

On Making Decisions

Dr. Nick Demos

Primer in Decision Making

- 1) **Defining DM**
- 2) **Factors affecting DM**
- 3) **Steps to DM**
- 4) **Process**
- 5) **Types**
- 6) **Styles**
- 7) **Becoming a Better Decision Maker**
- 8) **Ethics in DM**
- 9) **Special Issues in DM**
- 10) **Summary**

1) DEFINING DM

decision making

The thought process of selecting a logical choice from the available options. When trying to make a good decision, a ...

- **Decision making** is the cognitive process leading to the selection of a course of action among alternatives.
- Every decision making process produces a **final choice**. It can be an **action** or an **opinion**.
- It begins when we need to do something but we do not know what. Therefore, decision making is a **reasoning process** which can be rational or irrational, and can be based on explicit assumptions or tacit assumptions.
- **Examples:**
Shopping, deciding what to eat, What to wear, when to sleep, etc..



DM every minute...

- Every day we make decisions.
- There is no right or wrong way to make a decision.



... since everyday ... we might be / are ...



DM ...why ... to SOLVE...



... this is a solution too...



"I wish I could be as calm as JB when it comes to making decisions."

... and many of us ... we do follow ...

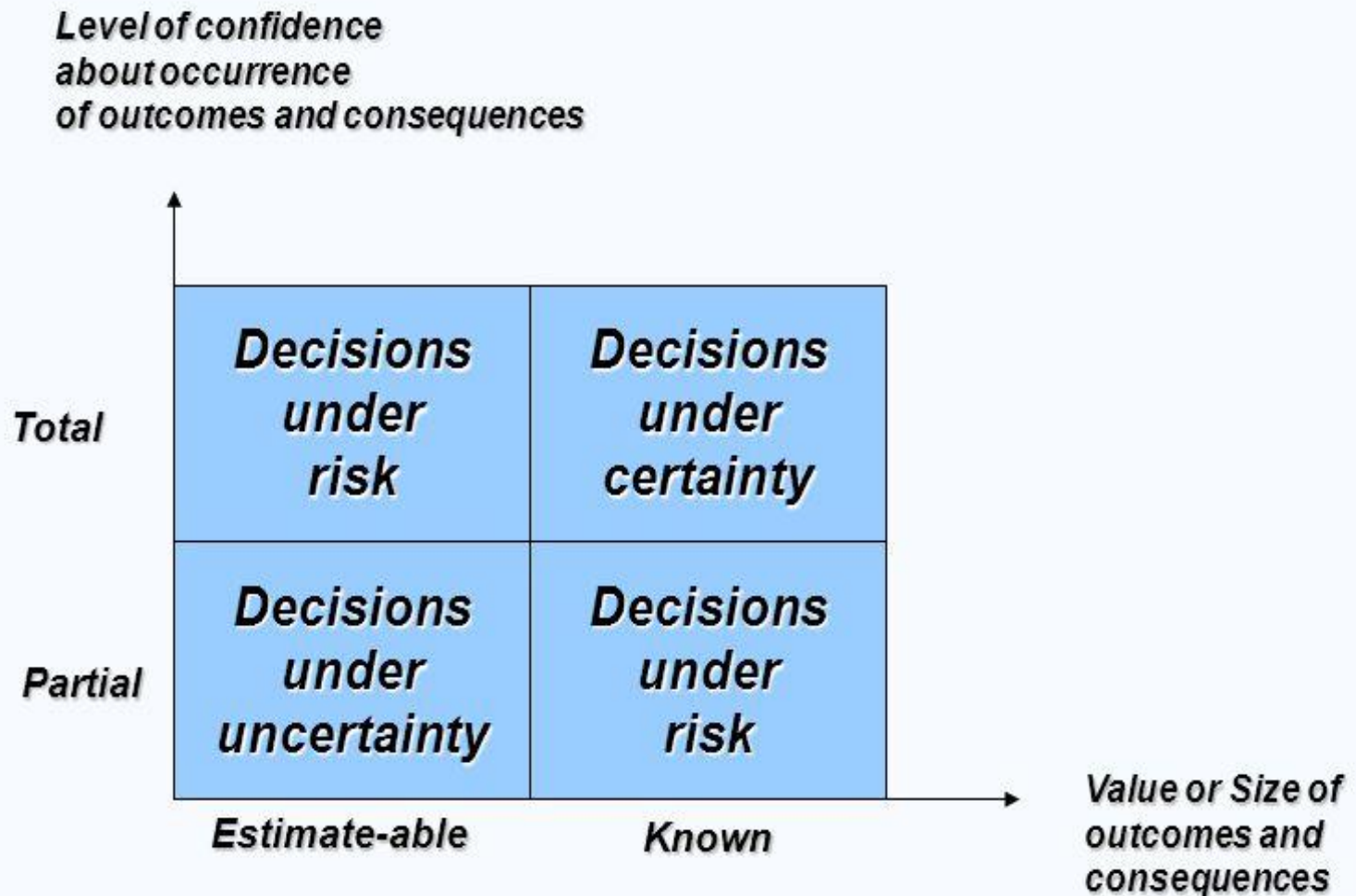
I'M BRINGING YOU INTO THE
DECISION-MAKING PROCESS, RUGGLES.
HERE - FLIP THIS COIN.



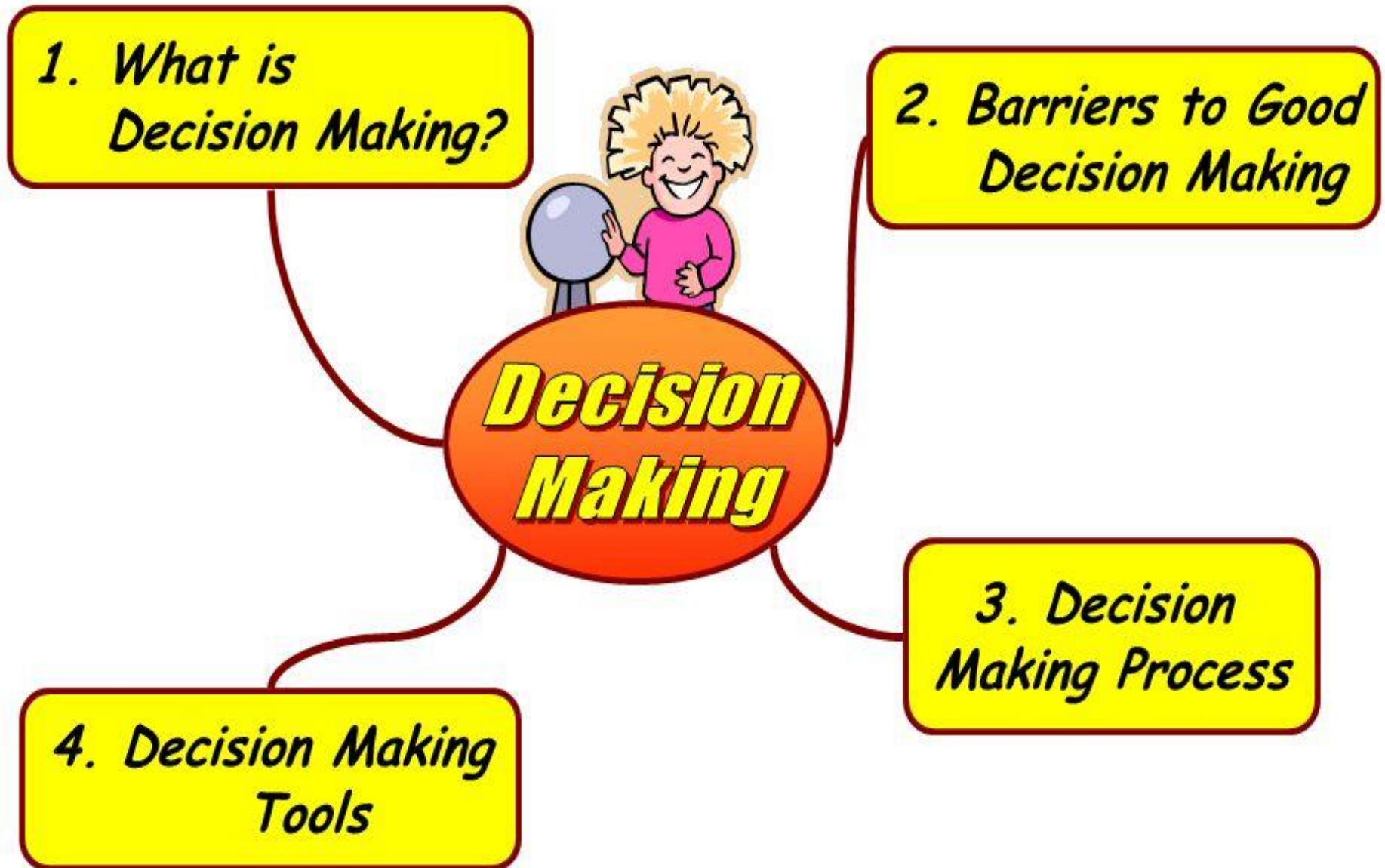
B2/00

... DM's basic matrix ...

Decision Making Environment

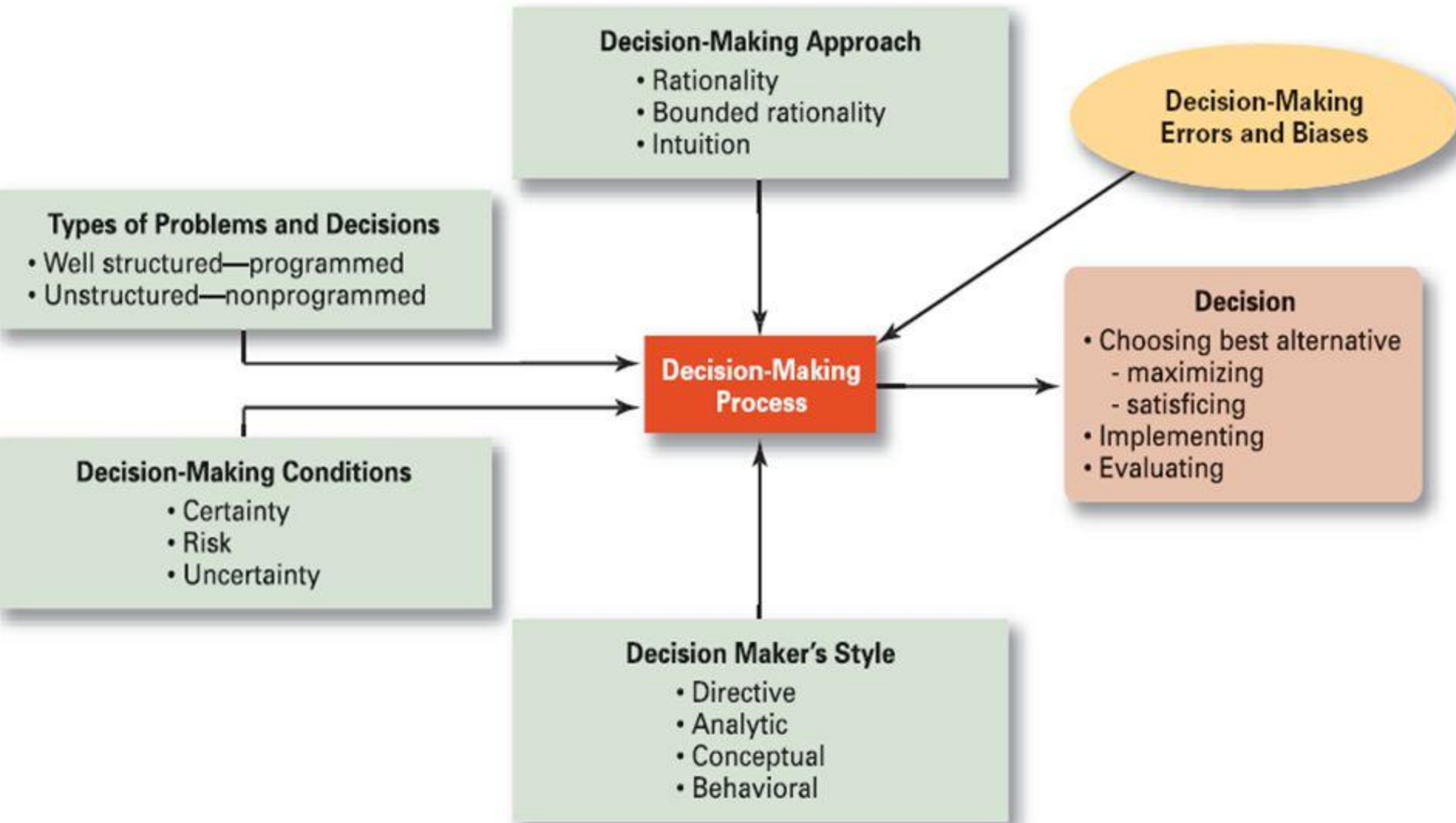


... so WHAT is DM ...

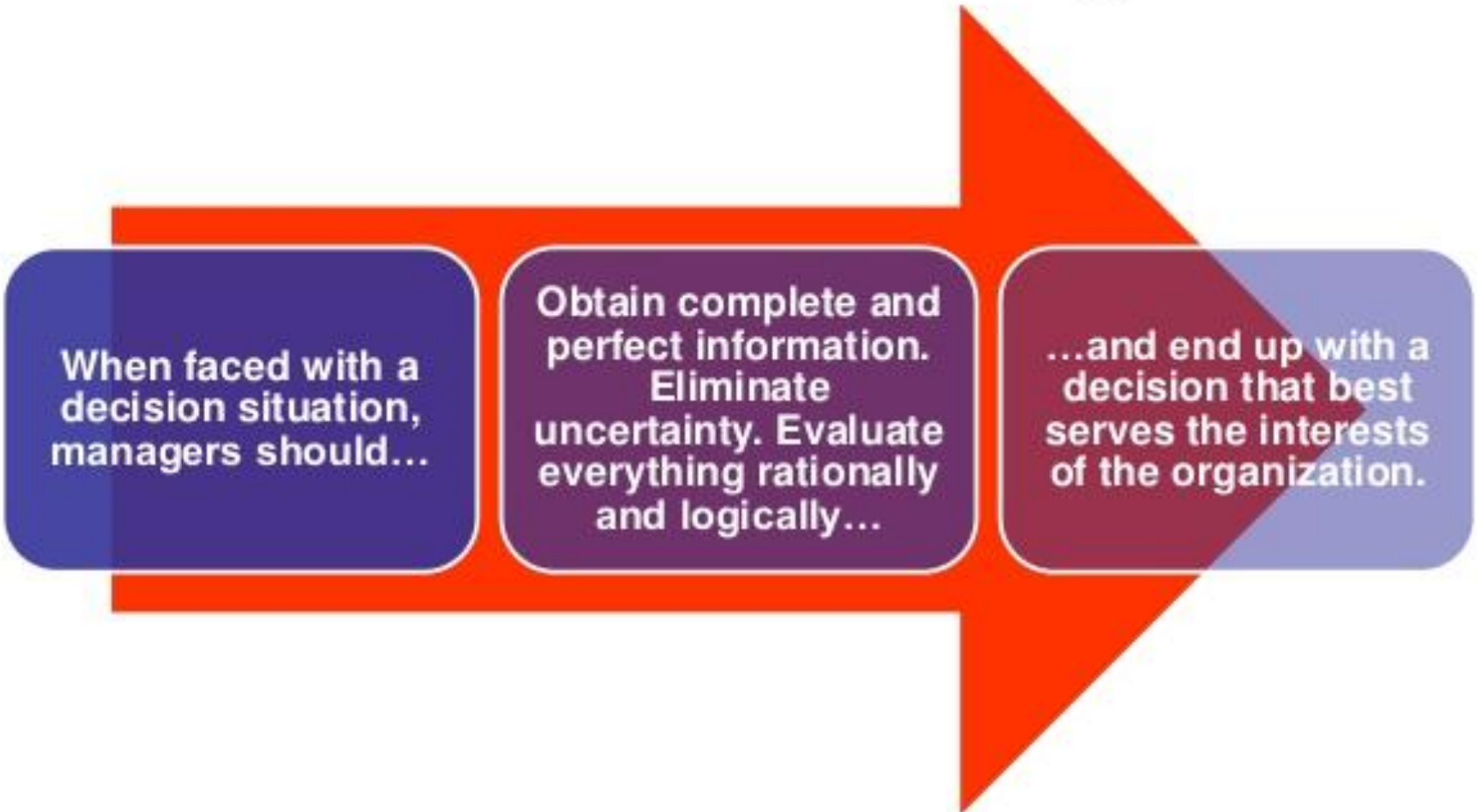


... especially in Business ...

Overview of Managerial Decision Making



The Classical Model of Decision Making



When faced with a decision situation, managers should...

Obtain complete and perfect information.
Eliminate uncertainty. Evaluate everything rationally and logically...

...and end up with a decision that best serves the interests of the organization.

