Pracademic Leadership Adaptive Decision Making: Choosing a Flexible Formula [1]

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Abstract

Modern Business Leaders are constantly required to make organizational decisions that impact the effectiveness and efficiency of their efforts. As the current working environment becomes more hyperbolic in constant change, with unrelenting amounts of data and constant business challenges, leaders need new techniques and models for decision making. The clarification of the difference between a Simple, Difficult and Complex decision are unclear at times causing consequential impacts. By adding a flexible format for decision making, we can embrace uncertainty and evaluate many different alternatives while still being able to make decisive judgements.

Keywords: Pracademic, Business Leadership, Organizational Decisions, Simple Decisions, Difficult Decisions, Complex Decisions, VUCA, Organizational Change.

Introduction

The purpose of this paper is to explore the current leadership decision making challenges, philosophies and strategies to optimize organizational success. Firstly, we need to understand the possible contributors to poor decision making. Traditionally, they are based on three "Wrongs":

- Wrong Comparisons
- Wrong Time
- Wrong Information

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Wrong Comparisons

When making a decision, the logical model that is created can be based on rapid comparisons without thinking clearly about the options creating a faulty comparison. This would be where you compare your decision options using representative logic that is not equal (Cherry, 2022).

For example, how far out of your way would you go to save $25? If you could save $25 on a $75 item by driving 15 minutes out of your way, you would probably do it. But if you could save $25 off a $10,000 item, would you still be willing to go out of your way to save the money? Even though both examples involve the same amount of savings, in most cases, people are less willing to travel further to save money on the more expensive item.

Wrong Time

When making a decision, we may find that we are pushed to create it based on an arbitrary timeline. There is a statement that you can have a decision made right now, or you must wait until it's fully understood before you get the right decision. Additionally, the other side of the situation is based on a leader who has the right information to make the decision, but purposely resists making it until they have additional information. This is called decision paralysis and can be caused by young leaders who are afraid of the consequences of making a decision.

Wrong Information

When making a decision, we may not have the required information to make it correctly. There is an information gap or misinformation that the decision maker is using. This can be a situation where the decision is based on technically inaccurate information. This can happen many times because we don't understand the complexity of decision characteristics. If you add the lack of decision making skills, processes and a leader who does not understand how to break decisions down into different types, you have a clear formula for problematic leadership.

Decision Making Types

To provide leaders with a strategic formula for decision making, we need to break them into three separate categories for resolution. We propose that a flexible solution would be to separate them into *Simple Decisions*, *Difficult Decisions* and *Complex Decisions*. This separation between

the proposed descriptions allows Business Leaders to approach decision making from three unique approaches.

According to research, the average person makes over 200 decisions every day based only on food selections (Krockow, 2018). From the time you wake up, your brain starts to make decisions, with many of them done without your awareness. These decisions are called "unconscious" and help us make the thousands of decisions we make each day. Then, we have the conscious decisions we make that require cognitive processing, pause and evaluation against the potential consequences. These can be broken down into the following three categories:

- ***Simple Decisions*** – This type of decision is usually based on one of two alternatives formulated in a "***This or That***" formula. This is a situation where it does not really matter which selection we make. Both alternatives are acceptable, and we simply decide what we think is the best selection at that point in time. The consequences of making the decision are usually very uneventful which makes these decisions seem automatic. Automatic thinking is the unconscious, effortless, cognitive process that we use when we need a quick solution to a problem. We make hundreds of these types of decisions each day and never give them a second thought.

- ***Difficult Decisions*** - This type of decision requires a cognitive process which contains organized steps to complete the process. A Five-Step decision making process flow works very well based on a sequence of predefined structured steps. The consequences of these types of decisions can directly impact the performance of an organization. Additionally, this type of decision-making structure can be used to identify new potential opportunities.

- ***Complex Decisions*** – This type of decision-making process can be used when there is no obvious correct choice. There is typically no one obvious right answer to any decision question but multiple answers that can lead down multiple different paths. This is the opposite situation of simple decision making. When implementing strategic decision making in uncertain contexts, it is important to practice considered decision making even for what may seem to be minor decisions. The key is to embrace the complexity of our contexts through awareness, openness to alternatives, contextualization and insightful sense making. This requires a decision model and a complex decision-making process.

With a flexible solution decision making mindset, you can select from the most appropriate decision-making methodology as seen in the figure below:

Figure 1.0: Decision Selection Matrix

Type	Process	Description
Simple	This or That	Choosing between 2 – 3 possibilities with no preference. Intuition Based.
Difficult	5-Step or Rule Based	Choosing by use of a condition, rule or process. Decision is not apparent and may require new ideas. Selection by priority of your value system.
Complex	Decision Matrix or Decision Model	Choosing by use of a multi variant decision model or process. Criteria variables are weighted, ranked, and rated to determine multi faceted decisions.

