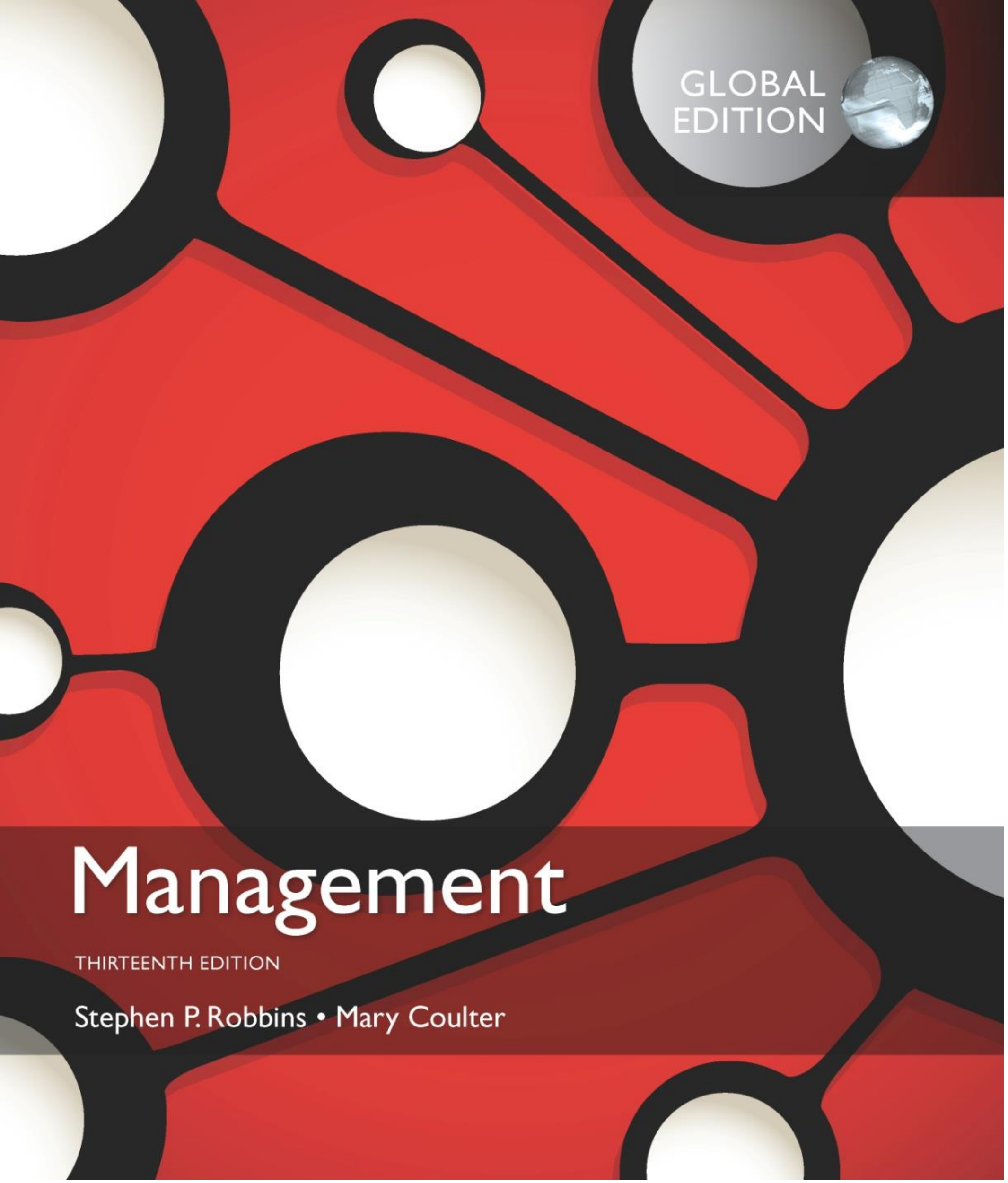


MAKING DECISIONS

2

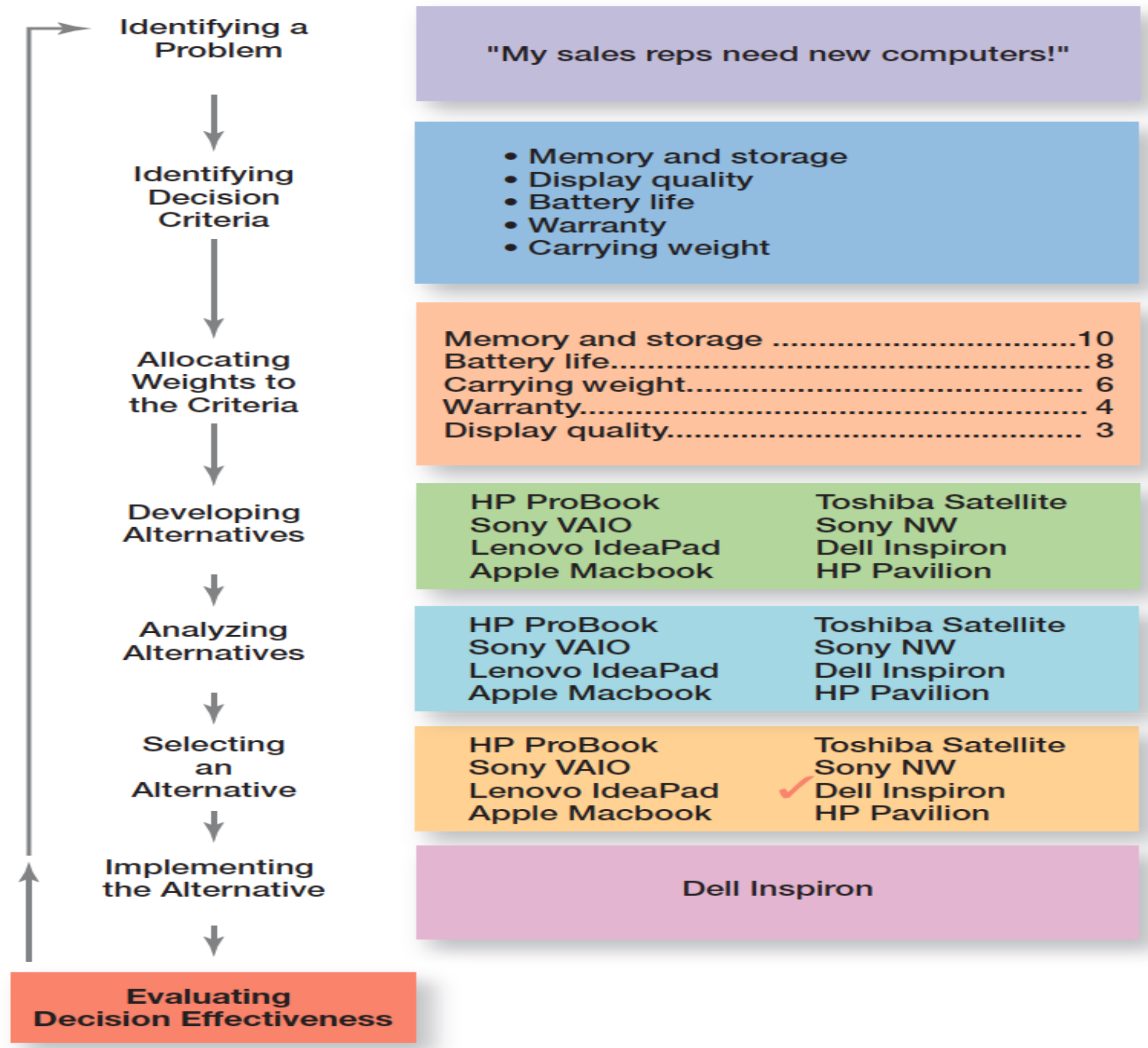
LEARNING OBJECTIVES

1. **Describe the eight steps in the decision-making process.**
   - **Develop your skill** at being creative.
2. **Explain** the four ways managers make decisions.
3. **Classify** decisions and decision-making conditions.
4. **Describe** different decision-making styles and discuss how biases affect decision-making.
   - **Know how to** recognize when you're using decision-making errors and biases and what to do about it.
5. **Identify** effective decision-making techniques.

A key to success in management and in your career is knowing how to be **an effective decision-maker**.

- **Decision** – making a **choice from** two or more **alternatives**.

Exhibit 2-1 Decision-Making Process



THE DECISION-MAKING PROCESS (CONT.)

- **Step 1: Identify a Problem**
  - **Problem** – an obstacle that makes it difficult to achieve a desired goal or purpose.
  - **Every decision starts with a problem**, a discrepancy between an existing and a desired condition.
  - Example – Amanda is a sales manager whose reps need new laptops.

PROBLEM IDENTIFICATION TOOLS

- Finding the cause of a problem is not always easy.
- Example: sneezing, fever, and runny nose are only **symptoms**, the **source of problem** is flu/cold.
- Tools that we can use:
  - Fishbone Diagram
  - Root cause analysis
  - CATWOE
    - Clients, Actors, Weltanschauung/ Worldview, Owners, and Environment
  - 5 WHYs
    - Asking why several times