Recognition

Implementation

Structure

Evaluate

Decide

Problem
framing

Scenario
analysis

Option
generation

Risk
analysis

Option
evaluation

Objective
definition

Situation
appraisal

Recommend
& negotiate

Decision &
commitment



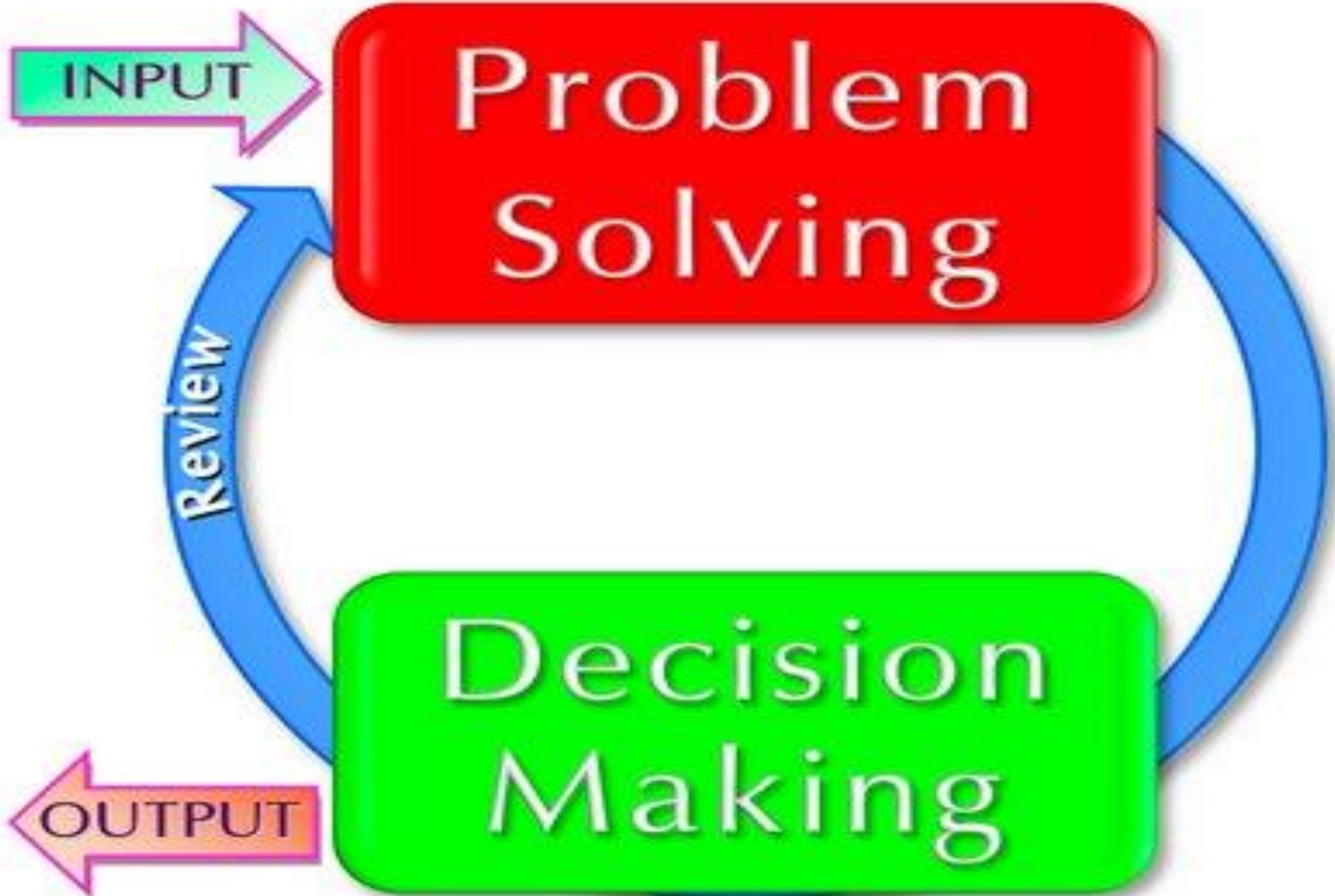
Overview Of Managerial Decision Making



... but as in Business ... also Personally ...



... In & Out ...



Critical Thinking & Decision Making



- Decision Making
 - Can adolescents make competent decisions?
 - Competence in the decision making process varies with age
 - Few differences have been found when comparing the decision-making process of late adolescents and adults
 - But, they may evaluate consequences differently (1)

... even in the Digital Age ...

Problem Solving/Decision Making



Decision Making vs. Problem Solving

Decision Making

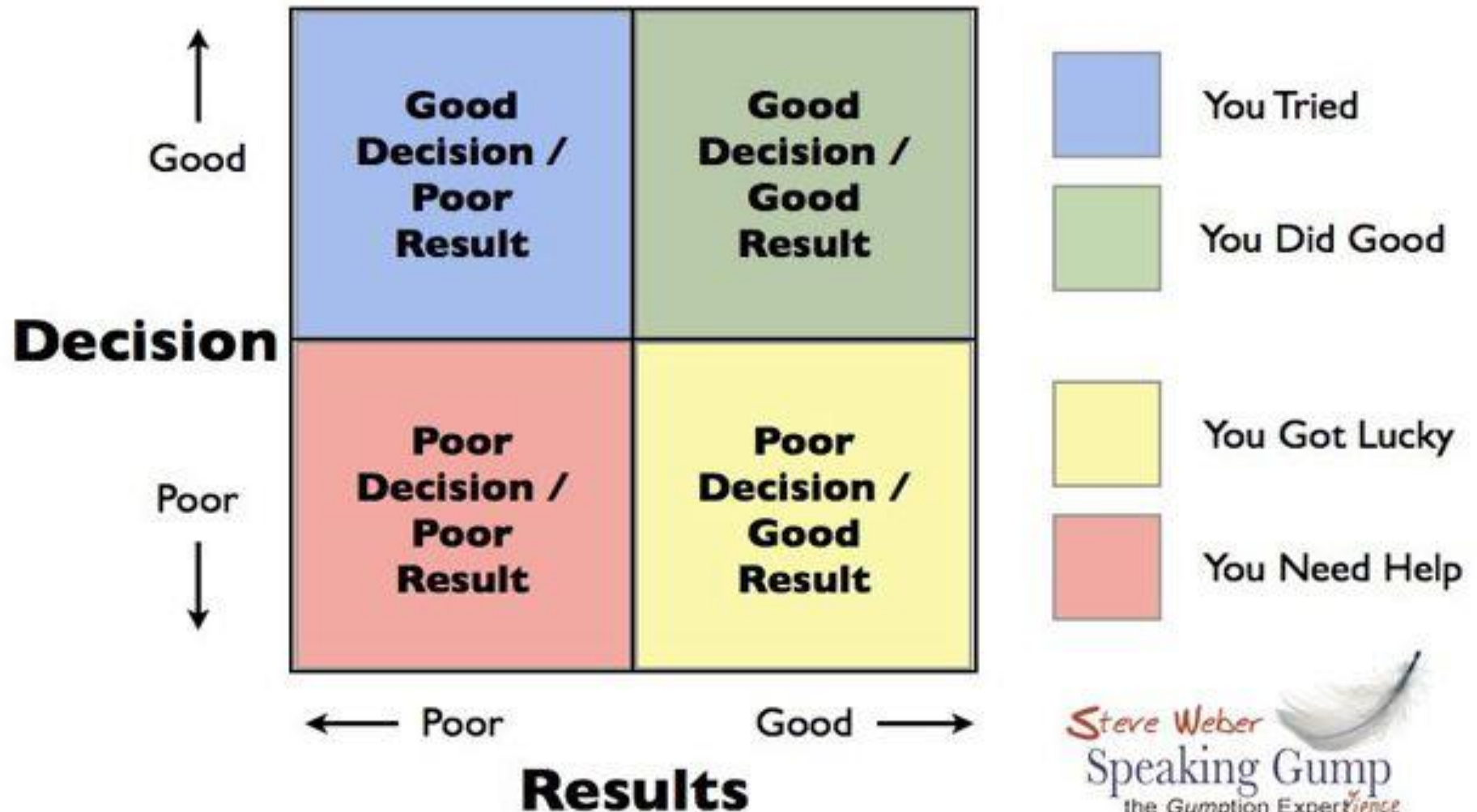
- Making a judgment
- Choosing an option
- Making choice between alternative
- Asks who, what, where & when

Problem Solving

- Developing a plan
- Analyzing a problem
- Creating a plan of action
- Asks why & how

... ultimately DM... is defined by the RESULTS ...

Decision Making / Results Matrix



2) FACTORS AFFECTING DM

- Perception
- Priority
- Acceptability
- Demands
- Style
- Resources
- judgment



... more ...



... Psychology ...

Decision Stage

Problem Recognition

Information Search

Alternate Evaluation

Purchase decision

Post purchase evaluation

Psychological Process

Motivation

Perception

Attitude formation

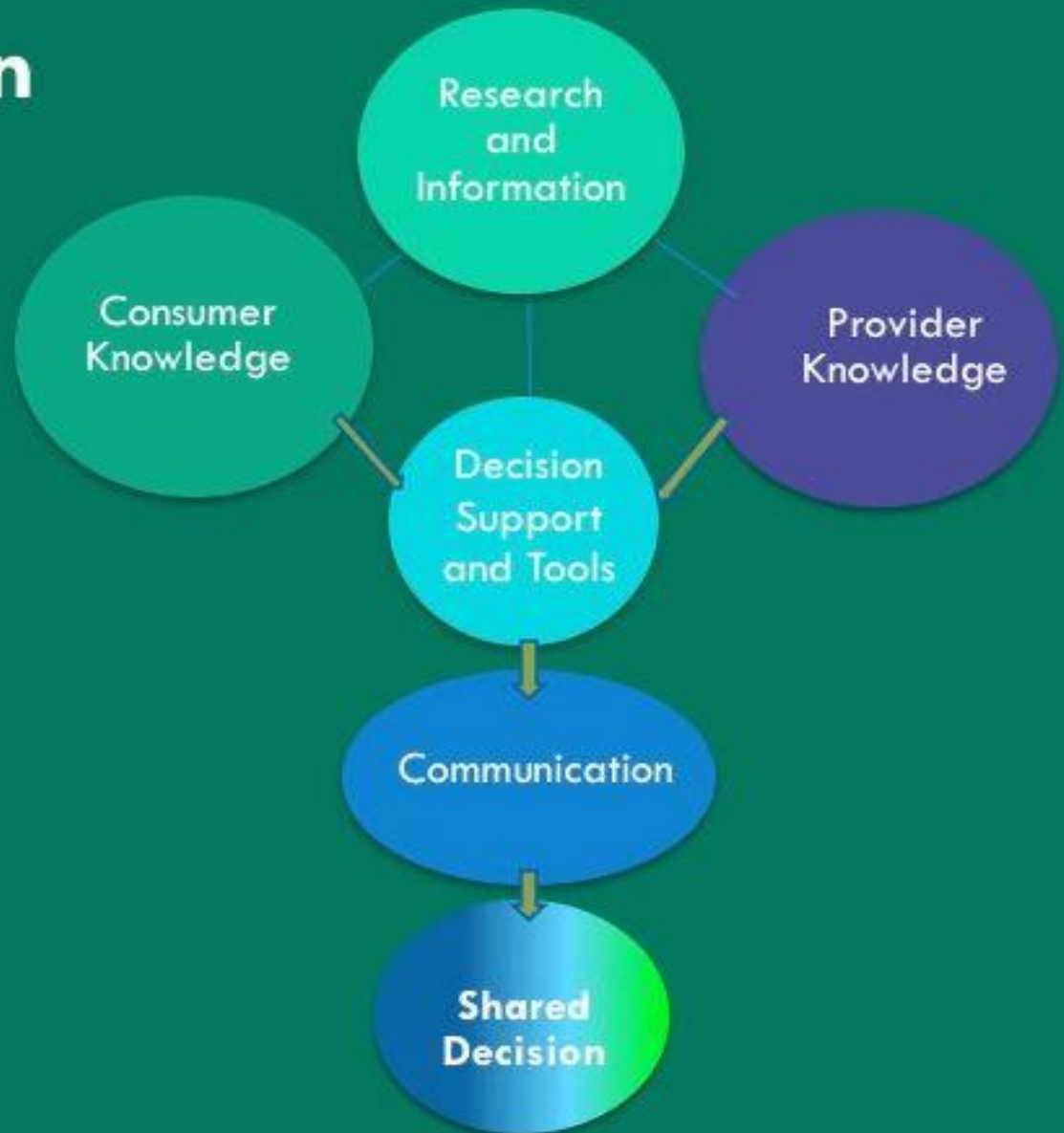
Integration

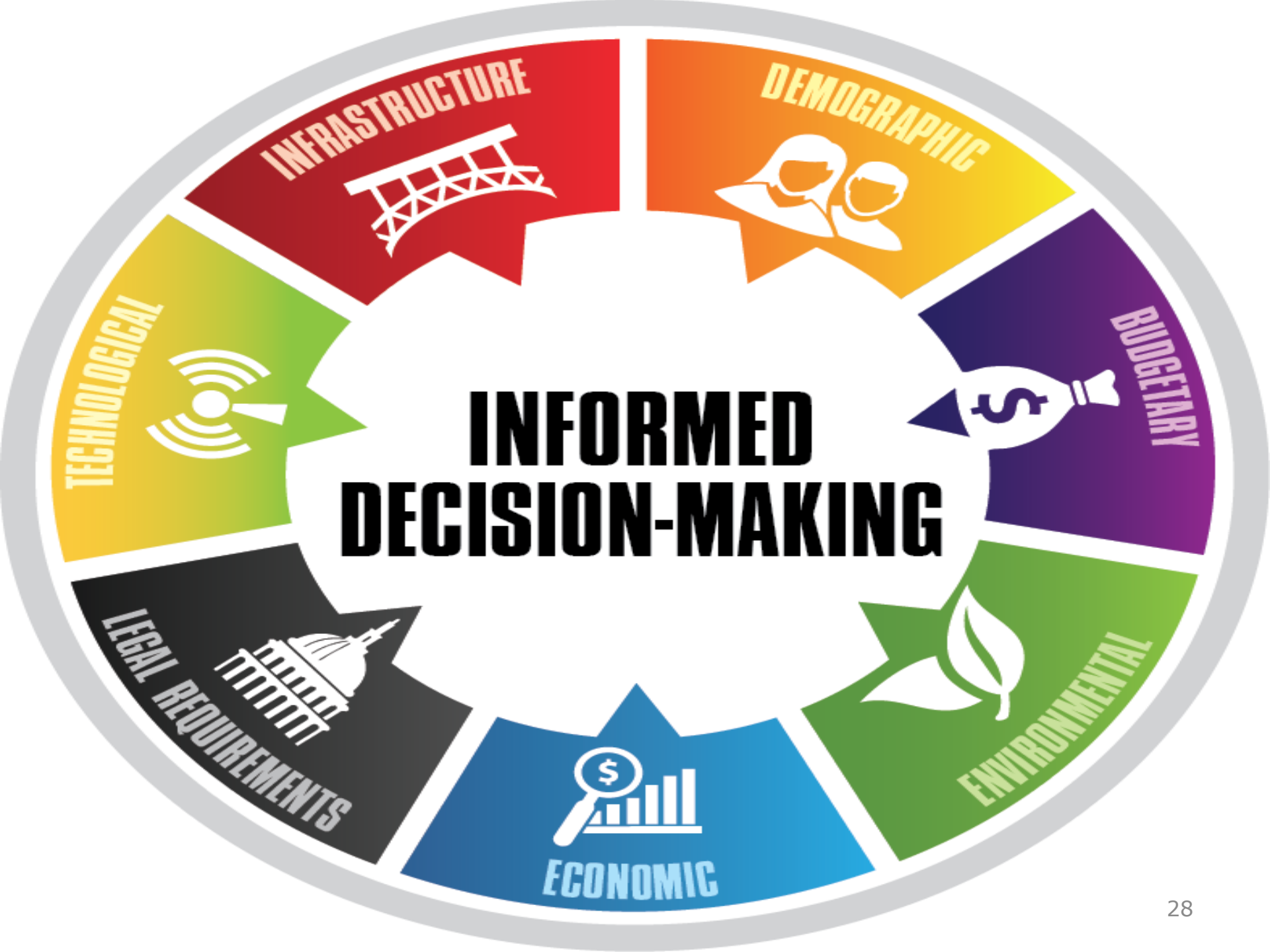
Learning

... Information ...

Shared Decision Making

- Full information
- DecisionTools
- Communication





... Value System / Philosophy ...



... Bias & Risk Profile ...

Biases & Decision Making

Anchoring

Numbers influence us even if not relevant.

Framing

The way the situation is presented influences us.

Availability heuristics

We give more weight to vivid memories even if they are uncommon.

Confirmation Bias

We seek comforting information and ignore negative ones.