To clearly understand the unique characteristics of Simple, Difficult and Complex decision making, we need to understand and explore the following:

What is a decision?

A decision is a conclusion or resolution reached after consideration. It is the action or process of deciding something or resolving a question. Whether you're deciding what to eat, what to wear, what to watch on TV, or where you want to go on vacation, your brain is making more than 35,000 decisions (choices) every day. Small decisions can have big impacts and consequences and at other times may seem inconsequential.

As a child, many decisions are made for us. As we move into adulthood, we are required to use multiple cognitive processes such as *information search*, *information integration* and *risk evaluation*. Not all decisions require us to consider probabilities, such as choosing a candy bar to purchase. In this case, you would weigh each of the available choices' attributes (such as price, flavor or calories). The challenge in a deterministic decision environment is not to consider probability, but to consider all the relevant information in a systematic fashion.

Decision makers often apply a weighted-additive strategy. Individuals determine the subjective expected value of each possible alternative, by weighing each of the aspects or attributes of the alternatives in terms of their respective relevance. You would choose the alternative that provides the best total package of attributes, that is, the most important or that yields the highest expected value.

Decision Examples

Simple Decision – Cheerios and Bran Flakes are the only cereals in your cupboard, and you hate Bran Flakes (they belong to your roommate) then your decision is obvious: Eat the Cheerios. (This or That).

Difficult Decision – You are driving to work and realize you forgot your wallet when you are halfway there. You also know that if you go back home to get it, you will be late for work and your supervisor will be upset. Finally, you will not need any of the money inside your wallet because you can borrow it from friends. (Utilize the 5-step or Rule Based Process to help you make the decision).

Complex Decision – You are starting to plan next year's vacation for you and your family. You want to go to Australia but everyone else wants to go New Zealand. The kids may need to be in summer school and your work requires 60 days' notice (2 months) prior to a vacation. Finally, airline flights and hotel accommodations book up about 6 months in advance which may prevent you from getting transportation and lodging. (Utilize a Decision Matrix or Decision Model to help you make the decision)

Examples of Poor or Flawed Decision Making

- In 1803, Jefferson bought the Louisiana territory from France for $15 million dollars. This purchase doubled the size of the United States and was considered an extreme abuse of federal power because the Constitution did not give permission for the president to acquire land from a foreign power. This required the passage of a Constitutional amendment to validate the purchase. The purchase antagonized Spain and almost caused a war due to expanded borders.

- In 1999, the NASA Mars Climate Orbiter probe hit the planet's atmosphere and burst into flames. This was after 10 months in space and a budget of $125million, its failure resulted from one simple mistake. During the design phase, the probe's speed had been calculated in metric units. When building the vehicle thrusters, however, the Jet

Propulsion Laboratory's engineers programmed the speed in English unit measures.

- In 2003, Red Lobster had a $14.99 all you can eat buffet. Edna Morris was the CEO and came up with a ploy offering an "endless" king crab leg promotion for only $22.99. Red Lobster assumed that because they brought the servings to the patrons out slowly 'nobody is going to sit there for 6 hours and just eat king crab legs'. This was a massive miscalculation that ended with Morris losing her job and the loss of $400 mission in stock value in one week.

- In 2013, Yahoo purchased the blogging service Tumblr for $1.1 billion in cash. They sold it to Verizon in August of 2019 for $3 million just 6 years later. The initial acquisition was meant to put a "fresh face" on an outdated internet company and provide it with a profitable revenue source. Yahoo was making a speculative bet on future revenues by trying to tap into the "Millennial" market early.

- In the 1980's, McDonalds offered a pizza that was served at your table on a pizza rack or available for takeout. They invested millions and it lingered on their menus until nearly 2000 but it never caught on. The McDonalds "McPizza" was criticized by competitor Pizza Hut calling the pies "McFrozen" in 1989. The attempt to expand outside the burger and fries market did not succeed.

Figure 2.0: McDonald's Pizza Box

Each of these decisions was based on very smart people making very Difficult or Complex decisions without either enough information or information that was proven wrong.

Difficult Decisions

The majority of the decisions that cause us to delay making an important choice require a decision rule, process or systemic checklist that utilizes both qualitative and quantitative evaluation parameters. What makes a decision "Difficult" is the increase in elements, parameters and potential conflicts in understanding. These types of decisions are a blending of a value-benefit analysis and an emotional perspective. Making the "Difficult" decision requires more than a simple logical choice. There are many different decision making processes that are based on a sequence of steps that if followed, provide an answer, but not necessarily the best answer. In the decision table below (Reyes, et al, 2015) you have a sample of 100 rules reduced into a portfolio of 48 rules. These rules are clearly defined in a logical description for pre-defined codes (Cost, PD, PI, LCD, LCI). In this format, you can reject or support the funding of projects as seen in the Figure 3.0 below.