FISHBONE DIAGRAM

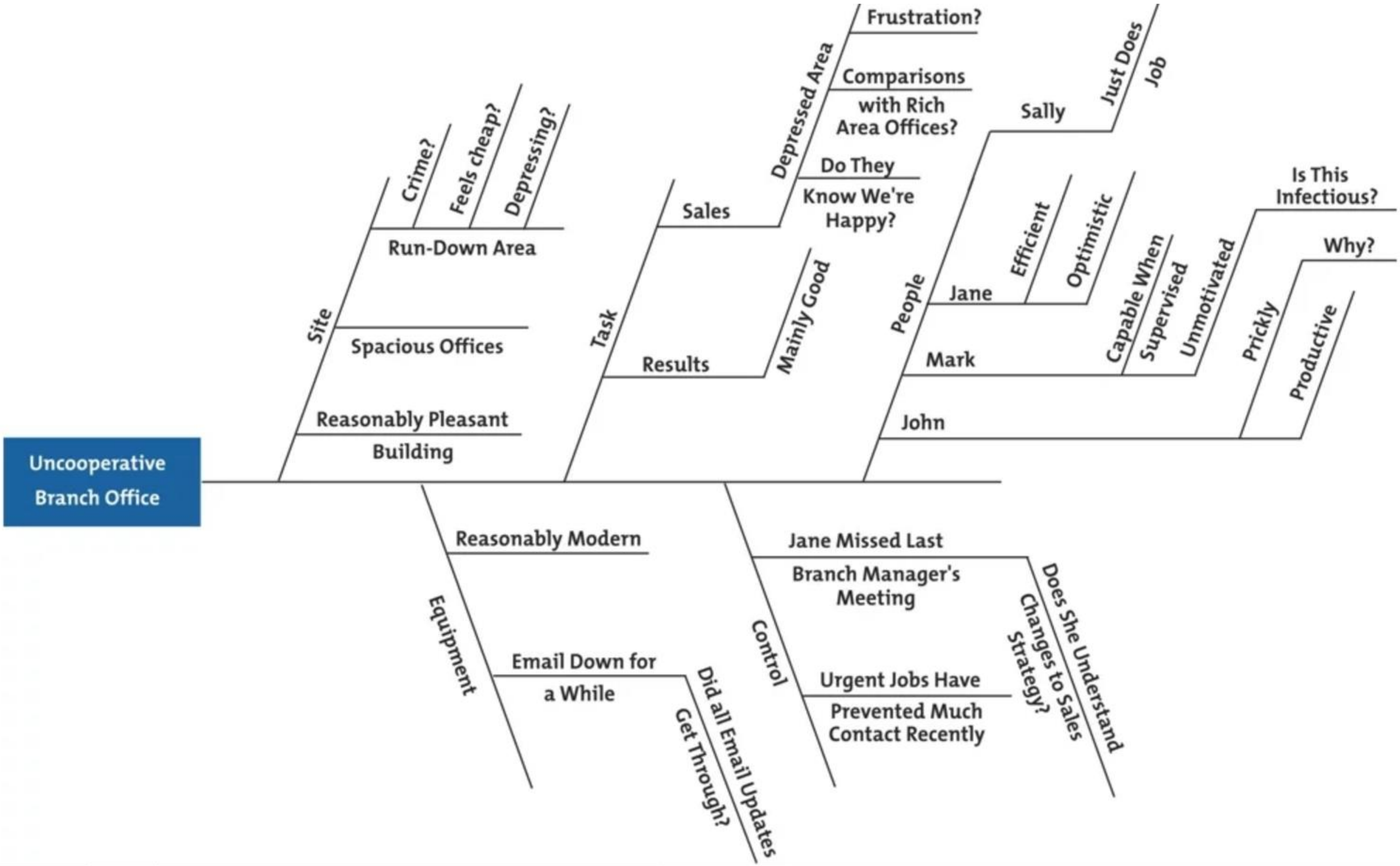
1. **Identify** the **problem**

2. **Identify** the **factors** that may be part of the problem

- You can use framework to help defines factors such as:
  - McKinsey 7s: strategy, structure, systems, shared value, skills, staff, style.
  - 4Ps of Marketing: product, price, place, and promotion
  - PIECES: performance, information/data, economics, control & security, efficiency, services

3. For each of the factors you considered in step 2, brainstorm **possible causes** of the problem that may be related to the factor.

4. **Analyze** your diagram to investigate the most likely **causes**


Uncooperative Branch Office
Site
Run-Down Area
Crime?
Feels cheap?
Depressing?
Spacious Offices
Reasonably Pleasant Building
Task
Sales
Depressed Area
Frustration?
Comparisons with Rich Area Offices?
Do They Know We're Happy?
Results
Mainly Good
People
Sally
Just Does Job
Jane
Efficient
Optimistic
Mark
Capable When Supervised
Unmotivated
Is This Infectious?
John
Prickly
Productive
Why?
Equipment
Reasonably Modern
Email Down for a While
Did all Email Updates Get Through?
Control
Jane Missed Last Branch Manager's Meeting
Does She Understand Changes to Sales Strategy?
Urgent Jobs Have Prevented Much Contact Recently

THE DECISION-MAKING PROCESS (CONT.)

- **Step 2: Identify Decision Criteria**
  - Decision criteria are factors that are important (relevant) to resolving the problem.
  - Example – Amanda decides that memory and storage capabilities, display quality, battery life, warranty, and carrying weight are the relevant criteria in her decision.

