

Chapter Eight - Individual Frameworks

The Power of the 2 x 2 Matrix: Using 2 x 2 Thinking to Solve Business Problems and Make Better Decisions

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DECISION-MAKING FRAMEWORKS

What is the best course of action?

We live in an era of overload and ambiguity. Information, alternatives, and advice bombard us daily. Ultimately, we must make decisions, often without completely understanding the terrain or being as prepared and clear as we would like to be. Decision-making frameworks help us to prioritize and on occasion reframe to gain a clearer perspective.

The frameworks in this section are highly scalable, as helpful at the personal level as they are for tackling organizational and national challenges.

Prisoner's Dilemma

Merrill Flood and Melvin Drescher

This remarkable result—that individually rational action results in both persons being made worse off in terms of their own self-interested purposes—is what has made the wide impact in modern social science. For there are many inter- actions in the modern world that seem very much like that, from arms races through road congestion and pollution to the depletion of fisheries and the over- exploitation of some subsurface water resources.

—Roger A. McCain^[18]

Flood and Drescher created the Prisoner's Dilemma in 1950 as part of the Rand Corporation's investigation of the risks associated with nuclear arms development. Based on game theory, the Prisoner's Dilemma was popularized by Albert Tucker, who formalized the basic concepts and taught them to Stanford psychology students. A powerful modeling tool that scales from couples to business partnering to global conflict resolution, the framework cuts to the heart of risk situations where predictability and transparency are limited, and trust and self-interest are the key determinants (Figure 8.15).

Self	Cooperate	Reward-Reward	Sucker-Temptation
	Defect	Sucker-Temptation	Penalty-Penalty
		Cooperate	Defect
		Other	

Figure 8.15: Prisoner's Dilemma Matrix

An example of this is the application of Prisoner's Dilemma logic to explain the competitive dynamics of NASCAR racing car drivers. To win, drivers are forced to alternately compete and collaborate with the other contestants. Positioning for "drag" is the main motivator, placing each driver in the position of giving and receiving help at different points in a race. Self-interest becomes complex, as drivers need the others to trust them in spite of the fact that they all want to win.

Since its introduction, over a thousand articles have been written on the Prisoner's Dilemma, as well as hundreds of doctoral dissertations.

The Two Dimensions and Their Extremes. Each axis represents the two prime options available to two parties to an interdependent risk situation. They can choose to Cooperate and hope for a win-win, or they can Defect by exclusively pursuing their self-interests. The classic situation is two guilty prisoners being asked to "rat" on their partner in exchange for personal freedom. The catch is that they are told the other prisoner is being offered the identical deal, and they must make their choice without consulting the other. Each combination of choices creates a unique set of outcomes for the two parties, ranging from win-win if both cooperate, to win-lose if one cooperates and the other defects. Assumptions about the other's position intermingle with personal values and goals to determine each side's decision. Students of the Prisoner's Dilemma point out the consistent irrationality of players, opting to defect in spite of the clear advantage of a mutually cooperative set of choices. The two dimensions are:

Self. One can Cooperate, hoping the Other will do likewise, or one can pursue self-interest and Defect.

Other. As above, the Other can Cooperate or Defect.

The Four Quadrants. Outcomes are composed of combinations of the following states:

R-reward: The reward payoff each party gains if both choose to cooperate (win-win).

T-temptation: The high personal gain one receives by defecting while the other cooperates (win-lose).

S-sucker: The loss one party suffers by cooperating when the other defects (lose-win).

P-punishment: The punishment each receives if both parties choose to defect (lose-lose).

The quadrants describe the four possible outcomes of choices made by the participating parties:

- **Upper left: Reward-Reward.** The greatest overall gain is achieved when both players cooperate. In the case of two criminals, this might result in a lighter sentence or possibly no sentence at all. If there is a stash of stolen money, each gets his or her half of that.
- **Lower left/Upper right: Sucker-Temptation.** Outcomes 2 and 3 are mirror images, where one player decides to cooperate while the other defects. This results in the worst possible outcome for one and the best for the

other. In the case of the two criminals, one is set free and keeps all the money, while the other is sentenced to the maximum amount of prison time. An additional unfortunate consequence is that the loser is unlikely to cooperate if given the chance at some point in the future.