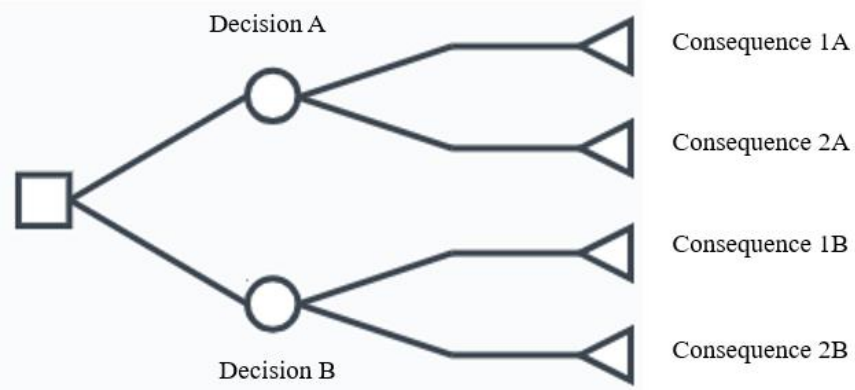
Figure 3.0: Example of minimal decision rules

Condition Attributes					Decision
Cost	PD	PI	LCD	LCI	
Not significant	Low Impact	Average Impact	Not significant	Not significant	All projects with these attributes are not supported.
High	Average Impact	Not significant	Not significant	Not significant	All projects with these attributes are not supported.
Average	High Impact	Low Impact	Low Impact	Low Impact	Half of the projects with these attributes are supported.
Average	Very High Impact	High Impact	Not significant	Not significant	Support all projects with this attributes
High	Very High Impact	Very High Impact	Not significant	Not significant	Support all projects with these attributes.

The sample table in Figure 3. shows decision rules, with 5 condition attributes (not significant, low impact, average impact, high impact, very high impact). With this knowledge, you can infer if the recommended project portfolio satisfies anticipated beliefs.

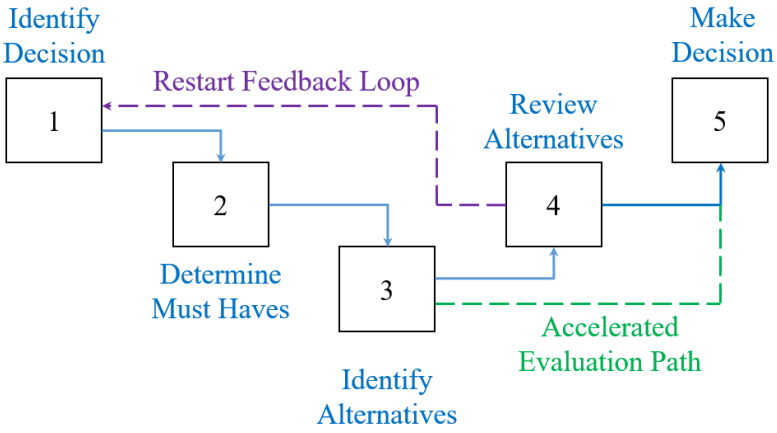
Sometimes, you can create a decision tree to make a decision (see Figure 4.0). A decision tree is a hierarchical model that uses a tree-like image of decision structure and their possible consequences. It is a way to display an algorithm that only contains conditional control statements. In other words, they are great for "If" and "Then" logic decisions but have limitations for "And" & "Or" logic situations.

Figure 4.0: Sample Decision Tree



Other decision processes lead you through a convoluted complex sequence of unclear conceptual steps. After evaluating a hand full of different decision flows, a decision was made to develop a simple 5-Step sequential process flow that incorporates a feedback loop to restart the process if required, and an accelerated evaluation path to expedite the decision process as seen in Figure 5.

Figure 5.0: **5-Step Decision Process Flow**



- ***Step-1*** – Identify the Decision: This step includes a clear description of the value gap. You should conduct a Gap Analysis to identify the "Current State" and the "Desired State" to create a single statement that clearly articulates the decision that needs to be made.

- ***Step-2*** – Determine The Must Haves: This step includes the identification of the required elements or attributes. You should establish a clear understanding of the Who, What, Where, When and Why features required in the "Future State" description.

- ***Step-3*** – Identify the Alternatives: This step lists all options you can choose. This requires creating a list of known or new ideas that can be used to transition the "Current State" into the desired or "Future State" situation where the problem or situation has been resolved. If there is an immediate clear choice solution to the decision that needs to be made, move to Step-5 immediately and make the decision.

- ***Step-4*** – Review the Alternatives: This step includes the use of a Hot, Warm, and Cold formula developed by mapping each of the possible alternatives into a checklist and by ranking and rating the best solution. If after completing this step you are still not comfortable with the list of alternatives, you should use the "Restart Feedback Loop" and go back to Step-1 and repeat the process.