THE DECISION-MAKING PROCESS (CONT.)

- **Step 3: Allocate Weights to the Criteria**
  - If the relevant **criteria aren't equally important**, the decision maker must **weight** the items in order to give them the **correct priority** in the decision.
  - The weighted criteria for our example is shown in Exhibit 2-2.

EXHIBIT 2-2
IMPORTANT DECISION CRITERIA

Memory and storage	10
Battery life	8
Carrying weight	6
Warranty	4
Display quality	3

THE DECISION-MAKING PROCESS (CONT.)

- **Step 4: Develop Alternatives**
  - List viable alternatives that could resolve the problem
  - Example – Amanda, identifies eight laptops as possible choices. (See Exhibit 2-3.)

THE DECISION-MAKING PROCESS (CONT.)

- **Step 5: Analyze Alternatives**
  - Appraising **each alternative's strengths and weaknesses.**
  - An alternative's appraisal is based on its ability to resolve the issues related to the criteria and criteria weight.

EXHIBIT 2-3
POSSIBLE ALTERNATIVES

	Memory and Storage	Battery Life	Carrying Weight	Warranty	Display Quality
HP ProBook	10	3	10	8	5
Sony VAIO	8	7	7	8	7
Lenovo IdeaPad	8	5	7	10	10
Apple Macbook	8	7	7	8	7
Toshiba Satellite	7	8	7	8	7
Sony NW	8	3	6	10	8
Dell Inspiron	10	7	8	6	7
HP Pavilion	4	10	4	8	10

THE DECISION-MAKING PROCESS (CONT.)

- **Step 6: Select an Alternative**
- Choosing the best alternative
  - The alternative with the highest total weight is chosen.

EXHIBIT 2-4
EVALUATION OF ALTERNATIVES

	Memory and Storage	Battery Life	Carrying Weight	Warranty	Display Quality	Total
HP ProBook	100	24	60	32	15	231
Sony VAIO	80	56	42	32	21	231
Lenovo IdeaPad	80	40	42	40	30	232
Apple Macbook	80	56	42	32	21	231
Toshiba Satellite	70	64	42	32	21	229
Sony NW	80	24	36	40	24	204
Dell Inspiron	100	56	48	24	21	249
HP Pavilion	40	80	24	32	30	206

The weight of criteria **X** the score

THE DECISION-MAKING PROCESS (CONT.)

- **Step 7: Implement the Alternative**
  - Putting the chosen alternative into action
  - Conveying the decision to **and gaining commitment** from those who will carry out the alternative

THE DECISION-MAKING PROCESS (CONT.)

- **Step 8: Evaluate Decision Effectiveness**
  - The soundness of the decision is judged by its outcomes.
  - **How effectively** was the problem **resolved** by outcomes resulting from the chosen alternatives?
  - If the problem was not resolved, **what went wrong?**

LEARNING OBJECTIVES

1. **Describe** the eight steps in the decision-making process.
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EXHIBIT 2-5
DECISIONS MANAGERS MAY MAKE*

Planning

- What are the organization's long-term objectives?
- What strategies will best achieve those objectives?
- What should the organization's short-term objectives be?
- How difficult should individual goals be?

Organizing

- How many employees should I have report directly to me?
- How much centralization should there be in an organization?
- How should jobs be designed?
- When should the organization implement a different structure?

EXHIBIT 2-5
DECISIONS MANAGERS MAY MAKE (CONT.) *

Leading

- How do I handle employees that appear to be unmotivated?
- What is the most effective leadership style in a given situation?
- How will a specific change affect worker productivity?
- When is the right time to stimulate conflict?

Controlling

- What activities in the organization need to be controlled?
- How should those activities be controlled?
- When is a performance deviation significant?
- What type of management information system should the organization have?

4 PERSPECTIVES ON HOW MANAGERS MAKE DECISIONS

- Rationality
- Bounded Rationality
- The Role of Intuition
- The Role of Evidence-Based Management

MAKING DECISIONS: RATIONALITY

- **Rational Decision-Making** – describes choices that are **logical** and **consistent** while **maximizing value.**
- Assumptions of Rationality *
  - The decision maker would be fully **objective** and **logical**
  - The **problem** faced would be **clear** and unambiguous
  - The decision maker would have a **clear and specific goal** and **know all possible alternatives and consequences** and consistently select the alternative that **maximizes** achieving that **goal**

MAKING DECISIONS: BOUNDED RATIONALITY

- **Bounded Rationality** – decision-making that's **rational, but limited** (bounded) by an individual's ability to process information.
  - Ex: choosing university. It is not possible to assess all possible alternatives since human have limitation on processing information
- **Satisfice** – accepting solutions that are "**good enough**." rather than maximize
- **Escalation of commitment** – an increased commitment to a previous decision despite evidence it may have been wrong.
  - Ex: we don't want to admit that our initial decision may have been flawed. Rather than search for new alternatives, we increase our commitment to the original solution