Commitment escalation

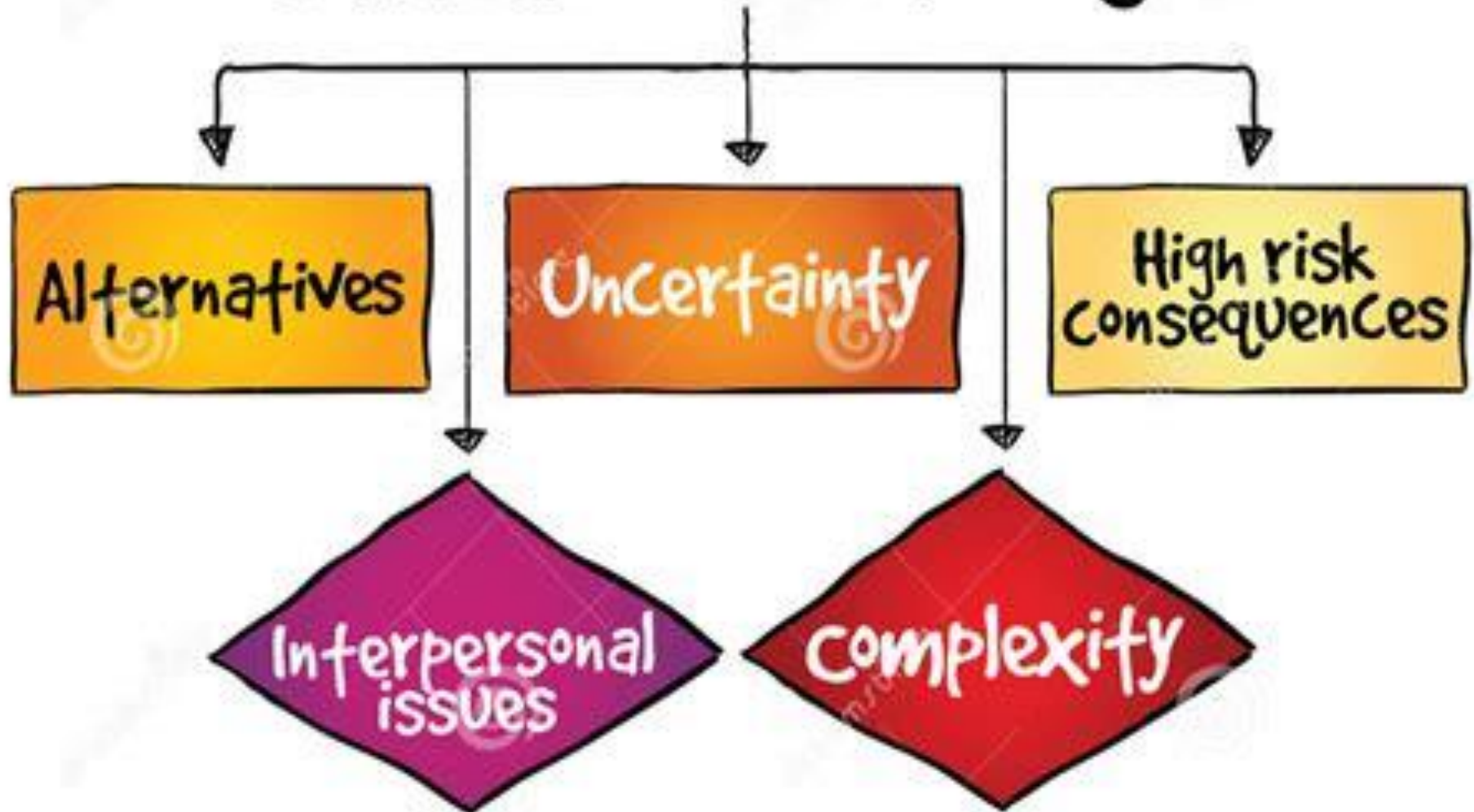
We carry on taking the same decision again and again even if it causes a loss.

Hindsight Bias

We cannot remember when we learned something new.

... Uncertainty ...

DeCision Making

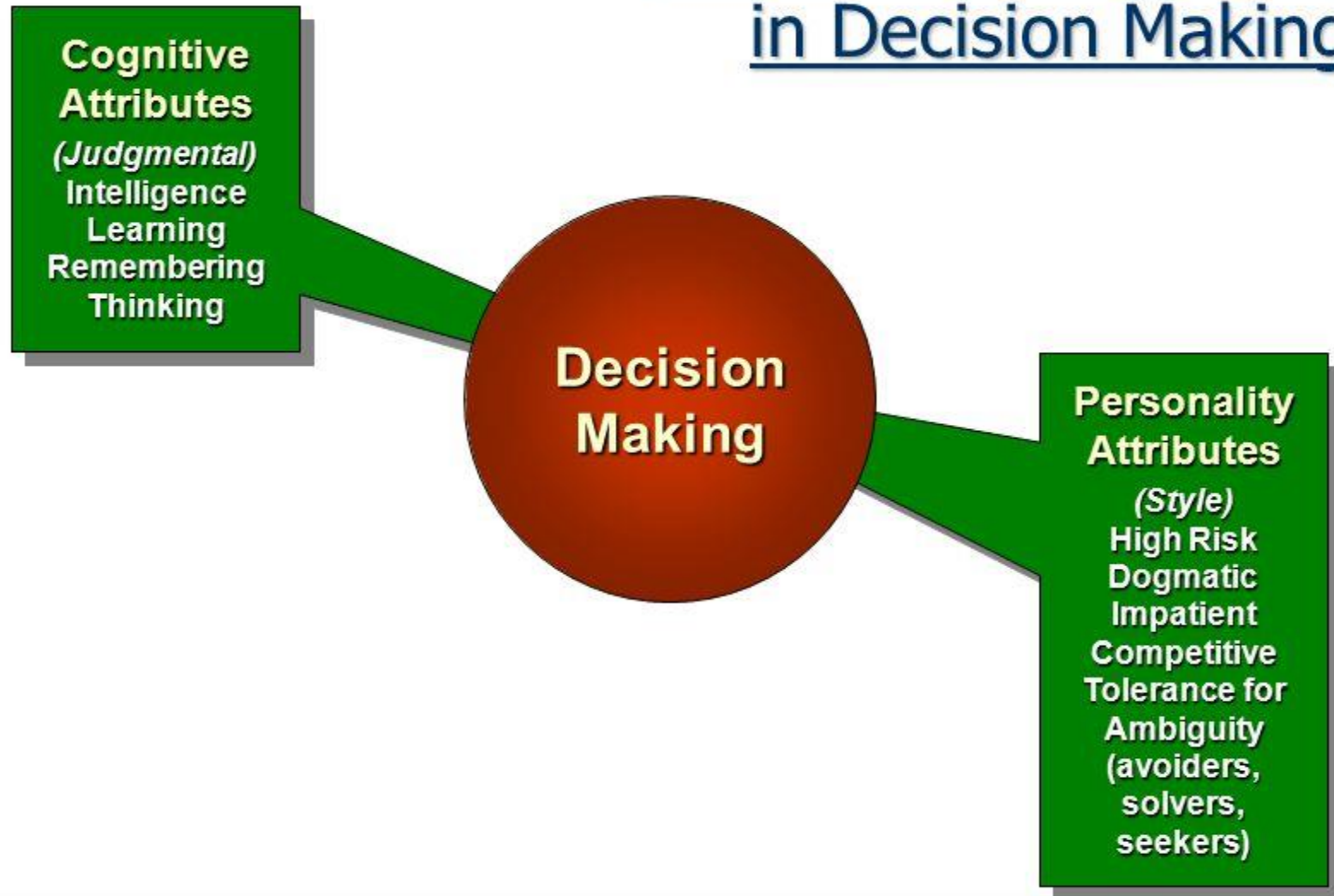


... Complexity ...

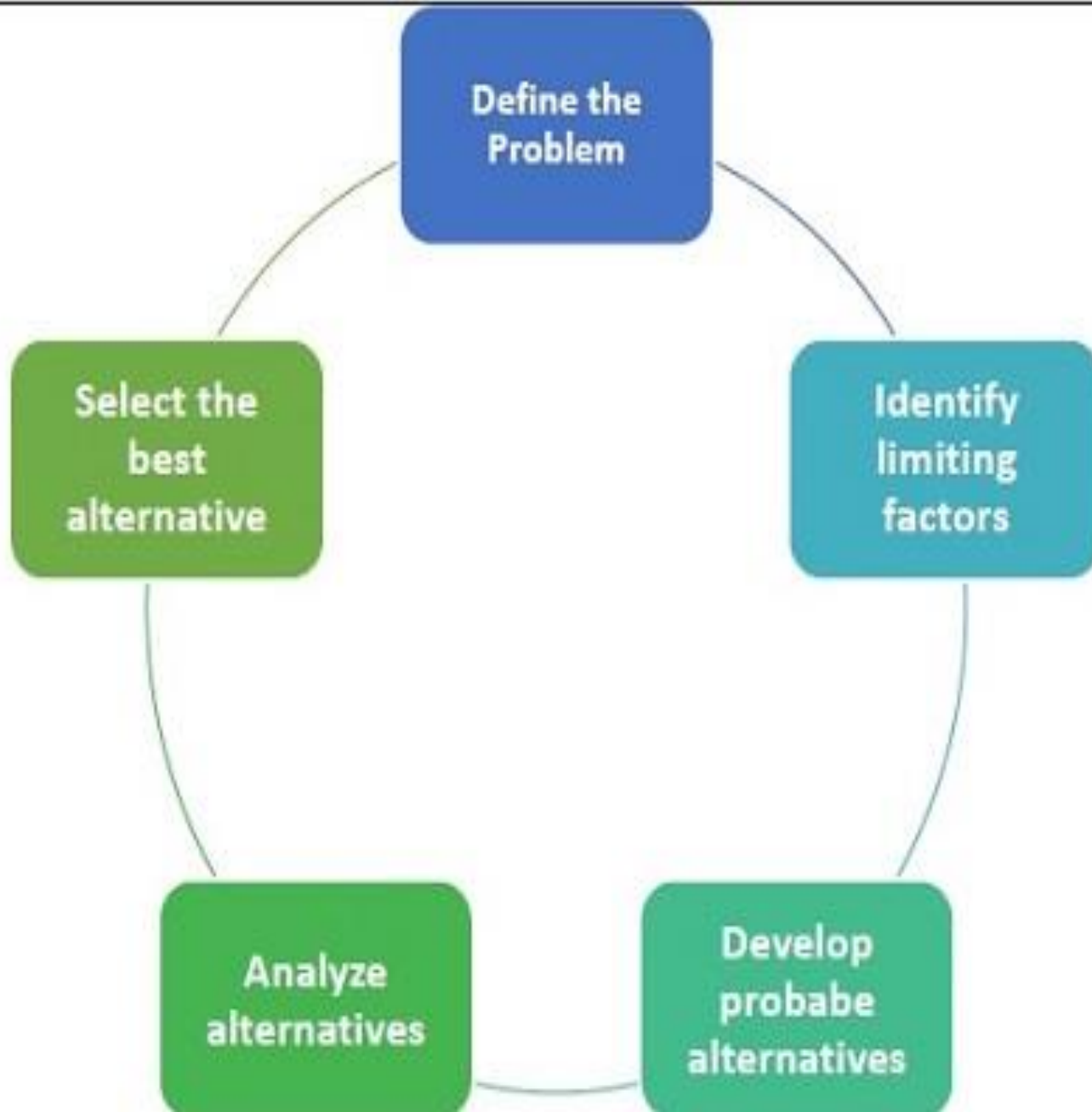


... and primarily ... **Intelligence ...**

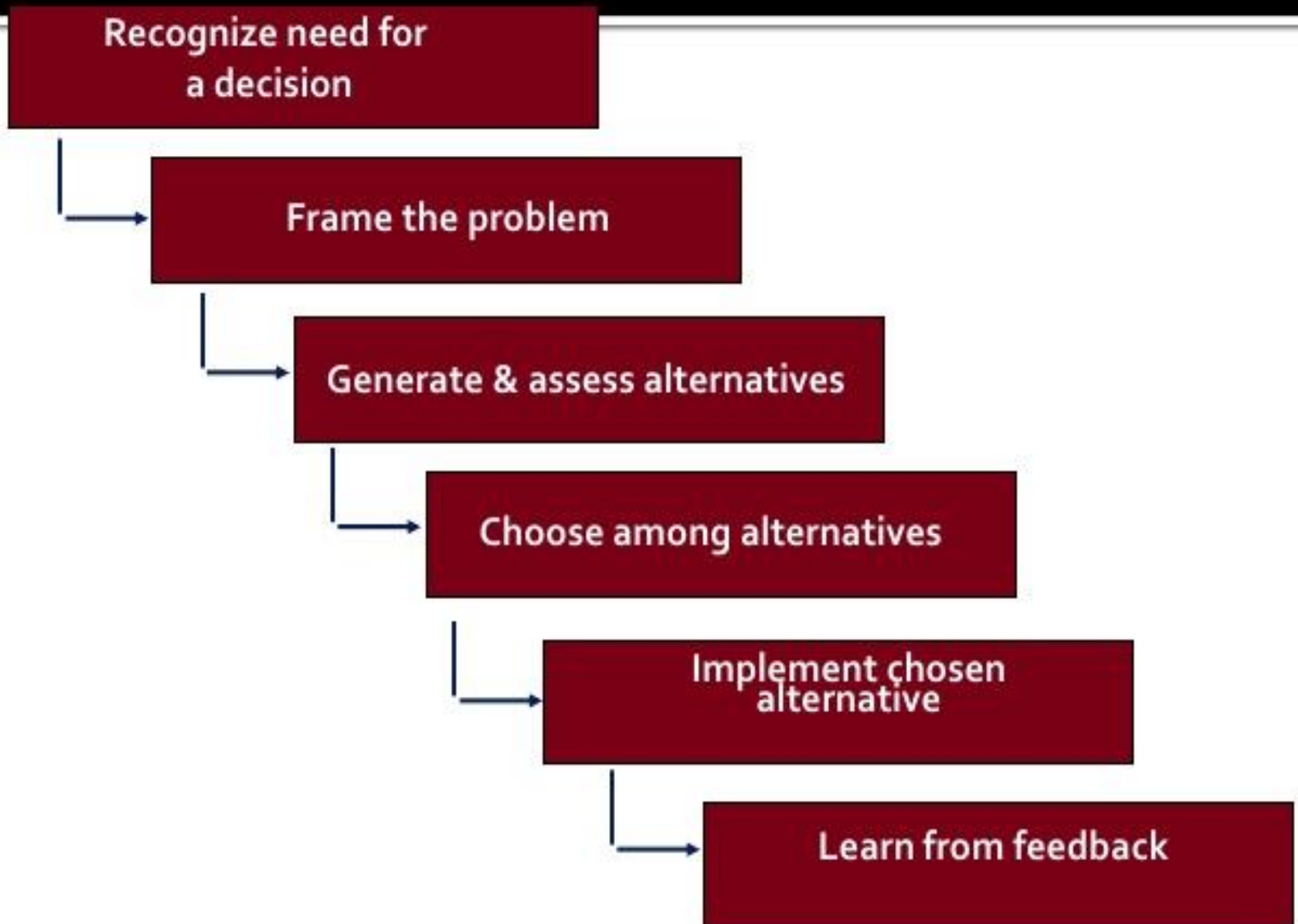
Individual Differences in Decision Making



3) BASIC STEPS to DM



Decision Making Steps



Decision-Making Steps

- When you make big decisions, follow the seven steps of the decision-making process.

1. Define the problem.
2. Establish goals.
3. Identify resources.
4. Consider the alternatives.
5. Make a decision.
6. Implement the decision.
7. Evaluate the results.



1

Define the Problem.