- ***Step-5*** – Make the Decision: This is the final step where you actually make the decision. You will implement the change based on the information you have with the alternative options available.

If designed properly, a systemic decision-making process reduces the possibility that the biases and blind spots of individuals will result in sub-optimal decisions. "Difficult" decisions are hard to make, but easy to make with decision rules, systems and decision processes. Let's create an example for you using the 5-Step process. The initial scenario is that you are told you need to make a decision on planting 5 trees. So, let's walk thru the process steps outlined in Figure 5.

Step-1. Your initial decision is that you need to select the type of tree to plant.

Step-2 is to determine the must haves. The name of the company is Missouri Landscaping and they have 1 acre of open land they are not using and they want to increase revenue by planting 5 fruit trees. These trees should not cost more than $500 and would need to be planted in late summer so that we would get fruit in the spring. The trees should not grow higher than 150 feet in 10 years and the fruit should be edible and able to be used for a sellable

product either directly to a customer or used as a fertilizer. Step-2 gives us a clear understanding of the *Who*, *What*, *Where*, *When* and *Why* requirements.

Step-3 is to identify the alternatives. We conducted some quick research, and based on what we know about fruit trees that can grow in the Missouri climate, we identified 7 different varieties. After a little more research, it was determined that the Avocado tree would not survive a freezing winter. Many of the fruit trees fall into a category of smaller dwarf category or bushes which were ignored. Finally, a Persimmon tree was discarded due to its bitter taste when not ripe. After carefully reviewing the options, there was no clear option to select, therefore we moved on to ***Step-4***.

Step-4 is to review the alternatives. To clearly see the options, we used a Decision Selection Heat Map with the input from a small group of company members who were able to rank the trees as seen the image below.

Figure 6.0: Fruit Tree Decision Selection Heat Map

Decision Selection Heat Map

	COLD	Cold Score (1-5)	WARM	Warm Score (6-10)	HOT	Hot Score (11-15)
Option 1	Peach tree	4				
Option 2			Cherry Tree	6		
Option 3	Pomegranate Tree	4				
Option 4					Apple Tree	14
Option 5					Pawpaw Tree	12

Decision based on the type of tree to plant in a rural Missouri neighborhood with a budget of $500 which will not only provide shade but will grow no higher than 150 feet in a 10 year time period. If it produces a fruit it should be edible and able to be used for a a sellable product.

As you see in the heat map image, the logical selection would be to purchase 5 apple trees ranked as the highest number out of the two "Hot" alternatives identified. The next step is to go to ***Step-5***.

Step-5 is to make the decision selection. We contacted Simply Trees, located in Livermore California, and they have a local distribution center located in Missouri with the correct inventory. The cost would be $99.00 per tree if we pick the trees up rather than having them shipped to us.

As you can clearly see by following the 5-Step Decision Process, we were able to create a difficult decision easily by following the flow steps. Unfortunately, sometimes we are challenged with making decisions that not only have multiple elements but also lead to multiple answers leading down multiple decision paths. In this scenario we need an "Action" based sequence to resolve a Complex decision.

Complex Decisions

A complex decision is one where there is no obvious correct choice. The key is to embrace the complexity of our context through increased awareness, openness to alternatives, contextualization, and insightful sense making. If you cannot make a decision after using the difficult decision-making process, it is probably because you have a complex decision.

What makes a decision complex may be based on the theory that requires the decision maker to know what their action-options are. This does not give us any data or information on the possible consequences. Additionally, there are fundamental uncertainties based on the future. None of us knows for certain what will happen in the future and we base this information on a series of predicted assumptions. Sometimes the decision we are making is unique and has never been made before. This gives us little to no information on past best practices, experiences or lessons learned. Finally, there are usually multiple stakeholders in the decision that have different biases, mental models and paradigms.

