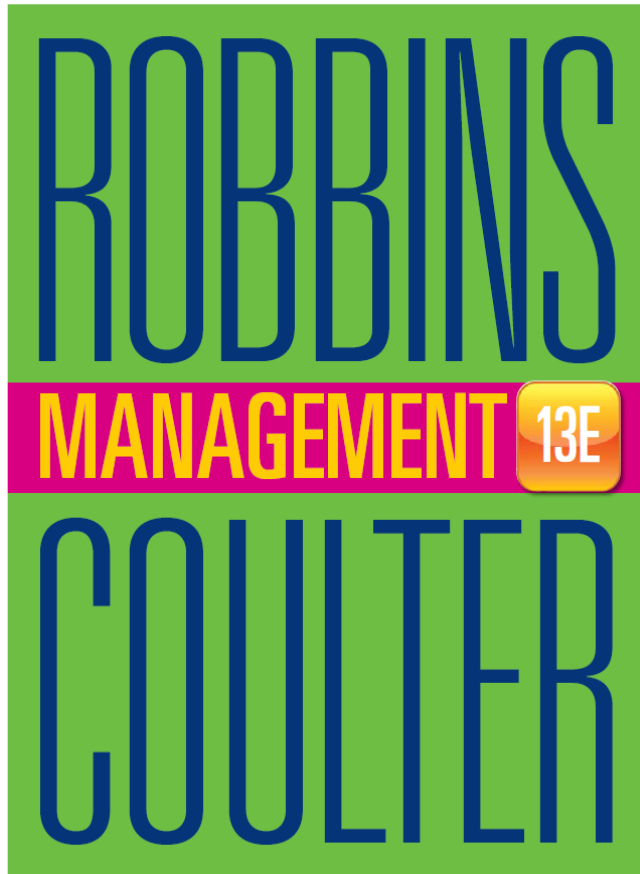# Management

Thirteenth Edition

Chapter 2

Making Decisions

Learning Objectives

2.1 Describe the eight steps in the decision-making process.

- Develop your skill at being creative.

2.2 Explain the four ways managers make decisions.

2.3 Classify decisions and decision-making conditions.

2.4 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.

2.5 Identify effective decision-making techniques.
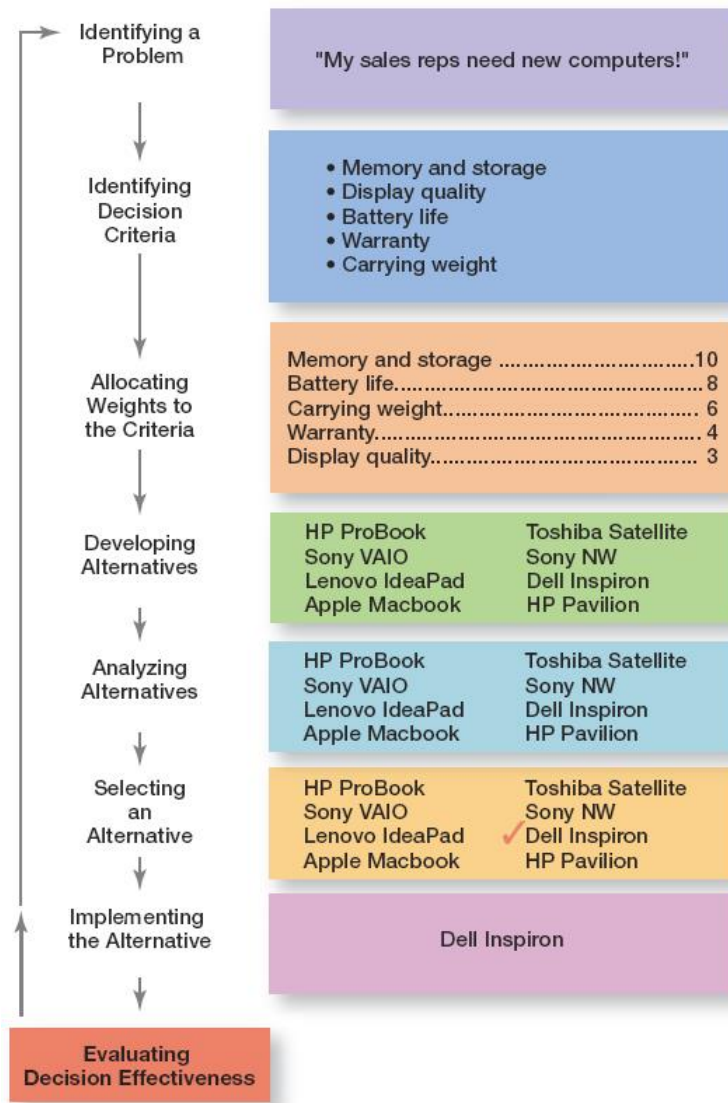
Be a Better Decision Maker

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

The Decision-Making Process

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

Exhibit 2-1 Decision-Making Process

Identifying a Problem

"My sales reps need new computers!"