2

Develop Alternatives

3

Evaluate the Alternatives

4

Make the Decision

5

Implement the Solution

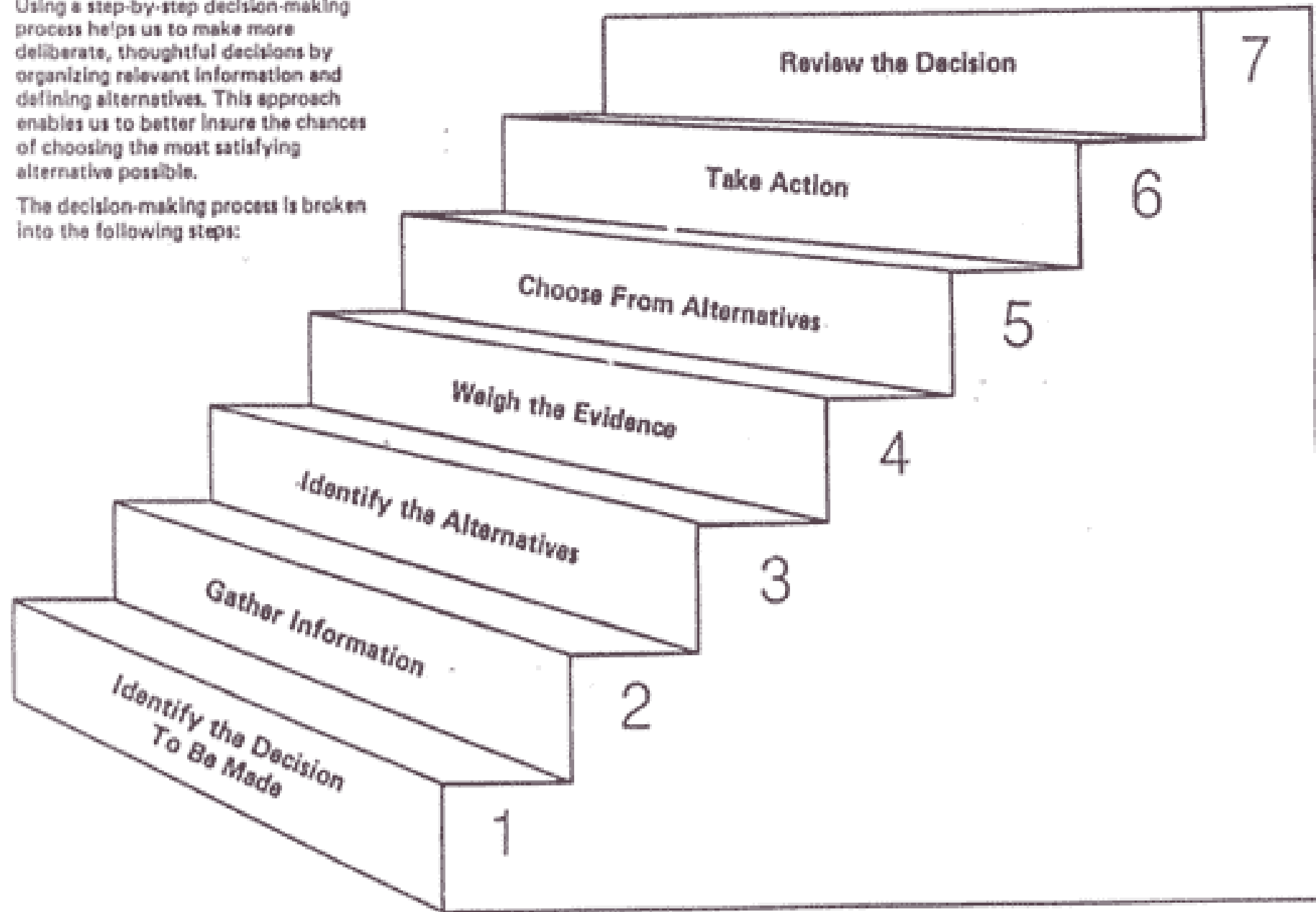
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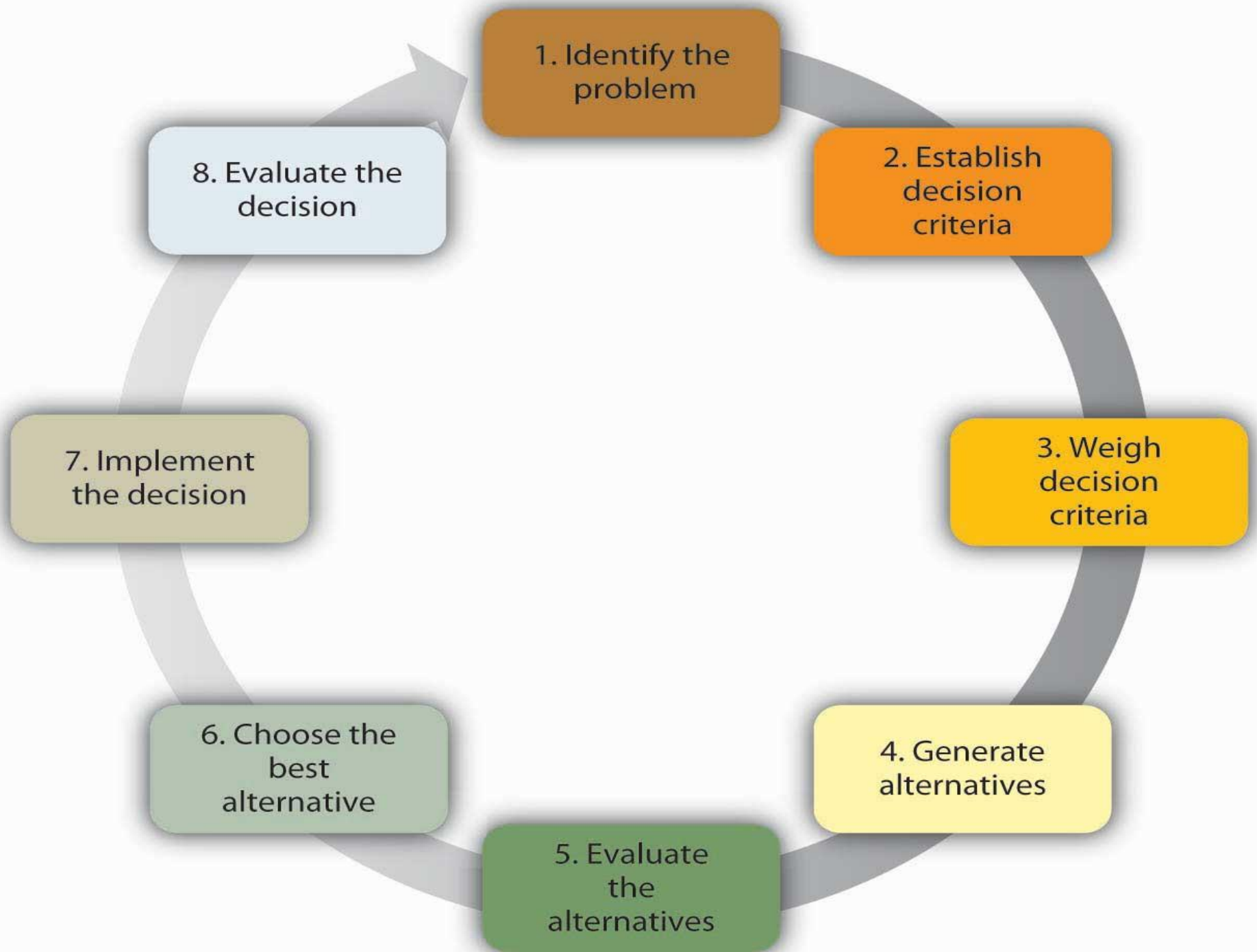
Monitor your Solution

DECISION-MAKING MODEL

Using a step-by-step decision-making process helps us to make more deliberate, thoughtful decisions by organizing relevant information and defining alternatives. This approach enables us to better insure the chances of choosing the most satisfying alternative possible.

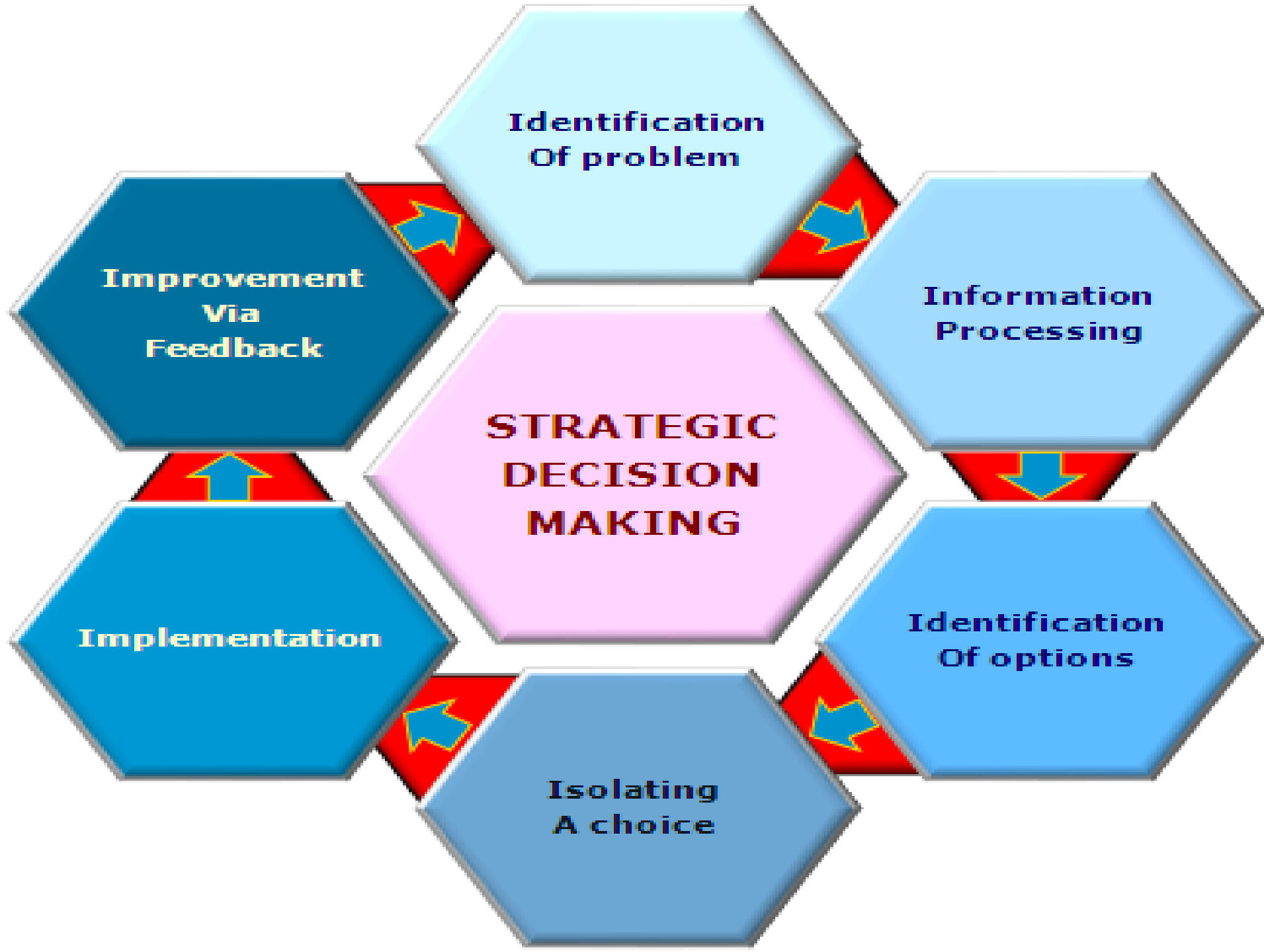
The decision-making process is broken into the following steps:



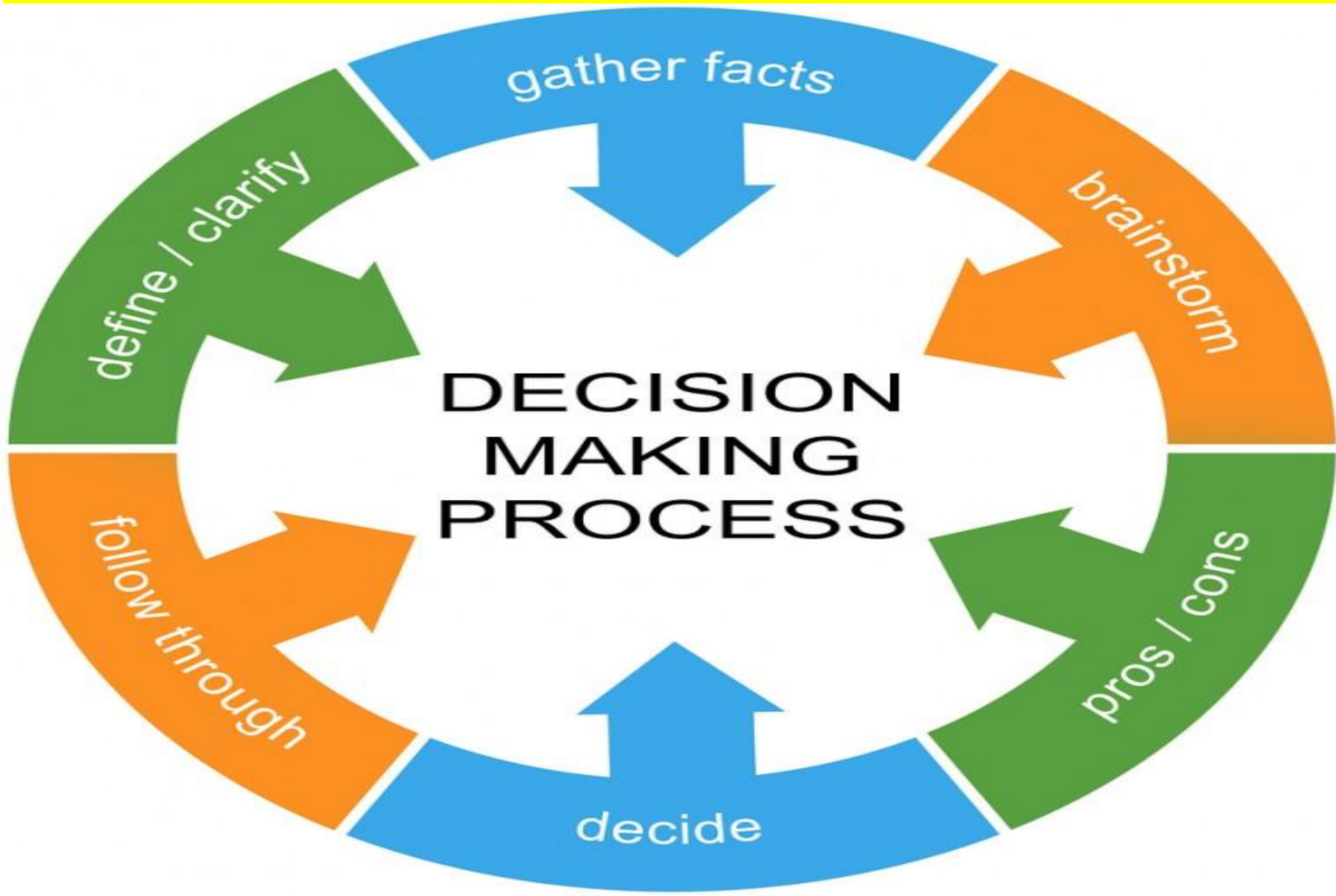


... vital ... to DM

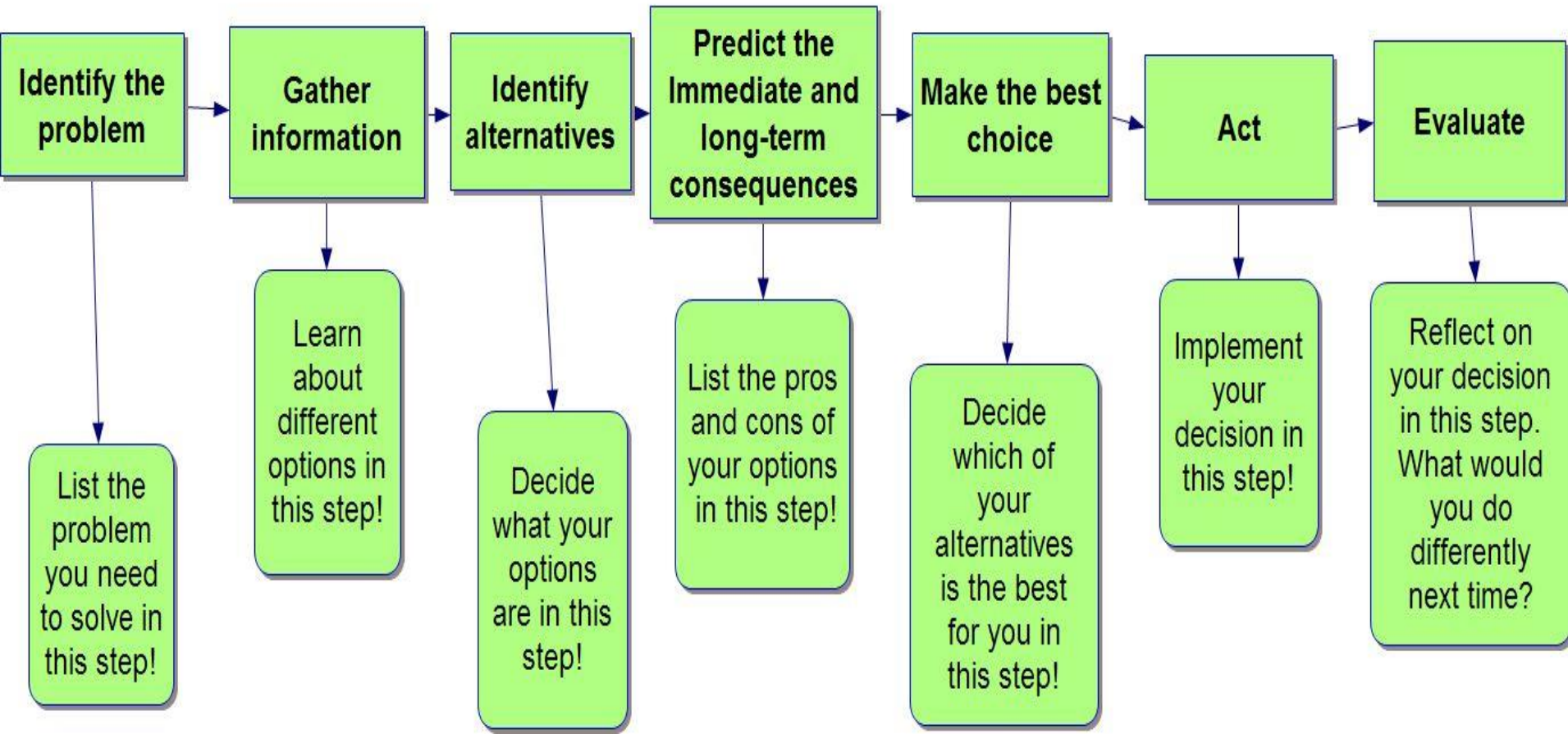




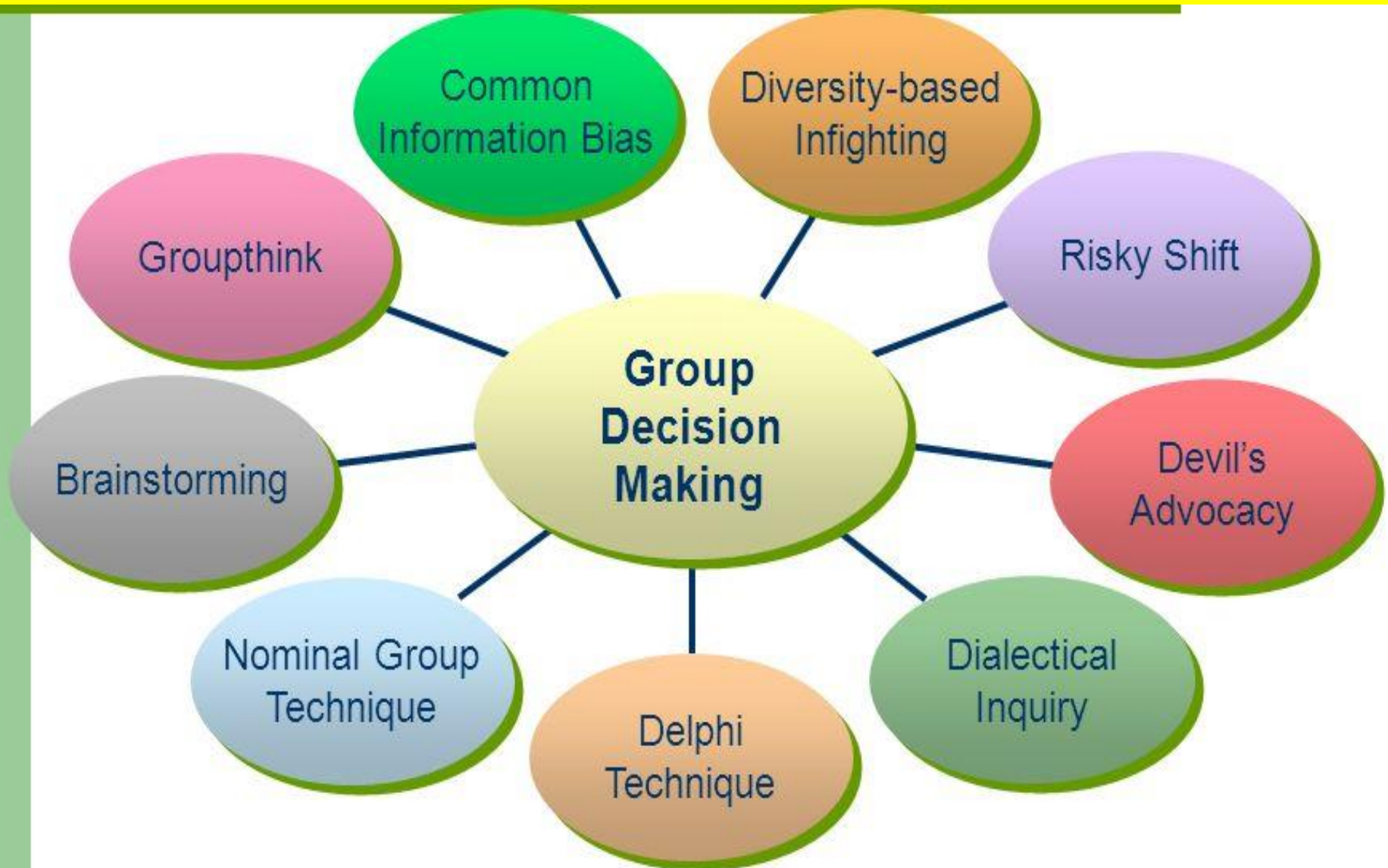
4) DM PROCESS



Decision-Making Process

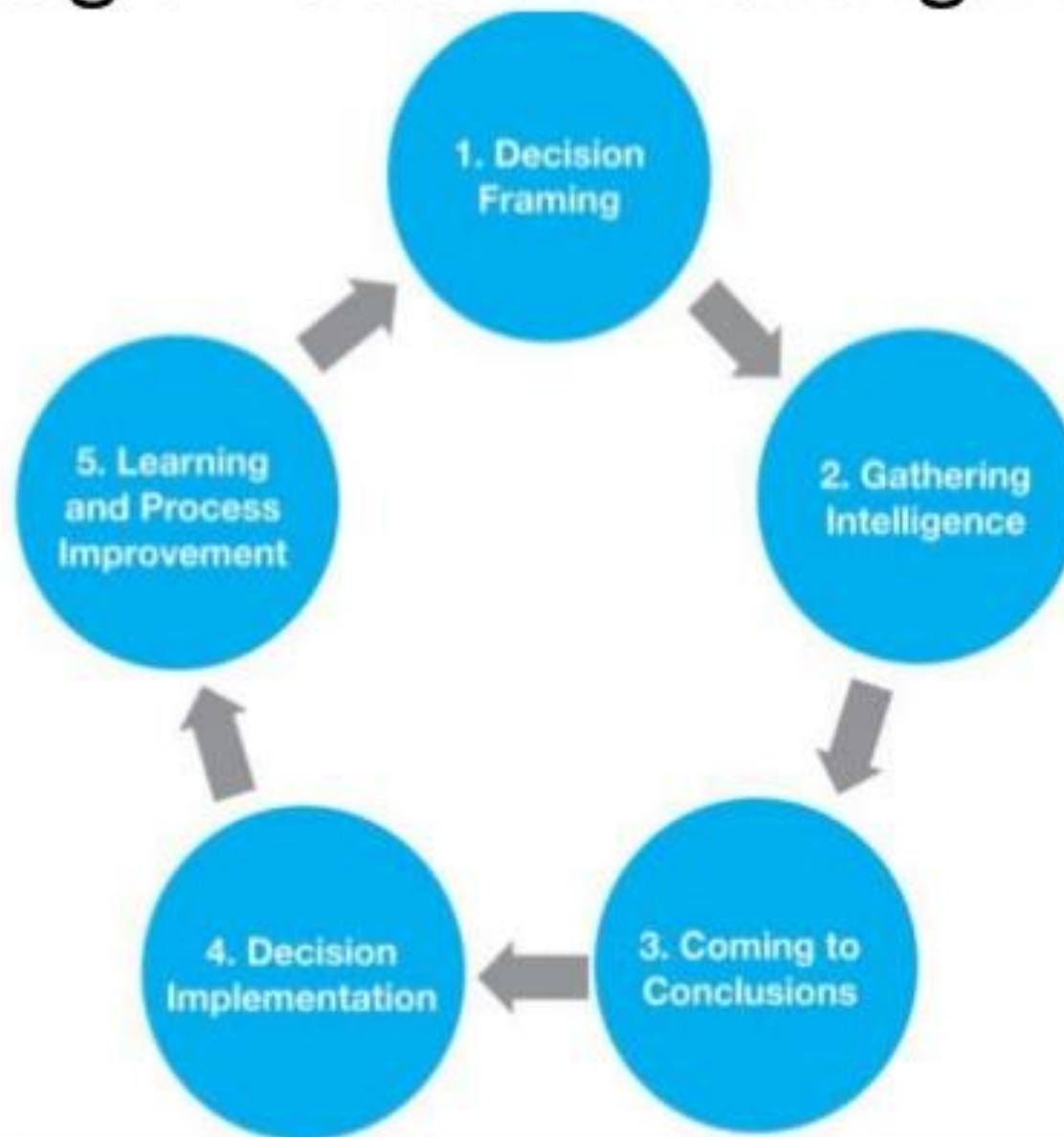


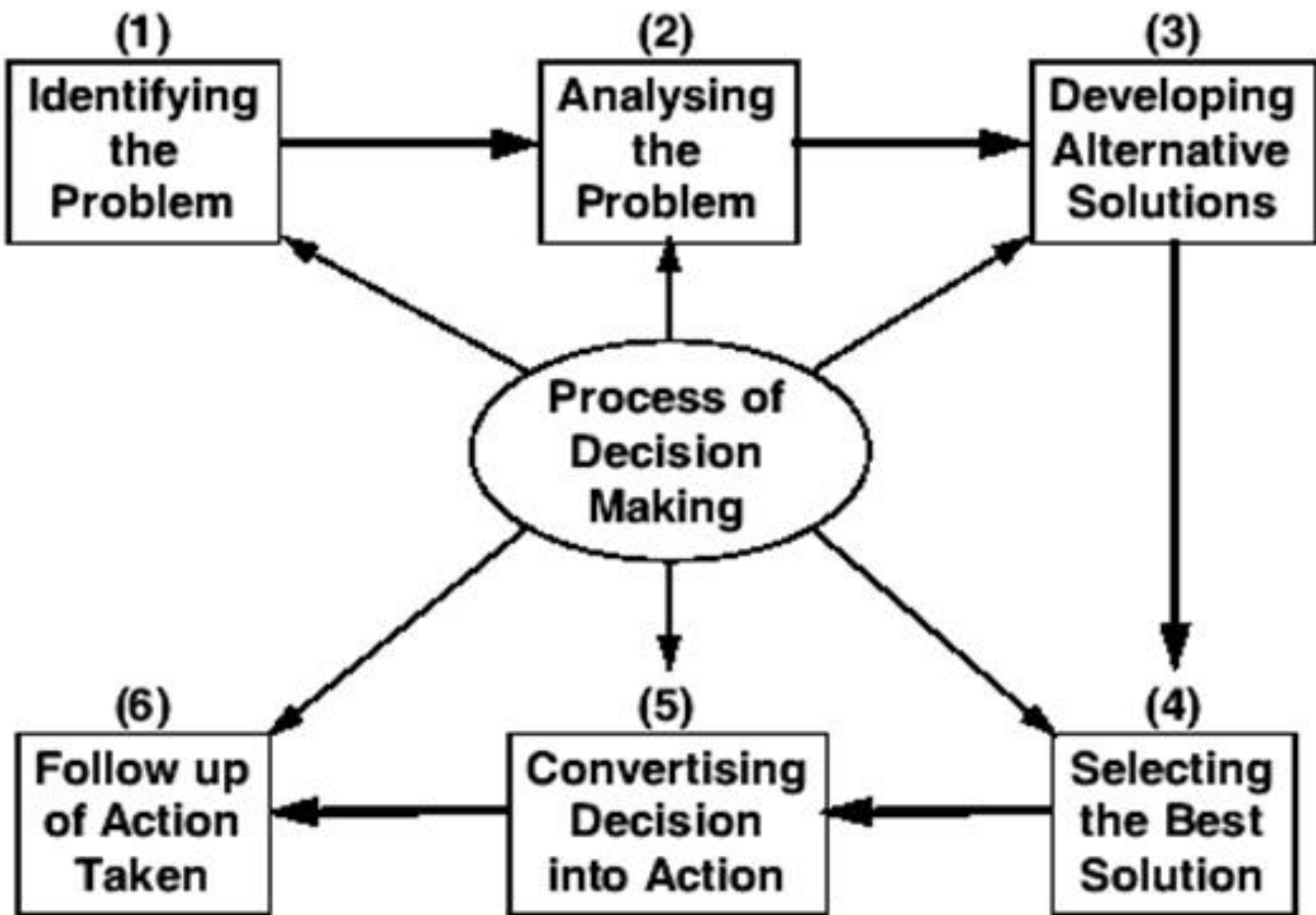
Group DM Process ...



Adapted from Exhibit 10-3: Group Decision-Making Phenomena—Pitfalls and Techniques