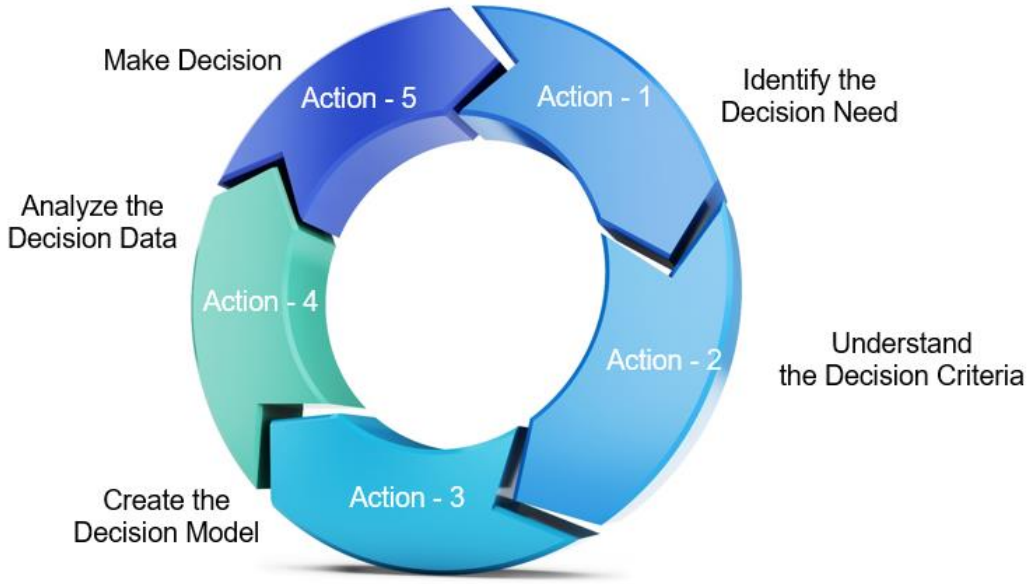
CDPM Model

To make a complex decision, it requires the creation of a decision model and the need to follow the "actions" of a Complex Decision Process Model (CDPM). The Complex Decision Process Model is conceptually more complex than a 5-Step process. It is based on a series of connected and interconnected actions. Each action contains multiple process steps, that when completed, provide a clear opportunity to make a complex decision based on both qualitative and quantitative information evaluation.

The use of a decision model allows you to integrate multiple weighted criteria against multiple options to determine a clear decision. A decision model can also contain a rule table that can be ranked and rated for each of the criteria variables using a team consensus methodology. Some decision models are tabular representations of inputs to determine outcomes, with rules and conditions. They may also contain decision trees to represent business rules and visual diagraming to illustrate bounded rationale. Decision making models typically fall into two general categories. The first are rational decision-making models that employ a structured approach and are considered orderly and logical. The second are intuitive decision-making models that use feelings and instinct to make quick decisions. They are less structured and may use previous knowledge of similar decision situations or obstacles.

The CDPM model blends actions from both styles to create a balanced formula for decision making. Each of the 5 CDPM actions are focused solely on helping construct a decision model as seen in Figure 7.

Figure 7.0: Complex Decision Process Model (CDPM)



The CDPM model, as seen in figure 7.0, is based on 5 separate but connected and interconnected actions that include the full development of a decision model. Additionally, inside each of the CPDM "Actions", there are multiple steps that must be accomplished. The CPDM Actions are identified as:

Action 1 – Identify the Decision Need: This action is where you determine the scope and the requirements for the decision. It requires you to identify the "who, what, where, when and why" elements and needs for the decision. Additionally, you will need to understand the interconnected needs from all of the stakeholders impacted or influenced by the decision. The decision immediacy and consequences should be documented.

Action 1 is the first phase in the CPDM model and may require multiple input attempts to fully understand the type of decision that needs to be made. Many times, the inability to correctly identify the type of decision leads to an inability to solve the problem. Spending as much time as necessary in this phase is essential to creating a successful path forward thru the CPDM model. When completed, you can move on to Action 2.

Action 2 – Understand the Decision Criteria: This action is composed of 3 steps to understand the possible decision alternatives. The first step in Action 2 is to create the decision choices based on the possible alternatives. It is recommended that you have at least 4 to 5 different decision alternatives identified. The reason you need different decision alternatives is because good alternatives are (1) under our control, (2) significantly different, (3) potentially attractive, and (4) doable. The quality of a decision is limited by the alternatives we consider. Deciding on alternatives should be a team effort to incorporate a variety of perspectives. Using the CPDM Model template as seen in figure 8.0, you would list the decision alternatives in any order as seen under the orange tab in figure 8.0 and 9.0. An explanation of the CPDM model steps will follow.

Figure 8.0: CDPM (Complex Decision Process Model) Template

		0	0	0	0	0		
	Decision Choice	**Selection Criteria # 1**	**Selection Criteria # 2**	**Selection Criteria # 3**	**Selection Criteria # 4**	**Selection Criteria # 5**	**Total**	**Weighted Adjustment**
#1	Alternative "A"						0	#VALUE!
#2	Alternative "B"						0	#VALUE!
#3	Alternative "C"						0	#VALUE!
#4	Alternative "D"						0	#VALUE!
#5	Alternative "E"						0	#VALUE!
#6	Alternative "F"						0	#VALUE!
#7	(TBD)						0	
		(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)		

Step 1 - review the information avaliable from research and create a "subjective" score from 1 to 5 in each cell.

Step 2 - make sure the scoring does not exceed 25 points for each selection in the total cell.

Step 3 - identify the highest total number to determine the decision selection.

Step 4 - apply weigted adjustment if all decision criteria are not equal.