MAKING DECISIONS: THE ROLE OF INTUITION

- Intuitive decision- making
  - Making decisions on the basis of **experience, feelings, and accumulated judgment.**
  - Almost **half** of the executives used **intuition** more often than formal analysis to run companies

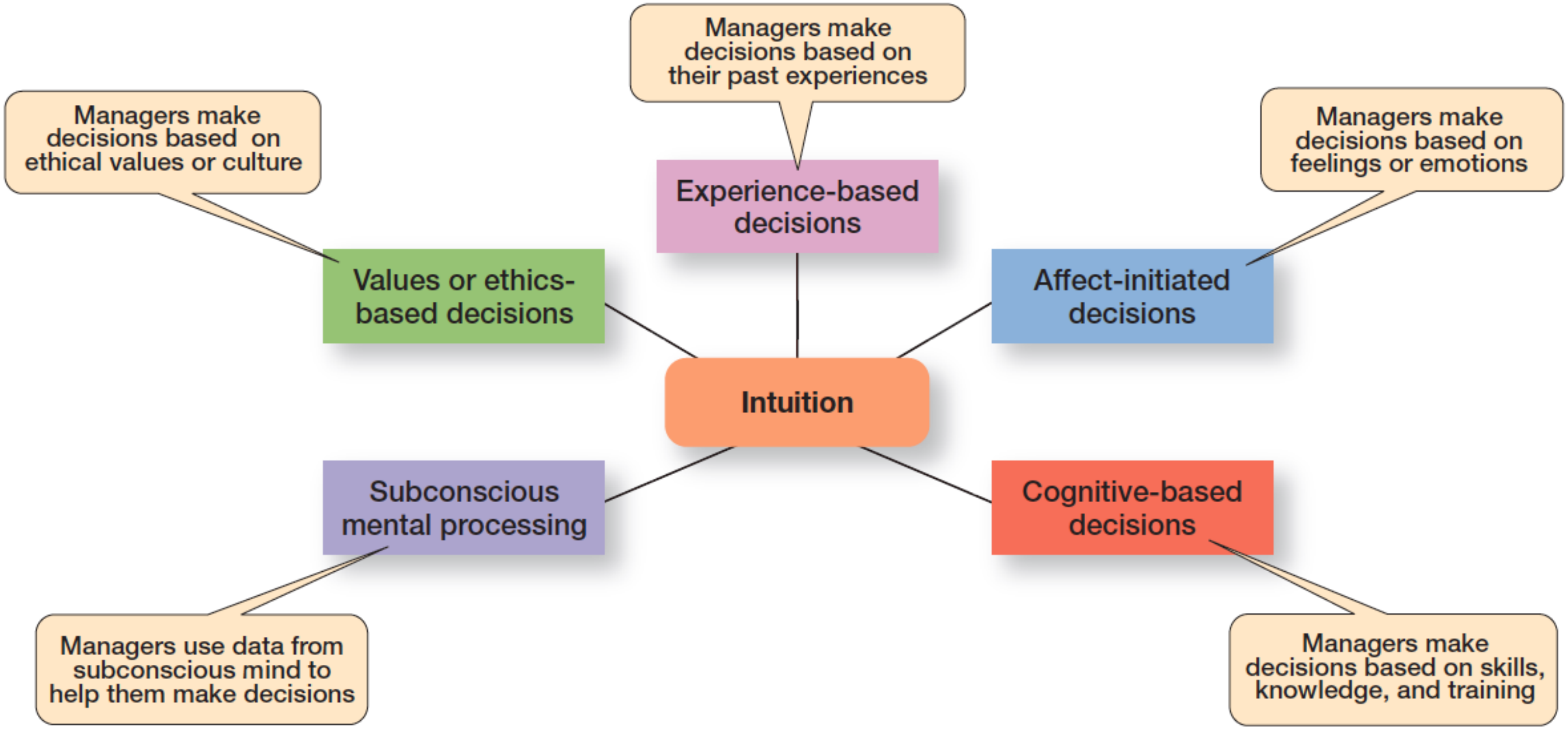
Sir Richard Branson of Virgin Group

« I rely far more on gut instinct than researching huge amounts of statistics «

Suggested reading:
Blink: The power of thinking without thinking by Malcom Gladwell

EXHIBIT 2-6
WHAT IS INTUITION?

The five different aspects of intuition:



MAKING DECISIONS: THE ROLE OF EVIDENCE-BASED MANAGEMENT *

- **Evidence-based management (EBMgt)** – the systematic use of the **best available evidence** to improve management practice.
  - Ex: A cosmetic company learned that their sales associates in Jakarta branch had the highest turnover of any store sales group. Based in this evidence, the manager decide to perform more thorough pre-employment assessment test

LEARNING OBJECTIVES

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TYPES OF DECISION

Structured Problems → Programmed Decision

Unstructured Problems → Non-programmed Decision

STRUCTURED PROBLEMS AND PROGRAMMED DECISIONS

- **Structured Problems** – straightforward, familiar, and **easily defined problems.**
- **Programmed decision** – a **repetitive decision** that can be handled by a routine approach.
- Example:

  a college's handling of a student wanting to drop a class

STRUCTURED PROBLEMS AND PROGRAMMED DECISIONS (CONT.)