Identifying Decision Criteria

- Memory and storage
- Display quality
- Battery life
- Warranty
- Carrying weight

Allocating Weights to the Criteria

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

Developing Alternatives

HP ProBook	Toshiba Satellite
Sony VAIO	Sony NW
Lenovo IdeaPad	Dell Inspiron
Apple Macbook	HP Pavilion

Analyzing Alternatives

HP ProBook	Toshiba Satellite
Sony VAIO	Sony NW
Lenovo IdeaPad	Dell Inspiron
Apple Macbook	HP Pavilion

Selecting an Alternative

HP ProBook	Toshiba Satellite
Sony VAIO	Sony NW
Lenovo IdeaPad	✓ Dell Inspiron
Apple Macbook	HP Pavilion

Implementing the Alternative

Dell Inspiron

Evaluating Decision Effectiveness

The Decision-Making Process

- **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.

- **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.

- **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

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

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

- **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.

The Decision-Making Process

- **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 Decision-Making Process

- **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

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- **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?

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 (2 of 2)

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?

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

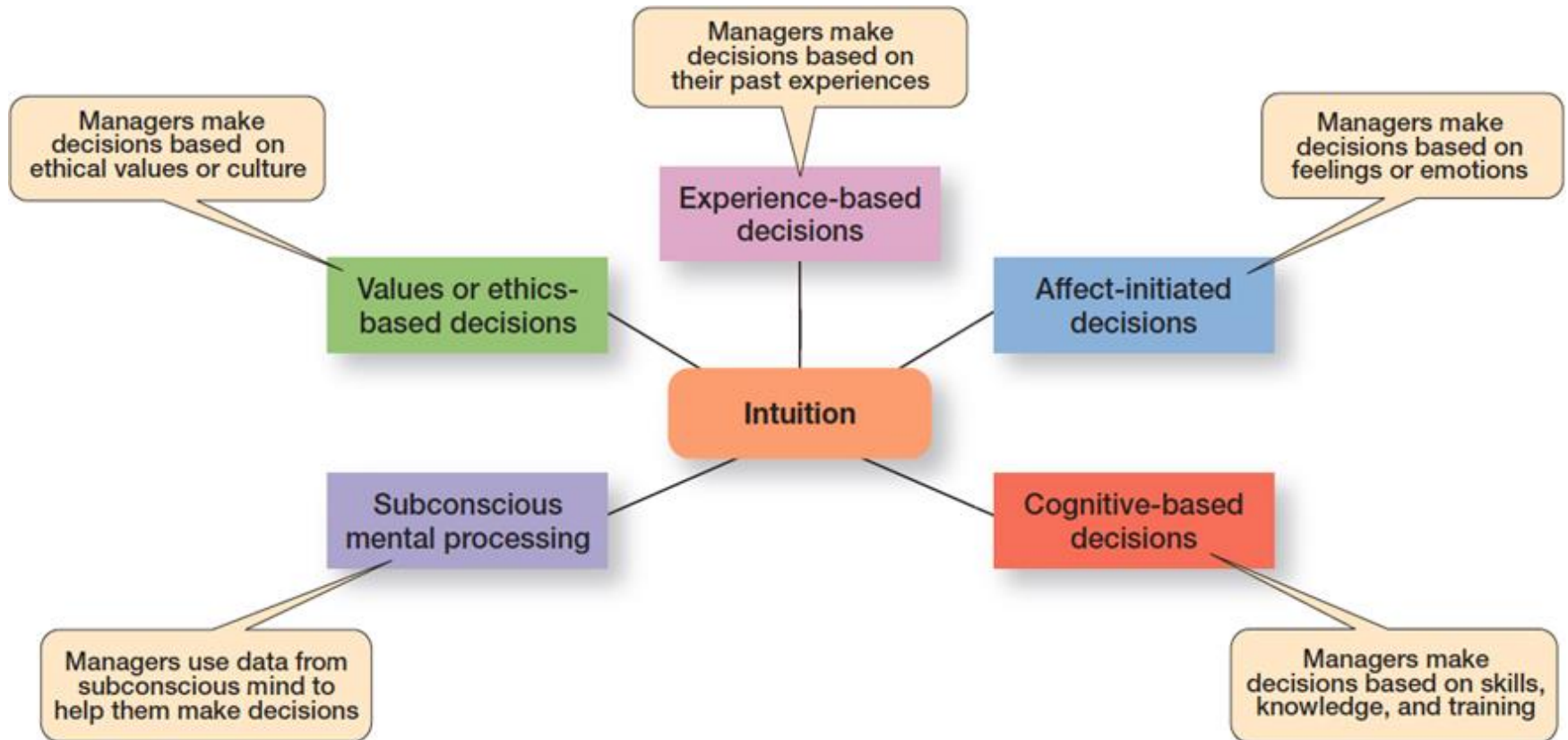# Making Decisions: Bounded Rationality

- **Bounded Rationality** – Decision-making that's rational, but limited (bounded) by an individual's ability to process information.