Selection Criteria # 1 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 2 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 3 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 4 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 5 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Figure 9.0: CDPM Template "Decision Choice" Entry Column (Step 1)

	Decision Choice
#1	Alternative "A"
#2	Alternative "B"
#3	Alternative "C"
#4	Alternative "D"
#5	Alternative "E"
#6	Alternative "F"
#7	(TBD)

The second step in Action 2 is to create the criterion to use for evaluating each of the potential alternatives. This step requires you to decompose the "Must Have" criteria based on Action 1. You should identify 5 elements that each solution "Must Have" to make it a viable solution choice. Using the CPDM Model template (figure 10.0), you would list the decision selection criteria in any order running horizontally across the top columns. These

evaluation characteristics are the principles, values, rules, variables, and conditions that an organization or team can use for the selection of an option to make a decision. Having decision criteria adds speed, quality and consistency to the decision-making process. Decisions made after evaluating and comparing various qualitative and quantitative criteria are more likely to give the desired outcome. These evaluation characteristics improve the quality, rationality, and fairness of the decision as seen in Figure 10.0 below (Green).

Figure 10.0: CDPM Template "Decision Selection Criteria" Entry Column (Step 2)

Selection Criteria # 1	Selection Criteria # 2	Selection Criteria # 3	Selection Criteria # 4	Selection Criteria # 5

The third and final step in Action 2 is the construction of a weighting criteria of importance for each of the decision selection criteria using a scoring of Low (0.1) to High (1.0). The lower the weighted scoring, the less numerical impact you have to the original score. A criterion weighted as 1.0 (High) would be critical and imperative in importance to the decision selection seen in Figure 11.0 (Blue).

Figure 11.0: CDPM Template "Decision Weighted Adjustment" Entry Column (Step 3)

0	0	0	0	0

Once you have completed this step it will be time to move on to Action 3.

Action 3 – Create the Decision Model: This action is where you either construct the logical operation definition for a "Low" scoring description for each of the "Selection Criteria" described in Figure 10. (Green). This becomes a grading rubric description to be used to rank and rate each of the selection criteria. It is a series of descriptive statements that provide guidance for a how to rank and rate the template as seen in the Figure 12.0.

Figure 12.0: CDPM Template "Decision Selection Criteria" Grading Rubric Definitions

Selection Criteria # 1 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 2 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 3 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 4 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Selection Criteria # 5 **low** (1) would be a description of the criteria at it's worst or lowest position. This position may not be acceptable at this level.

Once this description has been completed, you will have completed Action 3 and you can move into Action 4.

Action 4 – Analyze the Decision Data: This action is based on ranking and rating the decision data information and data. You will look at the decision data model fields and rank and rate each of the cells to provide a completed spreadsheet of numbers ranked from 1 (low) to 5 (High). Finally, you will review the summation of the "Total" column for each decision to make sure it does not exceed a numerical total of 25. Lastly, you will make sure that the data passes the "giggle" test for accuracy and completion. (Seen in Yellow on the right-hand side in the Figure 13.0 CPDM template)

Figure 13.0: CDPM Template

		0	0	0	0	0		
	Decision Choice	Selection Criteria # 1	Selection Criteria # 2	Selection Criteria # 3	Selection Criteria # 4	Selection Criteria # 5	Total	Weighted Adjustment
#1	Alternative "A"						0	#VALUE!
#2	Alternative "B"						0	#VALUE!
#3	Alternative "C"						0	#VALUE!
#4	Alternative "D"						0	#VALUE!
#5	Alternative "E"						0	#VALUE!
#6	Alternative "F"						0	#VALUE!
#7	(TBD)						0	
		(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)		

Once you have completed the Action 4 steps, you can then move forward into the final and last series of steps in Action 5.

Action 5 – Make Decision: This action is the point where you can review the decision model "Total" column and identify the highest score which would be the correct decision choice. If the highest score ties (the same) in multiple totals calculations, you would look at the weighted adjustment column to identify the highest total. This would be the correct decision to make. If the highest score in the weighted adjustment column score is tied (the same), either one of the tied choices would be a correct score.

CPDM Dog Selection Example

To illustrate how to use of the *CDPM Decision Model Template*, we will use a complex decision example of a family that is going to purchase a dog. This clear statement of the need to "select a dog" is the completion of *Action #1* in the CPDM Model,

Next, proceed to *Action #2* in the CPDM Model and understand the decision criteria. The family consists of two parents and two children (4 and 10 years old). One of the parents stays home and works from home. One of the parents helps to get the children off to school and are home when the kids get home. The other parent leaves early in the morning and commutes in a carpool for roughly 40 min. each day, going to and from work, 5 days a week. One parent wants a Labradoodle dog breed. The other parent feels the family needs a Beagle. The 4 year old wants a Chihuahua puppy and the 10 year old wants to have an Australian Sheppard.