- When facing structured problems, the manager relies on one of **three types of programmed decisions**, instead of searching and assessing alternatives:
  - **Procedure** – a series of sequential steps used to respond to a well-structured problem.
  - **Rule** – an explicit statement that tells managers what can or cannot be done.
  - **Policy** – a guideline for making decisions.

UNSTRUCTURED PROBLEMS AND NONPROGRAMMED DECISIONS

- **Unstructured Problems** – problems that are **new or unusual** and for which information is **ambiguous or incomplete.**
- **Non-programmed decisions** – unique and nonrecurring and involve custom made solutions.
- Example:

  whether to build a new manufactory in China

EXHIBIT 2-7
PROGRAMMED VERSUS
NON-PROGRAMMED DECISIONS *

Characteristic	Programmed Decisions	Nonprogrammed Decisions
Type of problem	Structured	Unstructured
Managerial level	Lower levels	Upper levels
Frequency	Repetitive, routine	New, unusual
Information	Readily available	Ambiguous or incomplete
Goals	Clear, specific	Vague
Time frame for solution	Short	Relatively long
Solution relies on . . .	Procedures, rules, policies	Judgment and creativity

DECISION-MAKING CONDITIONS

Certainty

- a situation in which a manager can make **accurate decisions** because **all outcomes are known.**

Risk

- a situation in which the decision maker is able to **estimate the likelihood of certain outcomes.**

Uncertainty

- a situation in which a decision maker **has neither certainty nor reasonable probability** estimates available.

MANAGING RISK

- Managers can use historical data from past experiences or secondary information that lets them assign probabilities to different alternatives.
- Managers use this information to help make decisions by calculating the expected value – the expected return from each possible outcome – by multiplying expected revenues by (the probability).
- This exercise will give the manager an idea of the average revenue that they can expect over time if everything relative to the probability remains constant.

EXHIBIT 2-8
EXPECTED VALUE

Suppose you manage a ski resort and need to decide whether to add another lift. How much revenue you can get are depends on snowfall. Based on 10 years data, you can calculate:

Event	Expected Revenues	×	Probability	=	Expected Value of Each Alternative
Heavy snowfall	$850,000		0.3		$255,000
Normal snowfall	725,000		0.5		362,500
Light snowfall	350,000		0.2		70,000
					$687,500

MAKIN UNCERTAIN DECISION

- Optimistic manager will follow a **maximax** choice – maximizing the maximum possible payoff
- A pessimist manager will follow **maximin** choice - maximizing the minimum possible payoff
- An optimal manager will follow **minimax** choice – minimize his maximum "regret"

EXHIBIT 2-9
PAYOFF MATRIX

Visa Marketing Strategy (in millions of dollars)	MasterCard's Competitive Action			
	CA_1	CA_2	CA_3	
S_1	13	14	11	
S_2	9	15	18	
S_3	24	21	15	Maximin
S_4	18	14	28	Maximax

EXHIBIT 2-10
REGRET MATRIX

Visa Marketing Strategy (in millions of dollars)	MasterCard's Competitive Action		
	CA_1	CA_2	CA_3
S_1	11	7	17
S_2	15	6	10
S_3	0	0	13
S_4	6	7	0

Highest value per column subtract with cell value
Ex: 28 - 11

Minimax

The maximum regret for each strategy are: S_1 = 17; S_2=15; S_3=13; S_4=7
Thus, we choose S4 to minimize the maximum regret (Minimax)

DECISION-MAKING STYLES *

- **Linear Thinking Style** – a person's tendency to use external data/facts; the habit of processing information through **rational**, logical thinking.
- **Nonlinear Thinking Style** – a person's preference for internal sources of information; a method of processing this information with internal insights, feelings, and **hunches**.

LEARNING OBJECTIVES

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DECISION-MAKING BIASES AND ERRORS

- **Heuristics** – using "rules of thumb" to simplify decision-making.
- **Overconfidence Bias** – holding **unrealistically positive views of oneself** and one's performance
- **Immediate Gratification Bias** – choosing alternatives that offer **immediate rewards and avoid immediate costs**.
  - Ex: Corruption in Indonesia

DECISION-MAKING BIASES AND ERRORS (CONT.)

- **Anchoring Effect** – fixating on **initial information** and ignoring subsequent information.
  - Ex: first impression
- **Selective Perception Bias** – selecting, organizing and interpreting events based on the decision maker’s biased perceptions.
- **Confirmation Bias** – seeking out information that **reaffirms past choices** while discounting contradictory information.