- **Satisfice** – Accepting solutions that are "good enough."

- **Escalation of Commitment** – An increased commitment to a previous decision despite evidence it may have been wrong.

Making Decisions: The Role of Intuition

- **Intuitive Decision-Making**
  - Making decisions on the basis of experience, feelings, and accumulated judgment.

Exhibit 2-6 What Is Intuition?

Managers make decisions based on their past experiences

Managers make decisions based on ethical values or culture

Managers make decisions based on feelings or emotions

Experience-based decisions

Values or ethics-based decisions

Affect-initiated decisions

Intuition

Subconscious mental processing

Cognitive-based decisions

Managers use data from subconscious mind to help them make decisions

Managers make decisions based on skills, knowledge, and training

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Making Decisions: The Role of Evidence-Based Management

- **Evidence-Based Management (EBMgt)** – The systematic use of the best available evidence to improve management practice.

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.

Structured Problems and Programmed Decisions

- **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.

- **Nonprogrammed Decisions** – Unique and nonrecurring and involve custom made solutions.

Exhibit 2-7 Programmed Versus Nonprogrammed 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

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

Exhibit 2-9 Payoff Matrix

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

Exhibit 2-10 Regret Matrix

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

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.

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.

Decision-Making Biases and Errors

- **Anchoring Effect** – Fixating on initial information and ignoring subsequent information.

- **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 (3 of 4)

- **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.

- **Representation Bias** – Drawing analogies and seeing identical situations when none exist.

- **Randomness Bias** – Creating unfounded meaning out of random events.
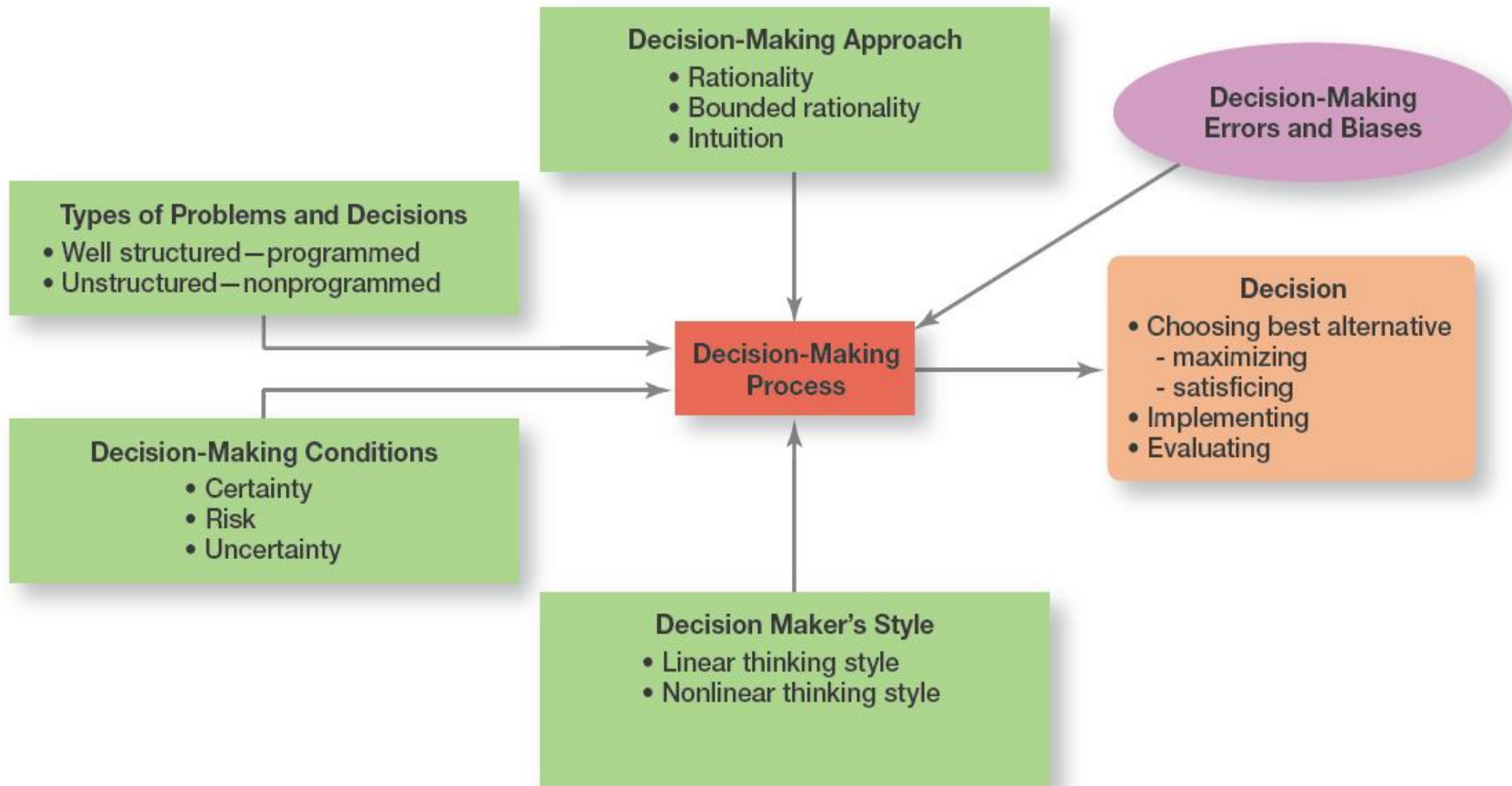
Decision-Making Biases and Errors