The family has decided they have a budget of $250.00 for the dog and are in no hurry to purchase their new pet. They have a small townhouse with a small yard but have a large park at the end of their street. In addition to this, the family already has 2 cats that are around 6 years old. The dog will primarily be used for security of the home balanced with a companionship for the kids to play with as they grow up.

The dog needs to have a temperament that is friendly towards the cats and at the same time does not bark constantly at outside noises or people. Your neighbor has a "Mutt" that is 2-3 years old that will need a new home in the next 3-6 months due to them moving. This clear series of descriptive statements allows you to decompose the following three steps of *Action #2* in the CPDM Model:

- Step 1 – Alternatives listed under the "Decision Choices" orange column.
- Step 2 – Decision Criteria listed across the "Selection Criteria" horizontal green cells.
- Step 3 – A weighted importance listed across the "Weighted Adjustment" horizontal blue cells.

For Step 1 of *Action # 2* in the CPDM Model flow, we will need to create the decision model. To accomplish this, we will use the CPDM "Blank" template and add the requirements for the decision alternatives. We take the five identified types of dogs that were described and we place them as alternatives in the template under the "Decision Choice" tab as seen in the Figure 14.0 below in *Action # 2* - Step 1.

Figure 14.0: Completed Decision Choice for Dog Selection

	Decision Choice
#1	Labradoodle
#2	Beagle
#3	Chihuahua
#4	Australian Sheppard
#5	German Sheppard
#6	Neighbors "Mutt"
#7	(TBD)

Next, we will complete the five "Selection Criteria" descriptions for what characteristics the decision will need to be made against. These decomposed criteria are shown in the Figure 15.0 in *Action # 2* – Step 2.

Figure 15.0: Completed Decision Criteria for Dog Selection

Excesive Barking	Housebroken or Trained	Sheds Excessively	Friendly towards People & Animals	Cost in Budget Target

The five criteria listed above were all agreed upon by all members of the family involved in the decision-making process. Finally, for *Action # 2* – Step 3, you will need to take

the same decision stakeholders and they will need to agree on a weighted adjustment which will identify which of the criteria are the most important with the highest score. The highest score would be a 1.0.which would mean the original score is not modified or reduced. Additionally, a weighted adjustment provides the least important criteria with scoring as low as 0.1. A score of 0.5 would indicate that the decision criteria is only ½ as important as something ranked as a 1.0. In the dog selection decision, the animal being "Friendly towards People & Animals" is the most important. This can be seen in the Figure 16.0.

Figure 16.0: Completed Decision Criteria Weighted Adjustment Scoring

0.9	0.6	0.5	1	0.5
Excesive Barking	Housebroken or Trained	Sheds Excessively	Friendly towards People & Animals	Cost in Budget Target

Now that the basic decision choice, selection criteria and weighted adjustments have been identified, you have completed *Action # 2* in the CPDM Model flow.

Next, you move to *Action # 3* in the CPDM Model flow which will require you to create the "Decision Model" and correlate what a low ranked score for each of the decision criteria is with a mini operational definition. This provides us clear descriptions for how to rank and rate the High and Low scoring required for each cell. This description is seen in Figure 17.0 from the CPDM spreadsheet:

Figure 17.0: Operational Definitions for "Low" Ranking

Excessive Barking **low** (1) would be a dog that constantly barks and/or howls excessively. Barks at anyone and other animals when walking.

Housebroken or Trained **low** (1) would be a dog or puppy that is not potty trained, chews the furniture and does not sit or obey any commands.

Sheds excessively **low** (1) would be a dog that requires constant brushing to remove loose hair.

Friendly towards People and Animals **low** (1) would be a dog that growls and tries to nip at people, children and other animals. It does not tolerate other pets.

Cost in Budget Target **low** (1) would be a dog or puppy that costs more that $250.00

After completing the all of the steps in *Action # 3*, you will move to Action # 4 and analyze the decision data.

In *Action # 4*, you will numerically rank and rate each of the decision choices cells against the decision criteria with a ranked order between 1 **(Low**) and 5 (High) for each cell. Remember that a score of 1 is the lowest score you can provide. A score of 5 is the highest score you can provide and meets all of the parameters described in the selection criteria.

Once you have reviewed that all of the data cells have been numerically ranked, you will have completed *Action # 4* of the model. A completed CPDM template will look like Figure 18.

Figure 18.0: ***CPDM Template with completed ranked scoring***

		0.9	0.6	0.5	1	0.5
	Decision Choice	Excessive Barking	Housebroken or Trained	Sheds Excessively	Friendly towards People & Animals	Cost in Budget Target
#1	Labradoodle	4	3	5	5	2
#2	Beagle	1	3	4	3	3
#3	Chihuahua	1	2	4	2	3
#4	Australian Sheppard	3	4	2	4	2
#5	German Sheppard	2	5	2	2	3
#6	Neighbors "Mutt"	3	3	4	4	5
#7	(TBD)					
		(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)	(Low = 1 High = 5)

Action #5 is where you can actually make the dog selection decision based on the output summary results from the CPDM template Figure 19.0. If you review the "Total" (Yellow) column scores, in the abbreviated views, you can see that all of the decision choices total below 25 which means the scoring template is accurate. But as you can see, the Labradoodle and the Neighbors "Mutt" both tied with a high score of 19.