- Lower right: Penalty-Penalty. The worst possible outcome results when both parties defect. In the case of the two criminals, both go to jail, although for a slightly shorter time than if only one had defected.

Example: Pricing War. Price wars tend to be messy, painful exercises for the combatants, with both or all parties losing. In Prisoner's Dilemma terms, they represent the lower right quadrant, where both parties defect or act in their own best interest. The computer industry provides a colorful example of this as the industry itself enters a phase of maturity, and key players reposition and compete for continued relevance. Although the personal computer market continues to be sizable, two things have changed: it is no longer growing at a fast pace, and all the major manufacturers are capable of satisfying customer expectations. In other words, it has become a commodity market.

In this context, Dell Computer has emerged with the winning commodity strategy. With its direct sales channel, on-line configuration capability, and low-cost virtual value chain, it consistently wins the pricing battle. Key competitors like IBM, Gateway, HP, and Compaq have had to respond to the Dell fact. How do they win in this situation?

In February 2001, Dell announced it was embarking on a campaign to increase its share of the market by intentionally undercutting the price of its competitors. All had to respond. With less overhead, an efficient and reliable value chain, and scale economies due to high sales volume, Dell has proved formidable.

Michael Bean, president of Forio Business Solutions, models the HP/Compaq versus Dell situation as the Prisoner's Dilemma on his company's Web site (Figure 8.16). A game simulation is available where visitors can play out the logical dynamics of the competition to discover the outcome for each of the competitors.^[19]

Context. The Prisoner's Dilemma is used primarily as a scenario-building and risk-assessment tool to guide decision making. Parties engaged in a conflict can model their situation and glimpse the consequences of various strategies. Real-world applications of the Prisoner's Dilemma tend to involve iterative opportunities to cooperate or defect, each with associated gains and losses. This may result in the development of learning and trust, increasing the possibility of a cooperative outcome. The Kyoto Agreement on Global Warming comes to mind as an instance of such a multiround process, replete with the complexity and inability to predict the follow-through of other parties that makes modeling a necessary aid.

Method. Follow these steps to model a multiparty decision-making or conflict process to gain useful insights:

- Step 1: Identify the parties and the issue. Identify the two (or more) parties and define the issue. What is at risk, and what can be gained?

HP's / Compaq's Actions	No Price Change	Dell: no change in profit or market share HP/Compaq: no change in profit or market share	Dell: gain market share and profitability HP/Compaq: lose market share, lose profitability
	Cut Prices	Dell: lose market share and profitability HP/Compaq: gain market share, gain profitability	Dell: no change in market share, lose profitability HP/Compaq: no change in market share, unprofitable
		No Price Change	Cut Prices
Dell's Actions			

Figure 8.16: Payoff Matrix for PC Makers

- Step 2: Create the Prisoner's Dilemma matrix. Construct the Prisoner's Dilemma matrix, defining the positive and negative decision options for each of the parties. For example, in the case of the criminals, the decision is to confess or not confess. If we were applying the model to couples in a relationship, we might consider sacrifice versus cheat as the two options, representing the cooperate and defect choices. If the situation is a pricing war, we might look at lowering price or not.
- Step 3: Complete the matrix. Complete the Prisoner's Dilemma matrix, naming the outcome for each of the four combinations. These represent four different future scenarios. Scenarios can be developed independently by a third party or by each participant, or they can be co-created by the parties involved in the conflict.
- Step 4: Examine the implications. Consider the implications of the scenarios. This is a chance to step back from an intense situation and be more reflective about risk, self-interest, and options. As in step 3, this work can be completed in various groupings and forms, with the highest impact likely to result from dialogue between participating parties. Unfortunately, full openness and sharing is not always possible, especially in competitive market contexts where questions of collusion exist.

Tips on Prisoner's Dilemma. The Prisoner's Dilemma is not a zero-sum game: both parties can win or lose to some degree. Look to the advantages inherent in your own competitiveness, in the situation, or the needs of the other party or the customer.

The dilemma is broken when trust is increased and transparency into the other's motivations and actions is achieved. We don't have to proceed to lose-lose when we are able to define a mutually advantageous goal and trust each other to work toward it.

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Urgency and Importance Stephen Covey

Organize and execute around priorities.