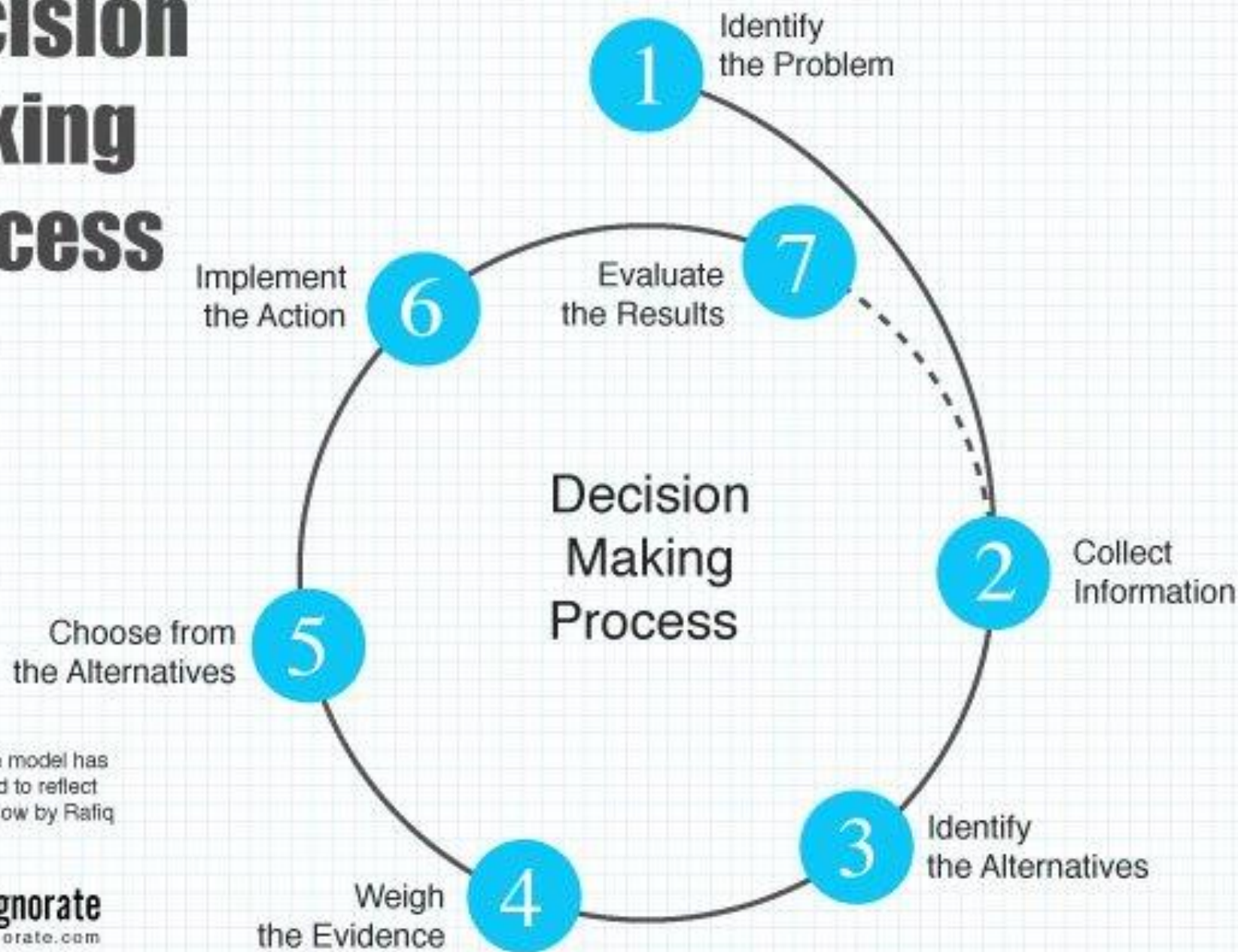
Strategic Decision Making Process





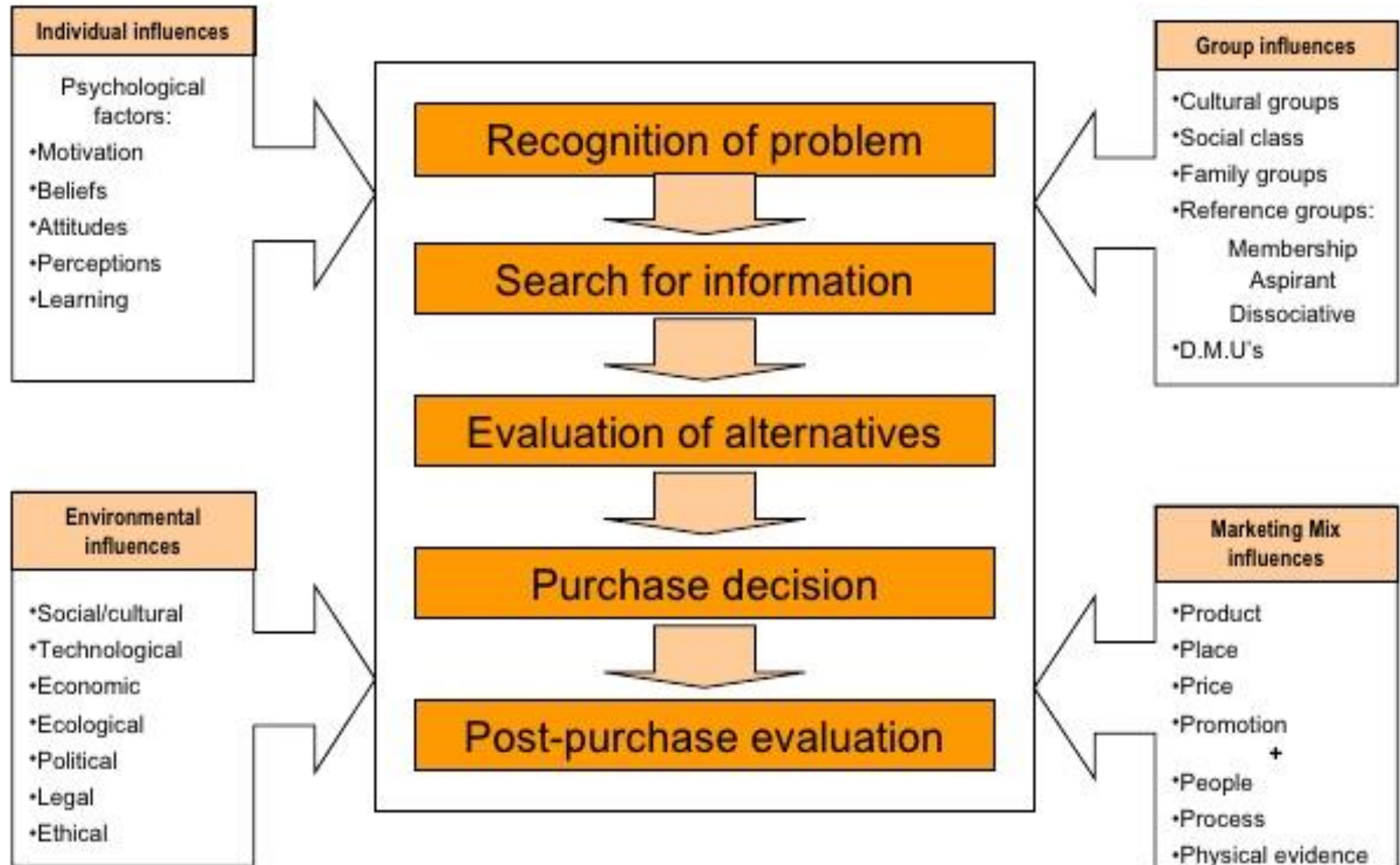
Decision-making Process

Decision Making Process

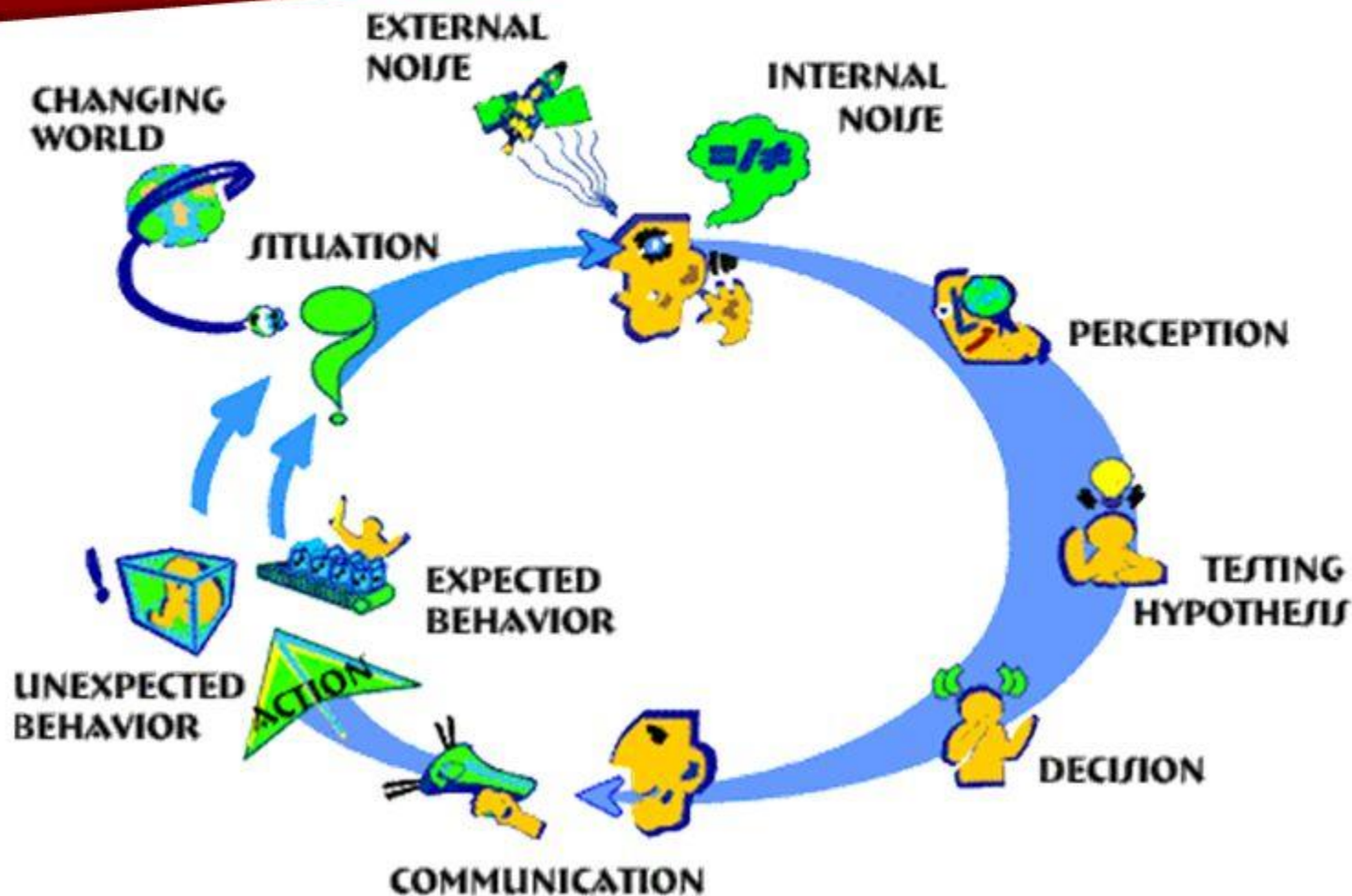


This common model has been modified to reflect the iterative flow by Rafiq Elmansy.

Decision Making Process



The Decision Making Process Map



5) TYPES of DM

- *Programmed Decisions:* routine, almost automatic process.

- Managers have made decision many times before.
- There are rules or guidelines to follow.
- *Example: Deciding to reorder office supplies.*

- *Non-programmed Decisions:* unusual situations that have not been often addressed.

- No rules to follow since the decision is new.
- These decisions are made based on information, and a manager's intuition, and judgment.
- *Example: Should the firm invest in a new technology?*

Individual Decision Making

Group Decision Making

Pros

Typically faster
than group
decision making

Best individual
in a group
usually
outperforms the
group

Accountability is
easier to determine

Cons

Fewer ideas

Identifying the best
individual can be
challenging

Possible to put off
making decisions if
left alone to do it

Pros

Diversity of ideas
and can piggyback
on others' ideas

Greater commitment
to ideas

Interaction can be
fun and serves as a
team building task

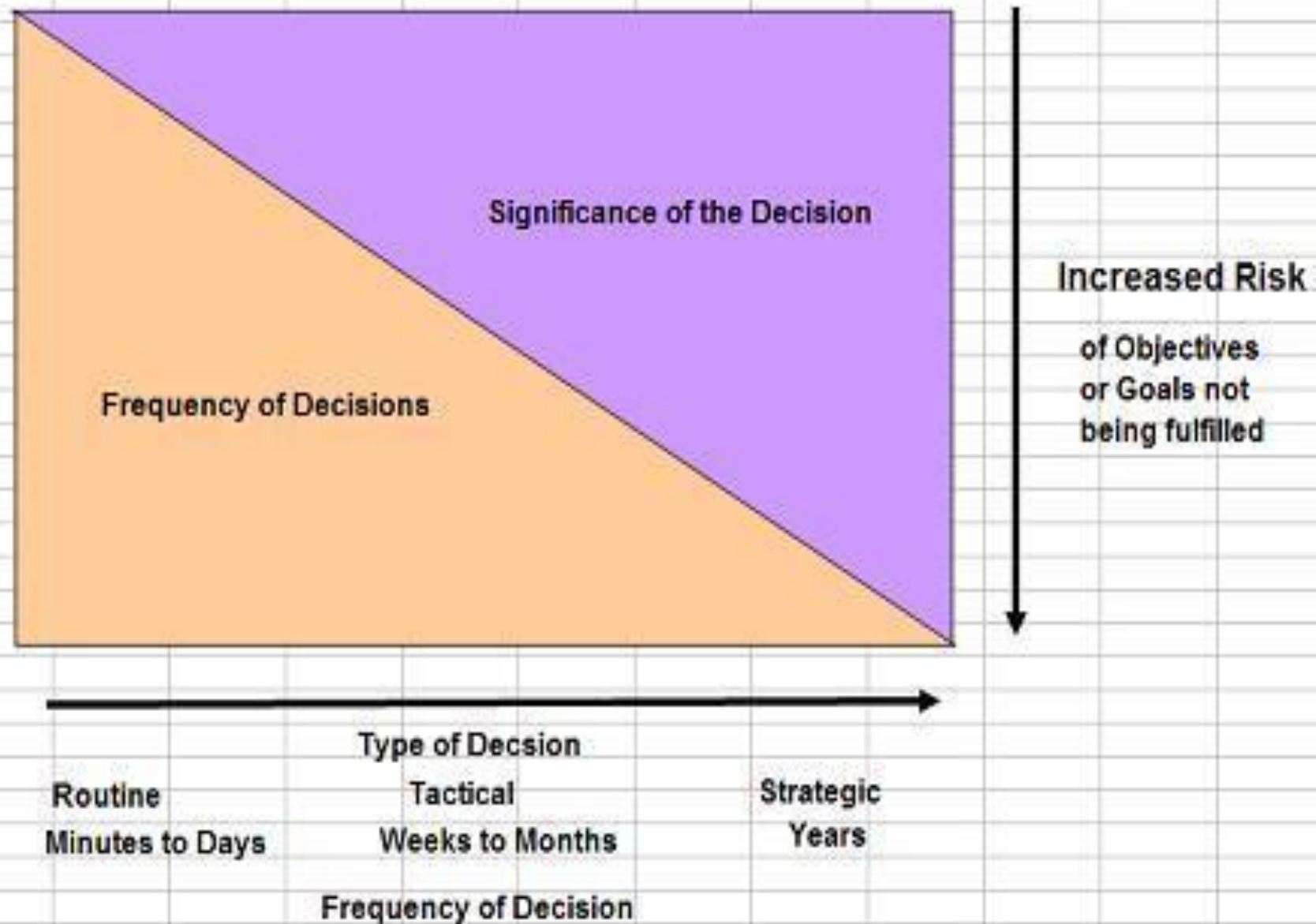
Cons

Takes longer

Group dynamics
such as groupthink
can occur

Social loafing-
harder to identify
responsibility for
decisions

Types of Decision Making and The Impact



6) STYLES in DM

Four Styles of Decision Making

Approaches to decision making differ in two ways: in the way that people use information and in the number of options they generate. This chart identifies four decision-making styles by mapping low and high use of information against single versus multiple options. Our research shows that most people use different styles in public than they do in private. For example, a manager may come across as quite task-oriented (decisive) in public, yet use the more creative integrative style when working in private or with close associates.

INFORMATION USE

		INFORMATION USE	
		Satisficing (less information)	Maximizing (more information)
NUMBER OF OPTIONS	Single focus (one option)	DECISIVE This decision style is direct, efficient, fast and firm. In public, this <i>action-focused</i> style comes across as <i>task oriented</i>.	HIERARCHIC People using this highly analytical and focused style expect their decisions, once taken, to be final and to stand the test of time. In public, this <i>complex</i> style comes across as highly <i>intellectual</i>.
	Multifocus (many options)	FLEXIBLE This style is about speed and adaptability. Managers make decisions quickly and change course just as quickly to keep abreast of immediate, shifting situations. In public, this <i>flexible</i> style comes across as highly <i>social</i> and <i>responsive</i>.	INTEGRATIVE In integrative mode, people frame problems broadly, using input from many sources, and make decisions involving multiple courses of action that may evolve over time as circumstances change. In public, this <i>creative</i> style comes across as highly <i>participative</i>.

Decision-Making Styles

- People tend to have different decision-making styles or typical ways of making decisions
- These styles are gained over a long period of time
- There are 7 styles that are most common
 1. The agonizer
 2. The mystic
 3. The fatalist
 4. The evader
 5. The plunger
 6. The submissive
 7. The planner



Fate Fetcher -
Decides based on
the flip of a coin;
fate is his/her
guide.



Skydiver -
Jumps right in
to the problem
without looking
or considering
other options.



Logical Larry -
Uses logic and
facts, and really
weighs out the
options before
making a
decision.



Decision Dealer -
Looks around
for someone else
to make the
decision for
them. They deal
out the problem
to anyone who
will help.

Decision Making Styles

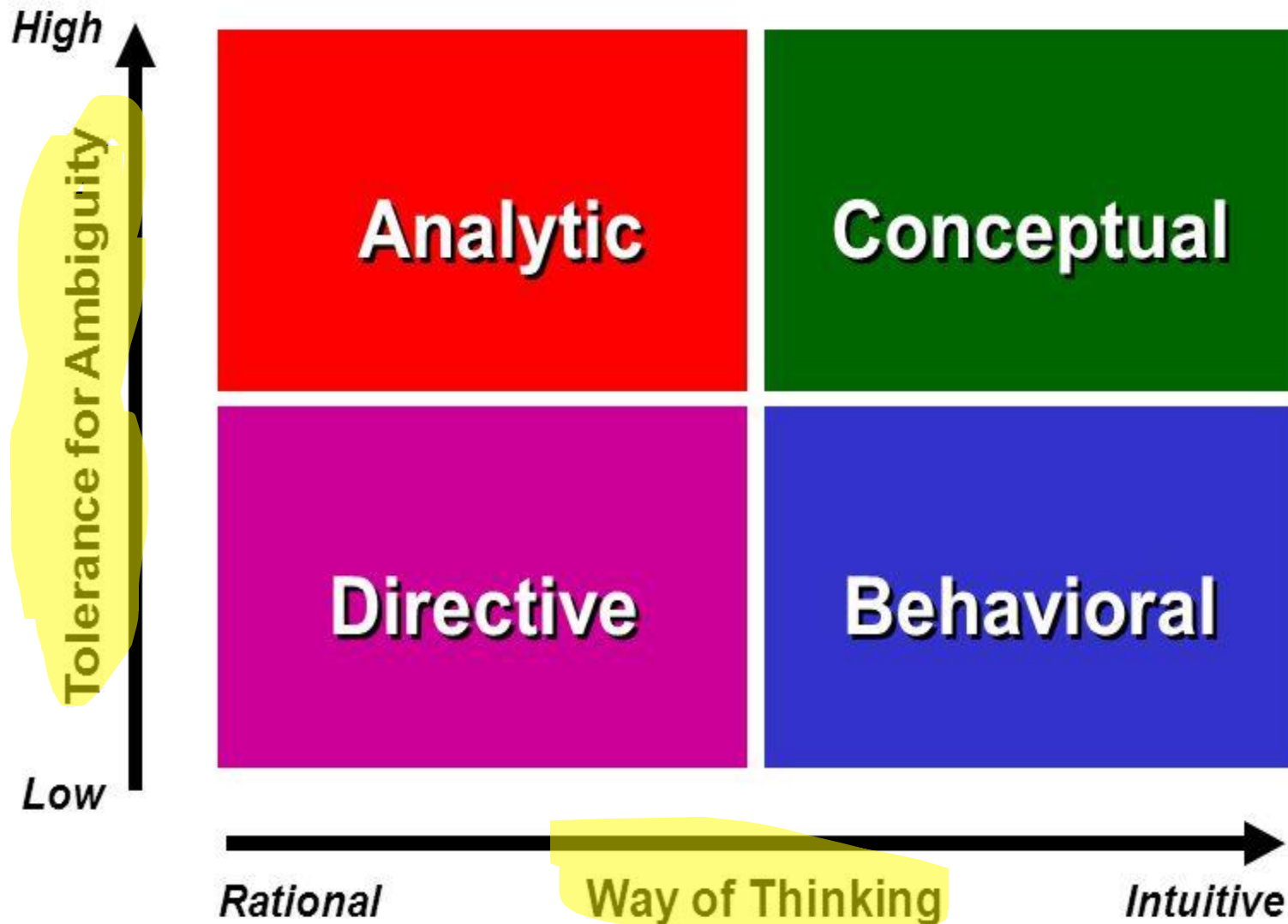


Excuse Magnet -
Procrastinates
and makes
excuses in order
to avoid making
a decision.



Worrywart -
Worries about
the details and
may lose focus
on the real
problem.

Decision-Making Styles



Decision-Making Styles

Jesse Lyn Stoner

High

Team

Consultative

Delegating

Autocratic

Low

Leader Involvement

High

Involvement of Others

4
**PARTICIPATIVE
DECISION-MAKING
STYLES**

```
graph TD; A((4 PARTICIPATIVE DECISION-MAKING STYLES)) -.- B(COLLECTIVE); A -.- C(DEMOCRATIC); A -.- D(AUTOCRATIC); A -.- E(CONSENSUS);
```

COLLECTIVE

DEMOCRATIC

AUTOCRATIC

CONSENSUS

PSYCHOLOGIA.CO

Attribute and share:

<http://psychologia.co/participative-leadership/>

Decision Making

Recognition Primed Decision Making

Relies on remembering an effective response to previous situations of a similar type

Advantages

- Very fast
- Requires little conscious thought
- Can provide satisfactory workable option
- Useful in routine situations

Disadvantages

- Requires user to be experienced
- May be difficult to justify after the event

Rule Based Decision Making

Involves identifying the situation and remembering or looking up in a manual the rule or procedure that applies

Advantages

- Good for novices
- Can be rapid if rule has been learnt
- Easy to justify i.e. followed the procedures

Disadvantages

- Time-consuming if the manual has to be consulted
- Not easy to recall or locate relevant procedures
- Rule may be out of date or inaccurate and therefore may cause skill decay
- Does not develop higher level understanding and skills

Choice Through Comparison of Options

Involves identifying options, weighing up their relevant features in terms of a match to the requirements of the situation. Useful in contingency planning and allows for faster recognition-primed decision making

Advantages

- Fully compares alternative course of actions
- Can be justified
- More likely to produce optimal solution

Disadvantages

- Requires time
- Not suited to noisy, distracting environment
- Can be affected by stress
- May produce cognitive overload and 'stall' the decision-maker

Creative Decision Making

Requires devising a novel course of action for an unfamiliar course of action - rarely used in high time-pressure environments unless there are no alternatives.