To resolve the tie in the decision choice, you would review the weighted adjustment scoring (Blue) column scores and as you can clearly see, the Labradoodle ranked at a 13.9 after the weighted adjustment has been automatically calculated.

Since this score is higher than the neighbors "Mutt" the recommended choice to this complex decision is the Labradoodle as seen in the image snapshots below.

Figure 19.0: CPDM Abbreviated Scoring Views

	Decision Choice
#1	Labradoodle
#2	Beagle
#3	Chihuahua
#4	Australian Sheppard
#5	German Sheppard
#6	Neighbors "Mutt"
#7	(TBD)

Total	Weighted Adjustment
19	**13.9**
14	**9.2**
12	**7.6**
15	**11.1**
14	**9.3**
19	**13**

Conclusion

As we described in the beginning of this publication, the ability to make decisions can be a big challenge. Sometimes, the actual impact of a decision may not be seen for quite some time. The consequences of a poor or bad decision may never be traced to one, specific decision or person. They may be due to an accumulation of bad decisions over a period of time by many people. Simple decisions can be easily made with a binary decision process of evaluating things on a "This" or "That" process perspective.

The majority of the professional decisions, that require us to ponder and think about a decision, are either Difficult or Complex Problems. These require a new methodology for decision making. We need to think about embracing decision making processes, analytical mapping with decision trees and logic models that can assist decision makers into categorizing the information into rules and rule-based structures. When things move into an environment of complexity, you need assistance. Understanding how to blend intuition with logic, complexity and ambiguity into a connected and interconnected logic structure and establishing a decision model and process sequence is essential.

Many of the previous problems with critical decisions has been traced to either a biased interpretation of data and information or an underestimation of the small impacts from making multiple small wrong decisions. The tsunami of data that is presented to leaders every day, every hour and potentially every minute is overwhelming. Successful decision making is more than a skill, it is an art. It requires the ability to understand that every decision you make generates a very different series of events or impacts. The rational decision maker reviews the best value or bang for their buck. The intuitive decision maker evaluates decisions based on perceptions and gut feel balanced by their biases. The requirements is a balanced version integrating both of these.

Pracademic Leaders are oversaturated with information, but unfortunately, it is not the information required to make complex decisions. There is no specific criteria in decision making applicable for every situation but a blending of analysis, critical thinking, intuition and emotion will allow you to make smarter decisions. By using a CDPM Decision Model and the CDPM spreadsheet template, you can make complex decisions by breaking steps into interconnected actions that leads to decision making success.

References

Nanus, Burt, *Hard Decisions made easy*. Rethink Press, Great Britain, 2021.

Borkan, Brad, Hirzel, David, *When Your Life Depends On It*, Terra Nova Press, Pacifica, CA, 2017.

Grunig, Rudolph, Kuhn, Richard, *Successful Decision-making, A Systemic Approach to Complex Problems*, Springer Berlin Heidelberg, NY, 2005.

Chery, Kendra. (2022), *What Leads to Bad Decision Making*, https://www.verywellmind.com/why-you-make-bad-decisions-2795489

Krockow, Eva, (2018), *How Many Decisions Do We Make Each Day?*, https://www.psychologytoday.com/us/blog/stretching-theory/201809/how-many-decisions-do-we-make-each-day

Laura Cruz-Reyes , César Medina-Trejo , Fernando Lopez-Irarragorri , Gilberto Rivera , Claudia G. Gómez S. , Mercedes Pérez-Villafuerte, *Reduction of Decision Rules for Project Explanation on Public Project Portfolio* (2015)

About the Author

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Dr. Dale S. Deardorff worked for Boeing Integrated Defense Systems and Space Propulsion Development divisions as a Project and Program manager for over 20 years. He worked for the Lockheed Burbank "Skunk" works and Aircraft division for almost 10 years and a high technology Valencia California start up for a couple of years. This 30 plus years' experience is a "Pracademic" blending of commercial, military, government, NASA and high technology organizations. Dale has taught Project Management "on-line" for multiple universities as an adjunct instructor since 2003 and continues to contribute to project management methodologies and philosophies as a current thought leader.

He created the Rocky Peak Leadership Center in 2010 and has helped modern organizations as an enterprise and executive consultant in the areas of thinking methodologies, Innovation and leadership training and facilitation. Dr. Deardorff volunteers with youth leadership programs and supports local youth training in the areas of personal mastery and effective collaboration techniques.

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