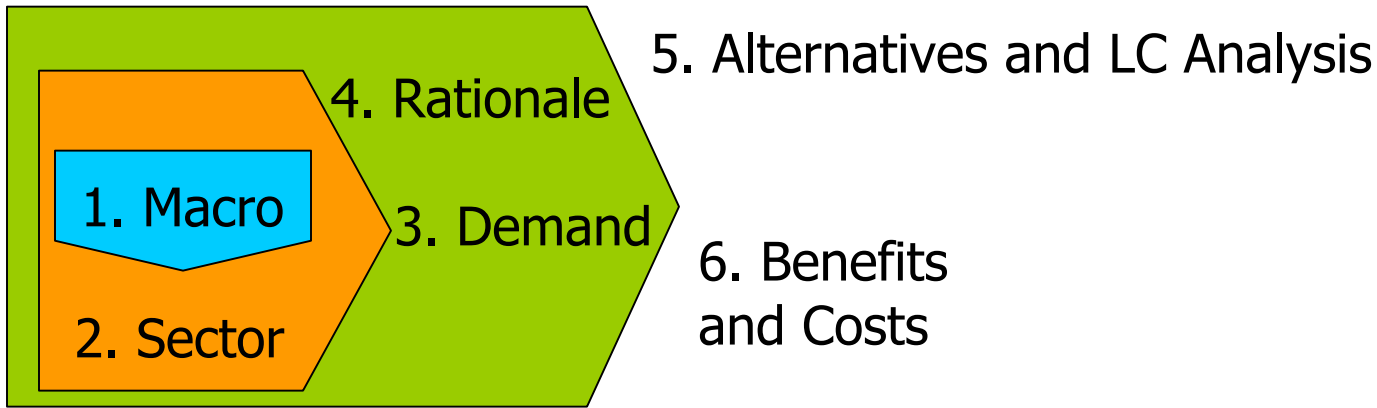
Institutional skill  
in project  
implementation

Stability of  
forex market

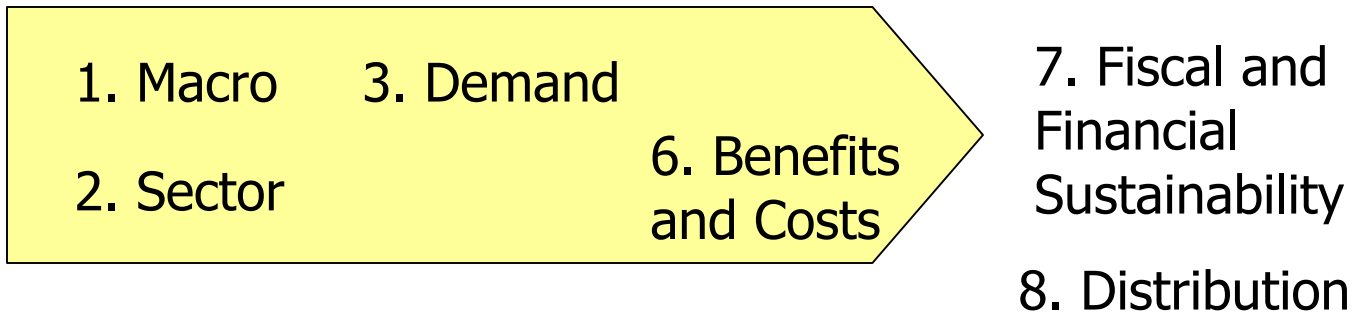
Volatility of  
prices; inflation

Labor  
demand and  
supply

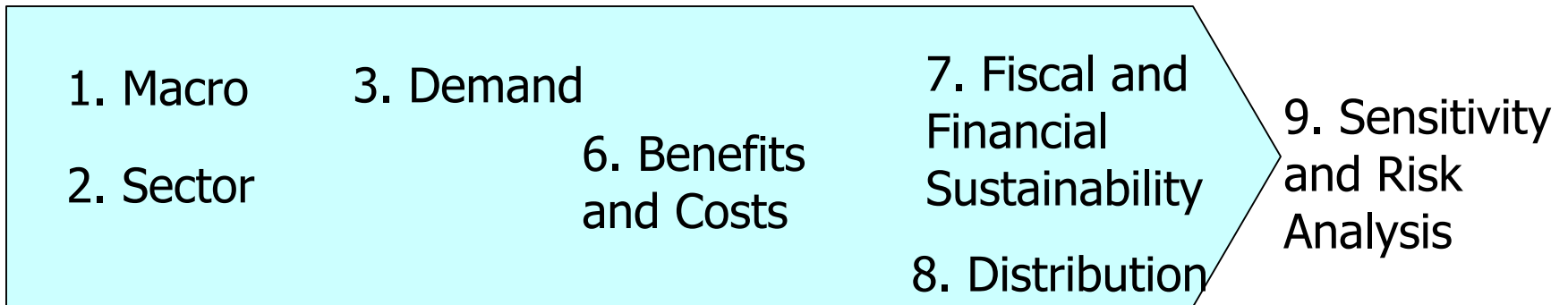
# Information Flow: Ten AAs



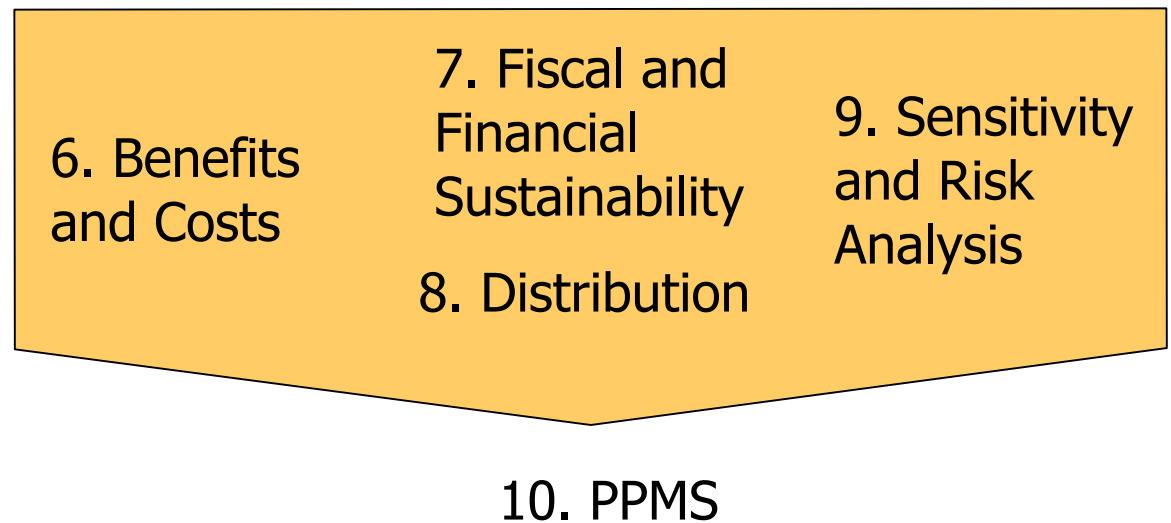
# Information Flow: Ten AAs



# Information Flow: Ten AAs



# Information Flow: Ten AAs



Macro and Sector Context, Demand, Rationale, and Alternatives involve half the analysis



NOT half the rhetoric.



The background features a large, faint watermark of the Asian Development Bank logo. It consists of a circular emblem with a laurel wreath border. Inside the circle, the text 'ASIAN DEVELOPMENT BANK' is written in a circular path. A banner across the center of the emblem contains the text 'ASIAN DEVELOPMENT BANK' in a stylized font.

# For More Information and Learning Materials

Contact EREA, ERD

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