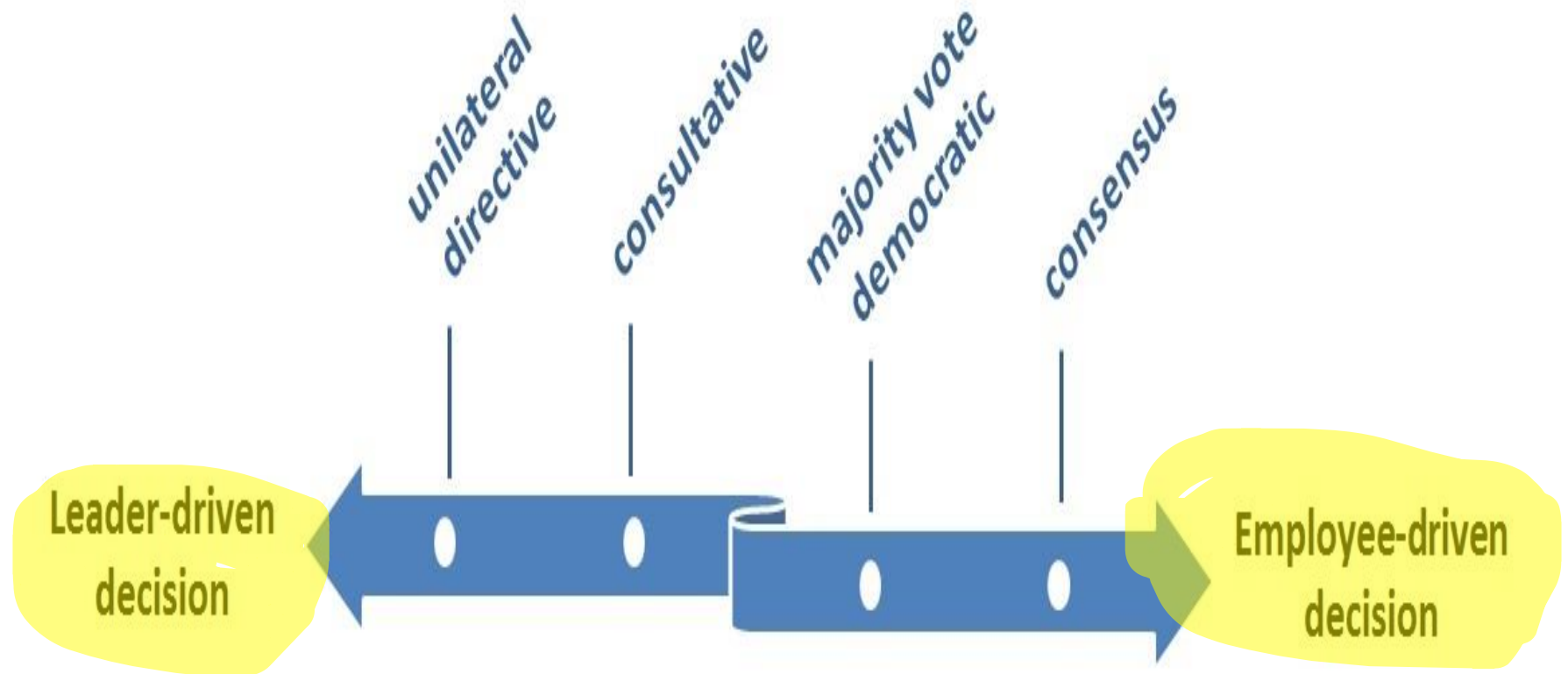
Ideally forms part of contingency planning where there is time to design and evaluate novel courses of action.

Advantages

- Produces solutions to unfamiliar problems
- New solutions may be invented which have wider application

Disadvantages

- Time consuming
- Untested solutions
- Difficult under noise and distraction
- Difficult under stress
- May be difficult to justify



Decision-Making Styles

7) Becoming a Better Decision Maker (DM)

9 TIPS FOR BETTER DECISION-MAKING



1

Learn from
Experience

2

Remain
Skeptical

3

Have
Options

4

Argue
It Out

5

Know the
Context

6

Experiment

7

Trash It

8

Assume
It's Wrong

9

Get Others'
Perspectives

PM

7 STEPS TO EFFECTIVE DECISION MAKING

Decision making is the process of making choices by identifying a decision, gathering information, and assessing alternative resolutions.

Using a step-by-step decision-making process can help you make more deliberate, thoughtful decisions by organizing relevant information and defining alternatives. This approach increases the chances that you will choose the most satisfying alternative possible.

①

IDENTIFY
THE DECISION

②

GATHER
INFORMATION

③

IDENTIFY
ALTERNATIVES

④

WEIGH THE
EVIDENCE

⑤

CHOOSE
AMONG
ALTERNATIVES

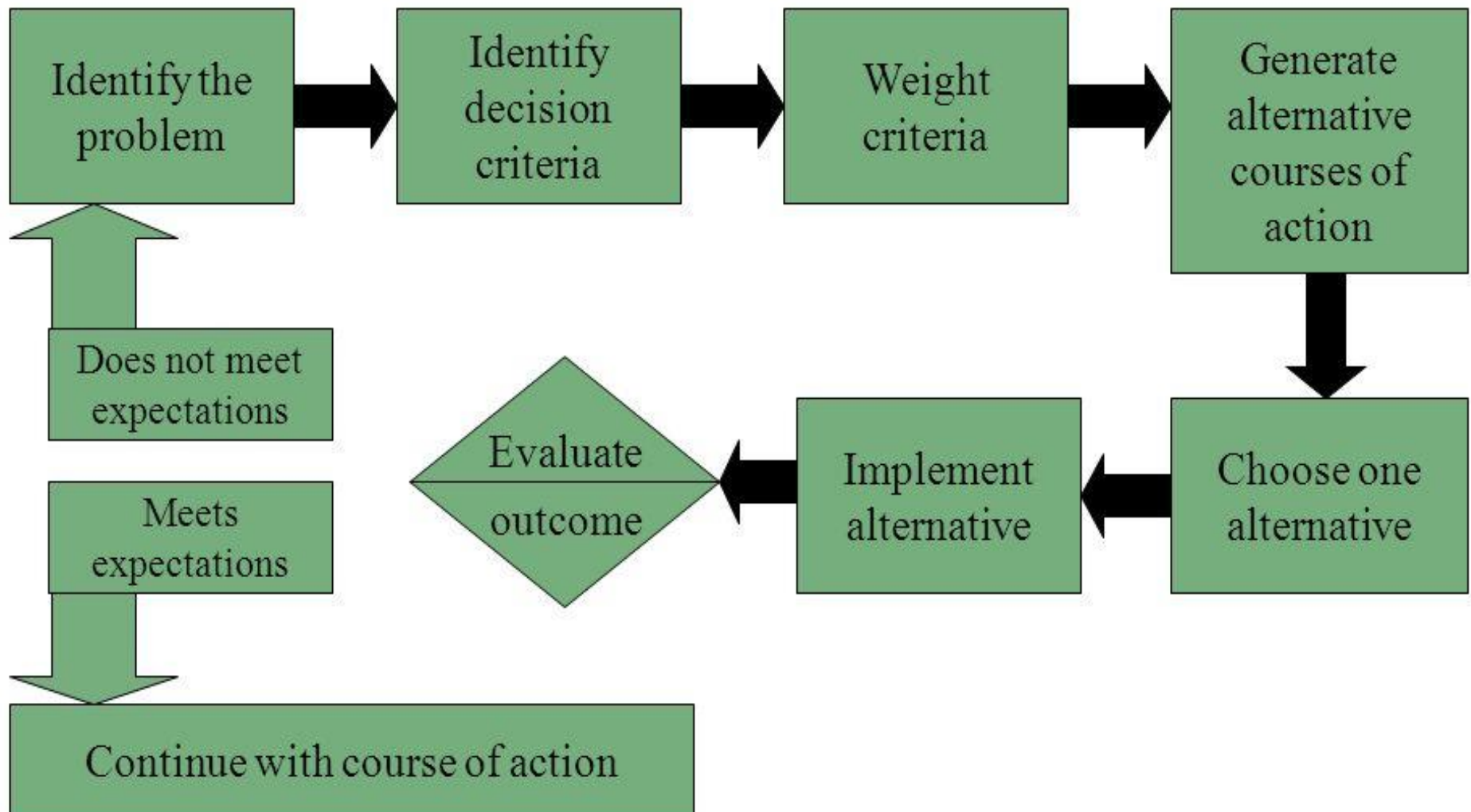
⑥

TAKE ACTION

⑦

REVIEW YOUR
DECISION

The Rational Decision-Making Model



Six Elements Needed to Make a Good Decision



DECISION MAKING

Make
fantastic
decisions
using
the
DECIDE
process:

- Define the situation
- Explore the alternatives
- Consider the outcomes
- Identify your values
- Values: beliefs and ideas that are important to you – they guide the way you live
- Decide and Act
- Evaluate
(determine if this worked out the way you intended it to)

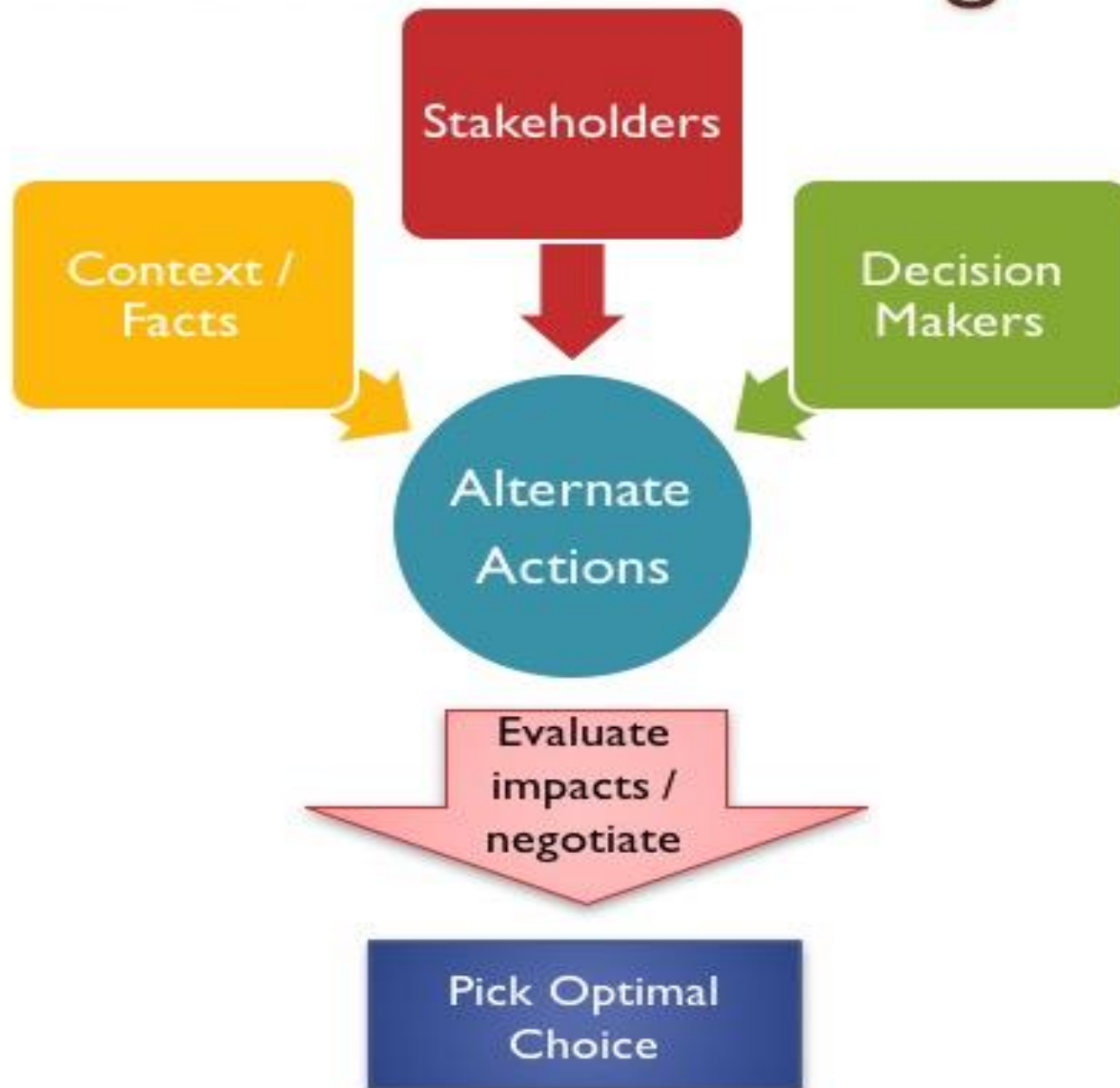
8) ETHICS in DM

Ethical Decision Making

Don't get blown
off course.



Ethical Decision Making Model



Ethical Decision Making Model Summary

Bowens Model for Strategic Decision Making

1. Ensure professional is autonomous
2. Consider key duties to client and public when making a decision
3. Consider ethical questions when communicating the choice

TARES Ethical Persuasion

- Truthfulness (of the message)
- Authenticity (of the persuader)
- Respect (for the persuader)
- Equity (of the persuasive appeal)
- Social Responsibility (for the common good)

Potter's Box for Decision Making

1. examining the issue at play in the situation
2. identifying values that should be employed
3. recognizing guiding principles
ascertaining loyalties that should be employed

Ethical Decision Making

Influential Factors

Extent of Problems

Probability of Harm

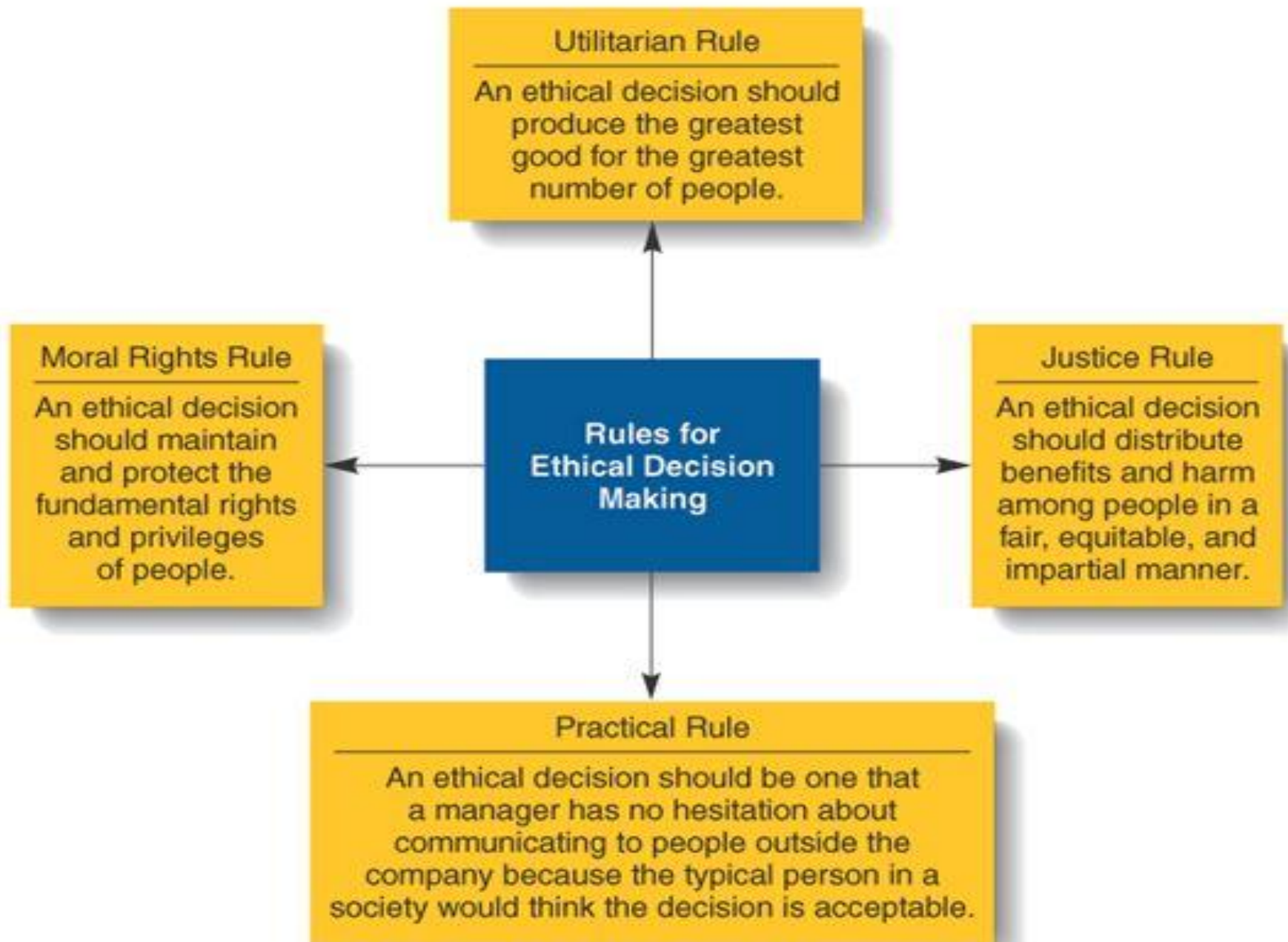
**Top Management
Actions**

**Time Until
Consequences**

Potential Consequences

Number Affected

Social Consensus



9) SPECIAL ISSUES in DM

Decision-Making Process

MARKET COMMUNICATIONS	Awareness— Need Recognition	Search	Evaluation of Alternatives	Purchase	Post-purchase Behavior— Loyalty
Offline Communications	Mass media TV, Radio Print media	Catalogs Print ads Mass media Sales people Product raters Store visits	Reference groups Opinion leaders Mass media Product raters Store visits	Promotions Direct mail Mass media Print media	Warranties Service calls Parts and Repair Consumer groups
Online Communications	Targeted banner ads Interstitials Targeted event promotions	Search engines Online catalogs Site visits Targeted e-mail	Search engines Online catalogs Site visits Product reviews User evaluations	Online promotions Lotteries Discounts Targeted e-mail	Communities of consumption Newsletters Customer e-mail Online updates