—Stephen Covey^[20]

For many of us, life is filled with tasks that are Urgent, leaving little time for more fundamental and long-term activities necessary for personal and professional development. Early versions of time management systems focused on efficiency and saving time, often at the expense of rich experiences, personal development, relationships, and spontaneity. Stephen Covey found that highly effective individuals take greater control of their lives and how they spend their time. Integrity and character grow when we act in accordance with intention rather than emotion or desire. This deceptively simple matrix (Figure 8.17) provides a clarifying mirror into how we are managing our life and where balance and investment into values clarification and goal setting are needed.

The Two Dimensions and Their Extremes. The Time Management matrix explores two key dimensions: Importance and Urgency:

Importance. Things that are important are reflective of one's values and contribute to achieving higher-priority goals and personal mission. Importance is about results that matter.

Urgency. Urgent things require immediate attention. They tend to be visible, popular with others, and to act on us.

The Four Quadrants. The Time Management matrix defines four sets of relationships between the variables Importance and Urgency. Finding time for High Importance–Low Urgency items is key to taking charge of one's life:

- Upper left: High Importance, High Urgency. These items are significant, and results are necessary. We all have some of these, but for many, this becomes the norm. The more you focus on this, the bigger it gets, and like the pounding surf, it knocks you down and wears you out.

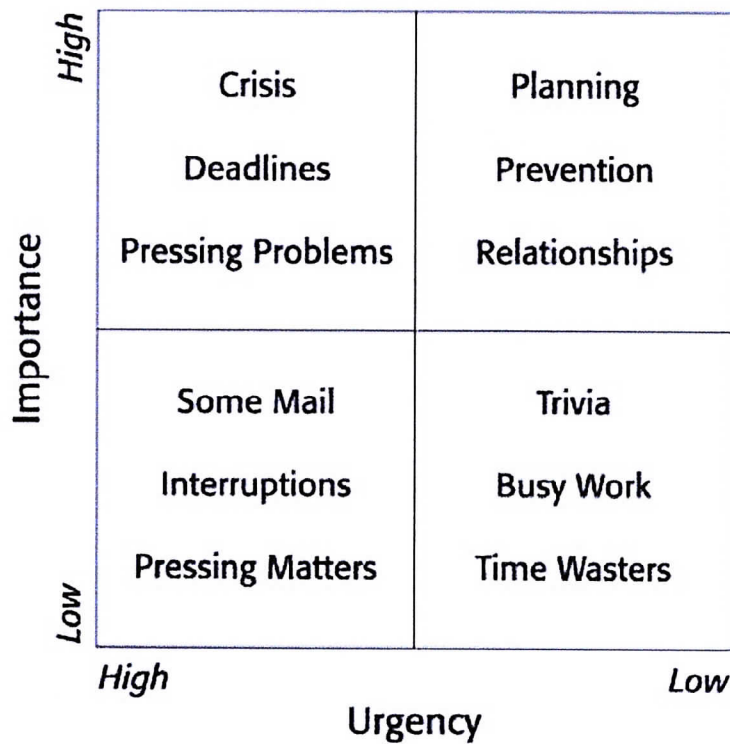


Figure 8.17: Time Management Matrix

- Lower left: Low Importance, High Urgency. Activities sometimes feel as if they are important, but the priorities tend to be those of other people, not our own. Driven by Urgency, this is a highly reactive and ultimately frustrating mode of existence.
- Lower right: Low Importance, Low Urgency. We all need to spend some time relaxing. This is the positive view of quadrant 4. However, even time off can be aligned with our values and interests, making it more important and ultimately satisfying. Too much time spent here is wasteful and destructive.
- Upper right: High Importance, Low Urgency. We take control of our lives by clarifying values and goals and working toward outcomes we truly care about. These kinds of activities tend to be Important but not Urgent, and we need to set time aside for them or they won't happen. Saying yes to a quadrant 2 commitment means saying no to others in quadrants 3 and 4.

Method. Personal effectiveness requires integrating long-term and short-term priorities and plans. Here are two approaches:

Upgrading Your Current Agenda

- Step 1: Define. Make a list of how you use the majority of your time, and place each activity on the matrix.
- Step 2: Plan. Reflect on the balance. What can you stop doing to create time for some more important activities?

Becoming Principle Driven

- Step 1: Define. Identify the key roles you play in your life, such as spouse, friend, and manager.
- Step 2: Plan. Develop plans for each based on results you hope to accomplish; schedule, monitor, and adapt in line with core values.