- **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).

Exhibit 2-11 Common Decision-Making Biases

Exhibit 2-12 Overview of Managerial Decision-Making

Decision-Making Approach
- Rationality
- Bounded rationality
- Intuition

Decision-Making Errors and Biases

Types of Problems and Decisions
- Well structured—programmed
- Unstructured—nonprogrammed

Decision-Making Conditions
- Certainty
- Risk
- Uncertainty

Decision-Making Process

Decision
- Choosing best alternative
  - maximizing
  - satisficing
- Implementing
- Evaluating

Decision Maker's Style
- Linear thinking style
- Nonlinear thinking style

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.

Review Learning Objective 2.1

- **Describe the eight steps in the decision-making process.**
    1. Identify problem
    2. Identify decision criteria
    3. Weight the criteria
    4. Develop alternatives
    5. Analyze alternatives
    6. Select alternative
    7. Implement alternative
    8. Evaluate decision effectiveness

Review Learning Objective 2.2

- **Explain the four ways managers make decisions.**
  - Assumptions of rationality
    - The problem is clear and unambiguous
    - A single, well-defined goal is to be achieved
    - All alternatives and consequences are known
    - The final choice will maximize the payoff

Review Learning Objective 2.2

- Satisficing – When decision makers accept solutions that are good enough.

- Escalation of commitment – Managers increase commitment to a decision, even when they have evidence it may have been a wrong decision.

- Intuitive decision-making means making decisions on the basis of experience, feelings, and accumulated judgment.

- Evidence-based management, a manager makes decisions based on the best available evidence.

Review Learning Objective 2.3

- **Classify decisions and decision-making conditions.**
  - Programmed decisions are repetitive decisions that can be handled by a routine approach and are used when the problem being resolved is straightforward, familiar, and easily defined (structured).
  - Nonprogrammed decisions are unique decisions that require a custom-made solution and are used when the problems are new or unusual (unstructured) and for which information is ambiguous or incomplete.

Review Learning Objective 2.3

- **Classify decisions and decision-making conditions.**
  - – Certainty is a situation in which a manager can make accurate decisions because all outcomes are known.
  - – Risk is a situation in which a manager can estimate the likelihood of certain outcomes.
  - – Uncertainty is a situation in which a manager is not certain about the outcomes and can't even make reasonable probability estimates.

Review Learning Objective 2.4

- **Describe different decision-making styles and discuss how biases affect decision-making.**
    - Linear thinking style – Characterized by a person's preference for using external data and processing this information through rational, logical thinking.
    - Nonlinear thinking style – Characterized by a preference for internal sources of information and processing this information with internal insights, feelings, and hunches.

Review Learning Objective 2.5

- **Identify effective decision-making techniques.**
  - An effective decision-making process
    1. Focuses on what's important
    2. Is logical and consistent
    3. Acknowledges both subjective and objective thinking and blends both analytical and intuitive approaches
    4. Requires only "enough" information as is necessary to resolve a problem

Review Learning Objective 2.5

5. Encourages and guides gathering relevant information and informed opinions

6. Is straightforward, reliable, easy to use, and flexible

- Design Thinking – "approaching management problems as designers approach design problems."

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