Customer's Decision Making Process

1. Need Recognition



```
graph TD; A[1. Need Recognition] --> B[2. Information Search]; B --> C[3. Evaluation]; C --> D[4. Purchase]; D --> E[5. Post-Purchase Evaluation];
```

2. Information Search

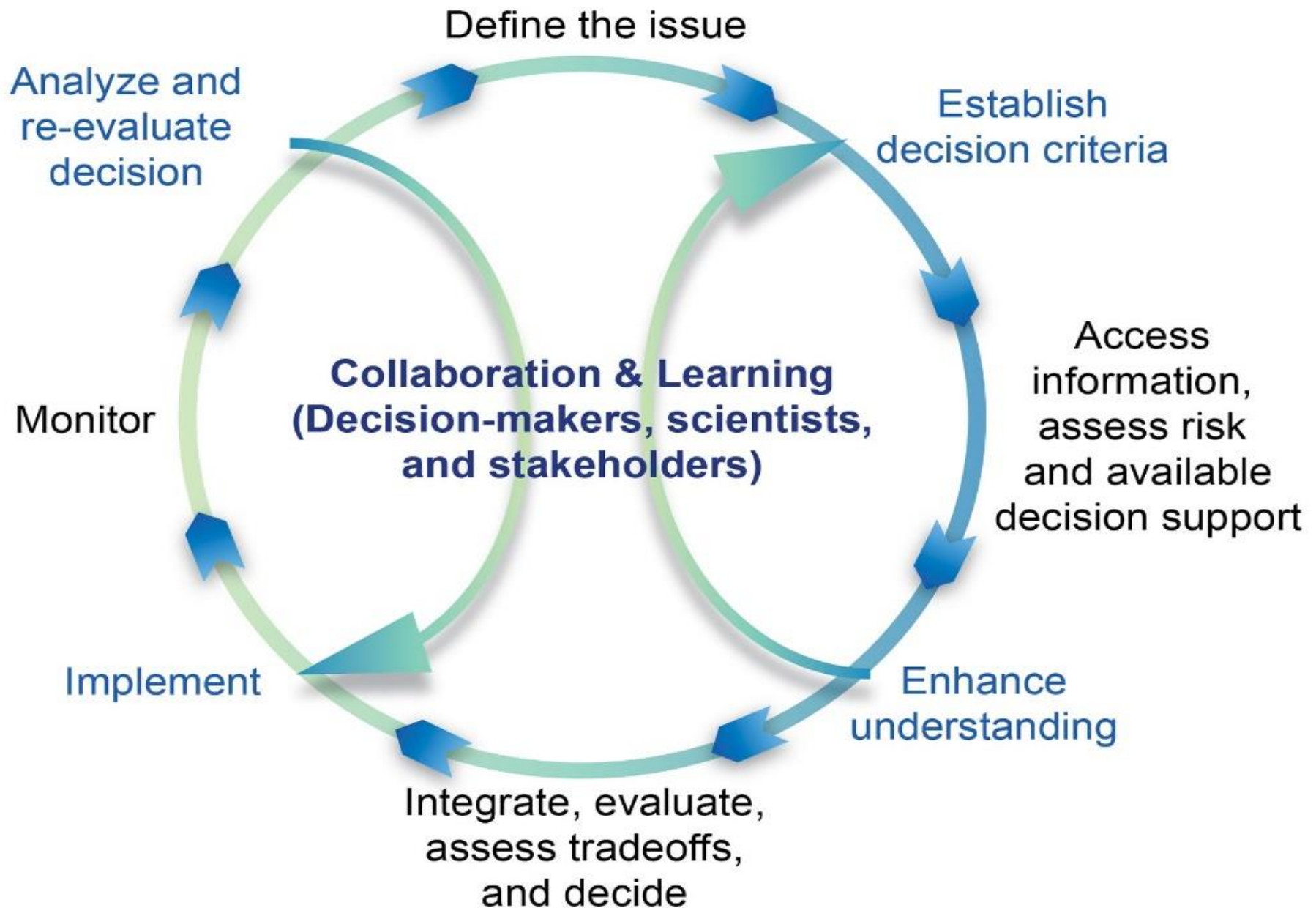
3. Evaluation

4. Purchase

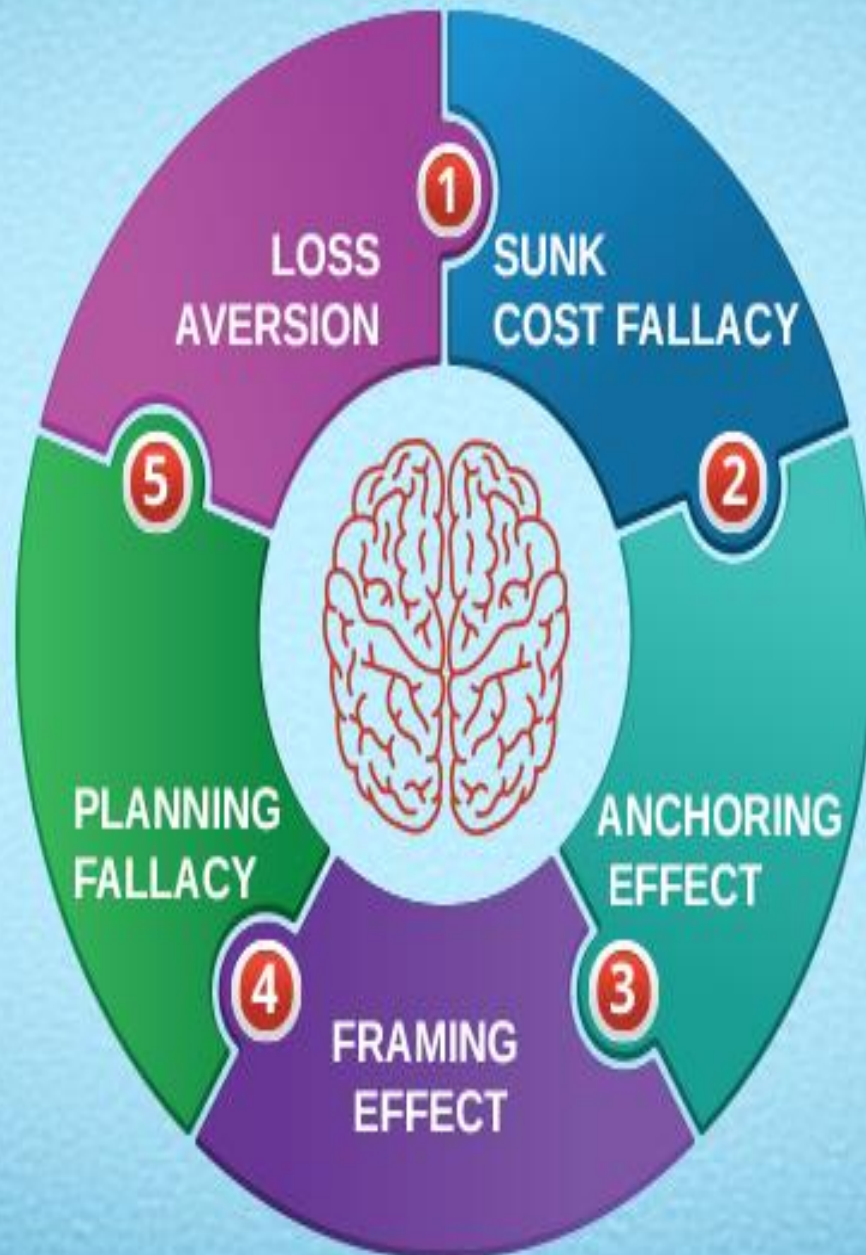
5. Post-Purchase Evaluation



Decision-Making Framework



ART OF DECISION MAKING



10) Summarize

...You remember that...

Decision analysis is a process that provides a structured method along with analytical tools designed to improve one's decision-making skills.

- It enables you to base your decisions on more than intuition or hunches.
- It teaches you how to rigorously analyze decisions to gain helpful insights.

Decision Analysis – Good News

- Decision analysis adds clarity and insight.
 - Uses a conceptual framework for thinking systematically
 - Breaks the problem down into smaller, more easily understood units for individual analysis
- Decision analysis supplies analytical tools that improve insight and understanding of the problem.
 - **Sensitivity analysis** helps us see which inputs are most important and deserving of further attention.
- Decision analysis instills a sense of confidence in the solution we choose to enact.

Decision Analysis – Bad News

- Decision analysis cannot make hard decisions completely easy.
 - Even after analysis, hard decisions are still difficult to decide.
 - We must think through all the various aspects of the decision.
- Decision analysis cannot provide us with “the” answer.
 - We cannot simply feed our inputs into a computer and out pops the one and only answer.
 - Decision analysis provides us with alternatives to choose between.

Why Are Decisions Hard?

Complexity

- Can quickly overload the decision maker
- Decision analysis reduces complexity.
- Able to isolate and analysis individual parts of the decision separately

Why Are Decisions Hard?

Uncertainty

- There is no way to know precisely how all of the factors not under your control will play out.
- Decision analysis addresses uncertainty by allowing us...
 1. ...to break each uncertainty down by listing the different outcomes that could occur
 2. ...and to determine both the consequence and the likelihood of that outcome occurring.
- Such analysis does not lead to immediate clarity, but it can provide a richer understanding of the problem and its alternative solutions.

Why Are Decisions Hard?

Multiple Objectives

- In most cases, decision makers face trade-offs between several goals. Rarely does a problem involve only one goal.
 - Financial goals versus non-financial goals
 - Short term goals versus long-term goals
- Decision analysis provides both a framework and specific tools for dealing with multiple objectives.
 - Make the goals explicit
 - Rank them in order of importance

Why Are Decisions Hard?

Competing Viewpoints

- Often lead to:
 - Different inputs
 - Different goals or their relative importance
 - Different ways of solving the problem
 - Ultimately—radically different solutions
- Such conflicts are often made worse when more than one person is involved in the decision.

Prescriptive Approach to Decision Analysis

“The prescriptive approach [is] designed for normally intelligent people who want to think hard and systematically about some important real problems.”

(Keeney and Raiffa 1976, p. vii)

Prescriptive Approach to Decision Analysis

- We are not perfect information processors.
- We are not completely rational or all-knowing.
- We have biases and preferences.
- This approach is not **descriptive**. It enables us to improve our decision making by learning to correct problems in how we normally (descriptively) think.

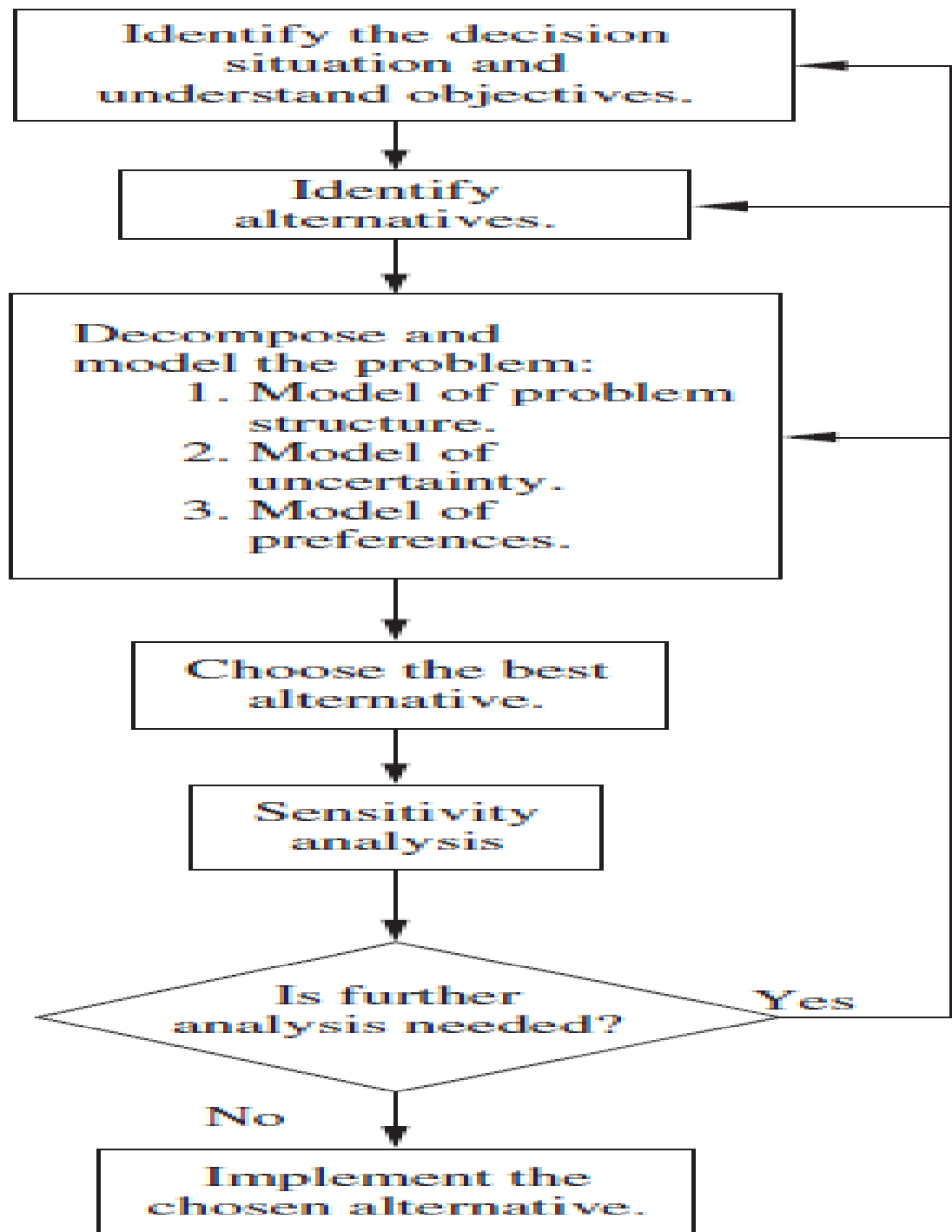
Why Study and Use Decision Analysis?

“The basic presumption of decision analysis is not at all to replace the decision maker’s intuition, to relieve him or her of the obligations in facing the problem, or to be, worst of all, a competitor to the decision maker’s personal style of analysis, but to complement, augment, and generally work alongside the decision maker in exemplifying the nature of the problem. Ultimately, it is of most value if the decision maker has actually learned something about the problem and his or her own decision-making attitude through the exercise.” (Bunn 1984, p. 8)

Subjective Judgments and Decision Making

- Subjective judgments and personal beliefs are important inputs to decision analysis.
- Decision analysis does not attempt to remove them from the decision making process.
- They are necessary because ultimately a person, not a machine, has to make the decision.
- However, decision analysis helps us to correct limitations inherent to human thinking by making us aware of them and providing us with tools for addressing them.

A decision-analysis process flowchart



The Decision-Analysis Process

- **Step 1: Identify the decision situation and understand objectives**
 - Sometime the surface problem hides the real problem.
 - Define the problem as exactly as possible
 - Identify financial and non-financial objectives
 - Understanding objectives is critical to subsequent steps
- **Step 2: Identify alternatives**
 - Analysis of objectives may reveal alternative solutions not initially obvious
 - A step that involves both discovery and creativity

The Decision-Analysis Process

- **Step 3: Decompose and model the problem**
 - Decomposition entails structuring the problem into smaller and more manageable pieces.
 - Consider elements of uncertainty in the different pieces
 - Modeling involves reassembling the pieces of the problem into a simplified representation.
 - Keep the relevant pieces and discard the irrelevant ones
 - Models can be mathematical or graphical.
 - Mathematical models allow for formal analysis that can provide insights not otherwise obvious.

The Decision-Analysis Process

- **Step 4: Choose the best alternative**
 - Which model is “preferred”?
 - Remember that decision making requires human judgment and is not a process of “solving” a problem for the right answer.
- **Step 5: Sensitivity analysis**
 - “What if” you change one of more aspects of the preferred model?

The Decision-Analysis Process

- **Step 6: Is further analysis needed?**
 - Sensitivity analysis often leads to new insights that may require repeating the previous steps.
 - **Decision-making cycle:** think of the overall decision making process as iterative
 - Usually necessary to cycle through the different steps several times
 - Continue iterations until you arrive at the **requisite decision model**, i.e., the model in which no new insights or intuitions are gained by another cycle of analysis, or which contains every essential for solving the problem
- **Step 7: Implement the chosen alternative**

Overview of Decision-Analysis Process

- **Decompose** the complex problem into smaller chunks for analysis
- Reassemble these smaller pieces into one or more overall representations of the decision situation, i.e., **models**
- Pick a model and do **sensitivity analysis** of this model
- Repeat the **decision analysis cycle** until arriving at a **requisite decision model**
 - Contains the essential elements of the problem
 - Allows the decision maker to take action

Big Picture

Decision analysis not only provides a structured way to think about decisions, but also more fundamentally provides a structure within which a decision maker can develop beliefs and feelings, those subjective judgments that are critical for a good solution.

Summary

- Decision analysis
 - A framework and a tool kit for dealing with difficult decisions
 - Allows the decision maker to incorporate subjective judgments and preferences into the solution
 - An iterative process that enables the decision to gain more insights and develop a mature judgment
 - An art...and a science!