DECISION-MAKING BIASES AND ERRORS (CONT.)

- **Framing Bias** – selecting and **highlighting certain aspects** of a situation while ignoring other aspects.
- **Availability Bias** – losing decision-making objectivity by **focusing on the most recent events**.
    - Ex: Reluctant to buy all Samsung products because of Samsung Note 7
- **Representation Bias** – drawing analogies and **seeing identical situations when none exist.**
- **Randomness Bias** – creating unfounded meaning out of random events.

DECISION-MAKING BIASES AND ERRORS (CONT.)

- **Sunk Costs Errors** – forgetting that **current actions cannot influence past events** and relate only to future consequences.
- **Self-Serving Bias** – taking **quick credit for successes and blaming outside** factors for **failures**.
- **Hindsight Bias** – **mistakenly** believing that an event **could have been predicted** once the actual outcome is known (after-the-fact).
  - the hindsight bias is sort of like saying "I knew it!" when an outcome (either expected or unexpected) occurs – and the belief that one actually predicted it correctly

EXHIBIT 2-11
COMMON DECISION-MAKING BIASES

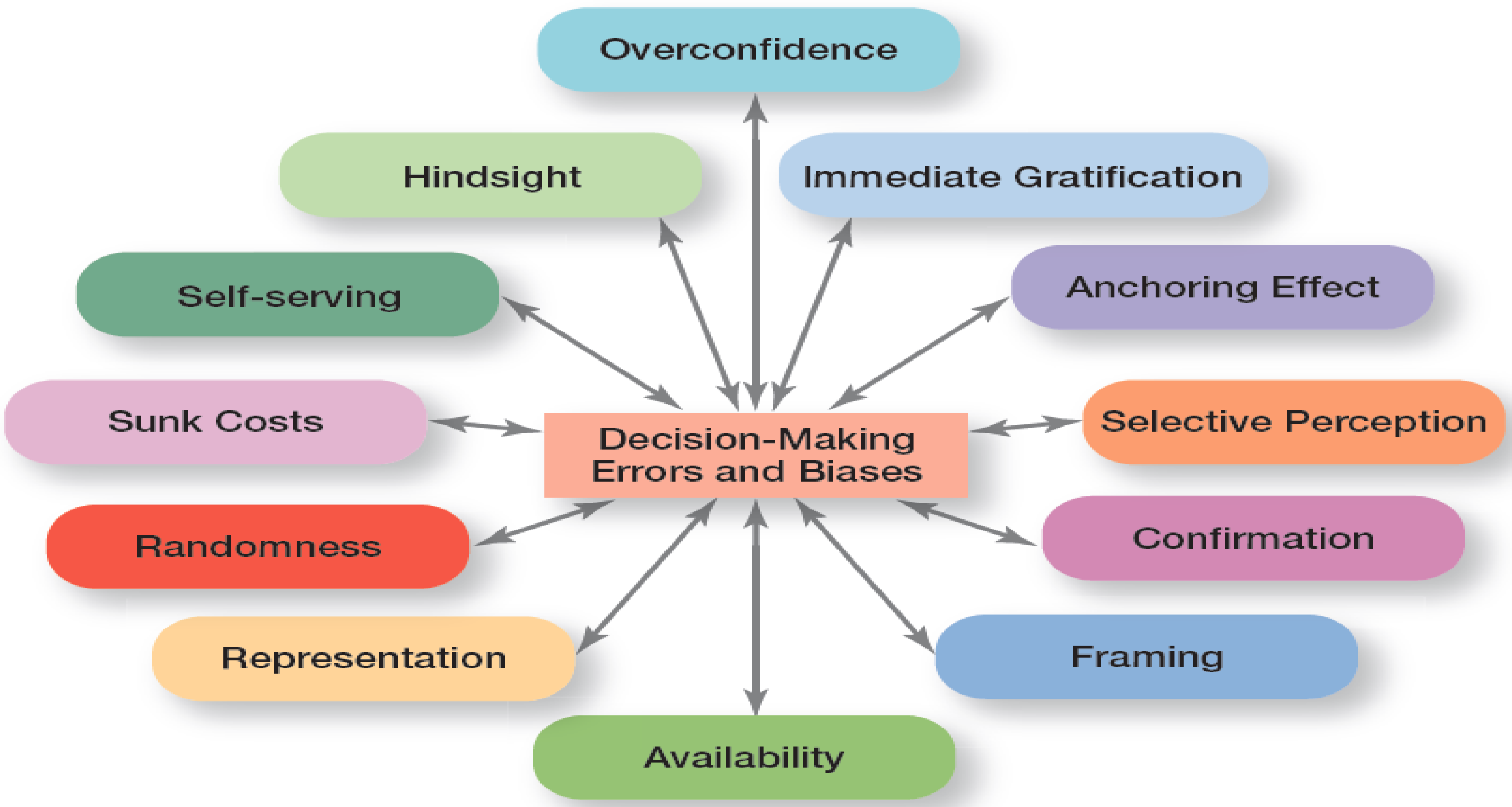
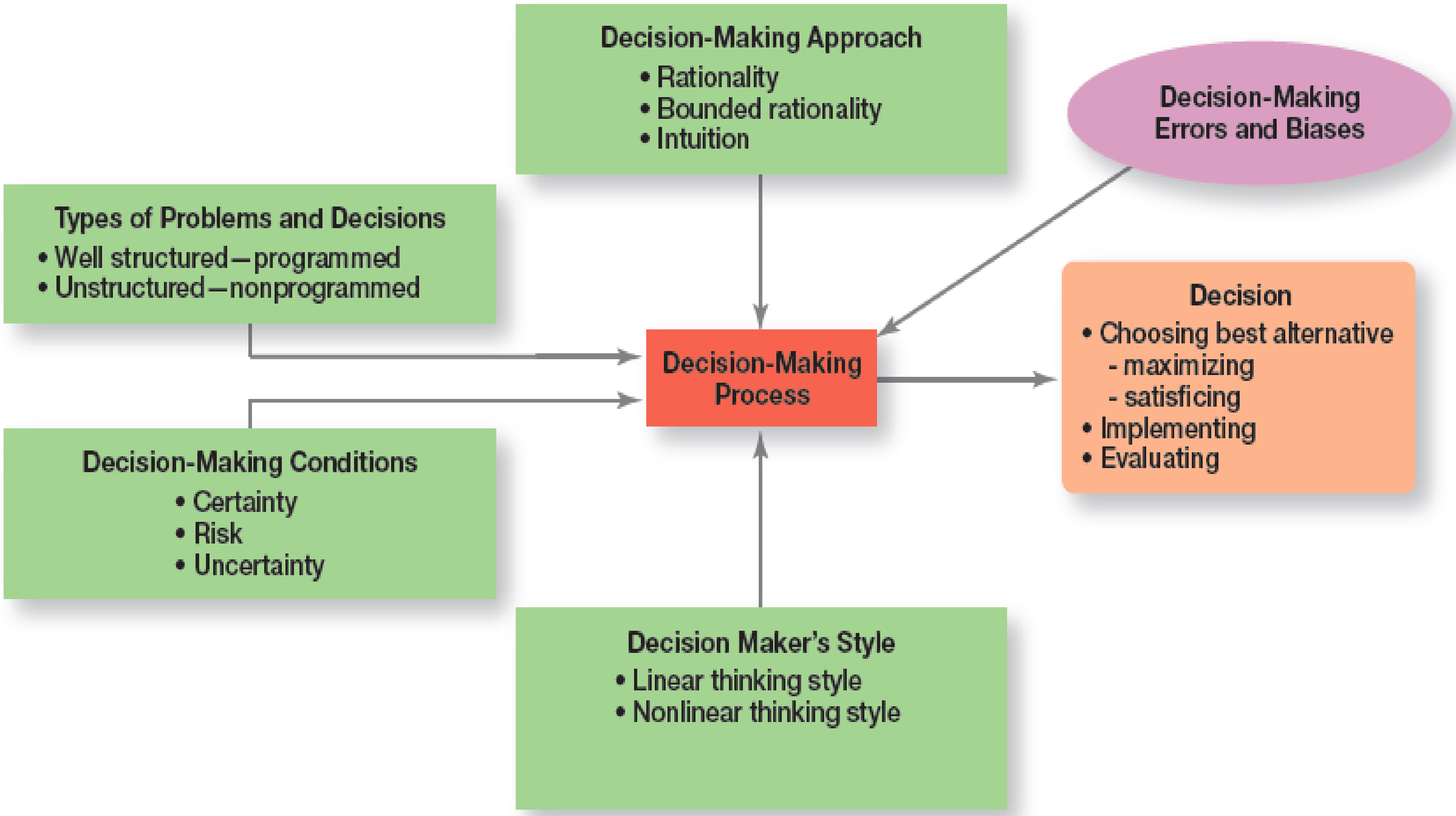


EXHIBIT 2-12
OVERVIEW OF MANAGERIAL DECISION-MAKING



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GUIDELINES FOR MAKING EFFECTIVE DECISIONS *

Understand cultural differences

Create standards for good decision-making

Know when it's time to call it quits

Use an effective decision-making process

Build an organization that can spot the unexpected and quickly adapt to the changed environment

DESIGN THINKING AND DECISION MAKING *

- **Design thinking** – approaching management problems as designers approach design problems.

BIG DATA AND DECISION MAKING *

- Big Data – the vast amount of quantifiable information that can be analysed by highly sophisticated data processing
  - High volume, high velocity and high variety information assets
- Amazon.com earns billions of dollars of revenue each year (estimated at 1/3 sales) from its "personalization technologies" such as product recommendations and computer-generated e-mails