References

Covey, S. *Seven Habits of Highly Effective People*. New York: Simon & Schuster, 1990.

Covey, S. *Principle-Centered Leadership*. New York: Simon & Schuster, 1992.

Influence and Concern

Stephen Covey

Lord, give me the courage to change the things which can and ought to be changed, the serenity to accept the things which cannot be changed, and the wisdom to know the difference.

—Alcoholics Anonymous prayer

We can choose to be proactive and take responsibility for our actions and feelings, or we can be reactive victims of circumstances and our own anxieties. We gain energy each time we get involved in improving things that matter, just as we lose energy by worrying about things outside our control. When we focus on areas that truly matter and where we can make a difference, we expand what Stephen Covey calls our circle of influence. "Proactive people focus their efforts in the Circle of Influence. They work on the things they can do something about. The nature of their energy is positive, enlarging and magnifying, causing their Circle of Influence to increase." This work typically begins with changing our own thoughts and actions, reclaiming time and energy tied up in anxiety about things we cannot change, which create feelings of powerlessness.^[21]

The Two Dimensions and Their Extremes. The matrix explores two key dimensions: Influence and Concern:

Influence. This is the degree to which we are able to affect outcomes.

Concern. This is the degree to which we care about situations.

The Four Quadrants. Personal effectiveness and satisfaction increase when we work on tasks that are meaningful and where we can make a difference. The Influence and Concern matrix helps one to become clear about the things that matter and to be proactive in areas where one can reasonably influence outcomes:

- Upper left: Reactive Focus. When we focus here, we allow our anxieties to control and diminish us. We feel powerless and waste energy on resentment and regret. Some problems need to be accepted more gracefully; others need to be reframed and converted to actions available in the Circle of Influence.

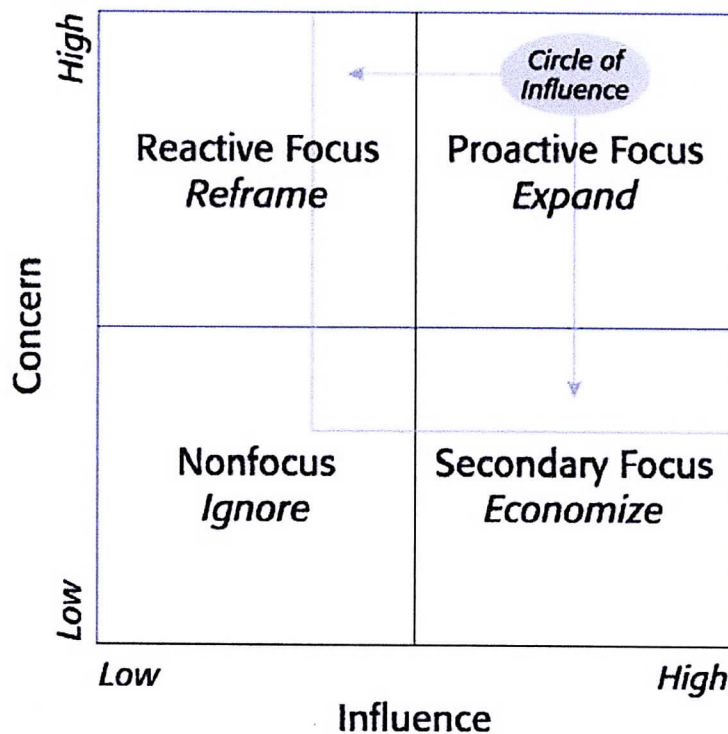


Figure 8.18: Influence and Concern Matrix

- Lower left: Nonfocus. These are other people's problems or challenges and are best left to them to address.
- Lower right: Secondary Focus. On occasion, our knowledge, professional position, or relationships give us more influence than we care to use. If we are not careful, these demands can consume a disproportionate amount of our time. Economize to be helpful while limiting involvement.
- Upper right: Proactive Focus. Highly effective people and organizations spend their time working on things they value that they can do something about. The goal is to expand this zone by taking responsibility for our actions and reactions. We positively alter our circumstances by how we choose to view them.

Method. We expand our Circle of Influence by taking responsibility for our actions and reactions:

- Step 1: Identify concerns. Make a list of the major sources of your concern.
- Step 2: Assess the ability to influence. For each item, ask if this is something clearly beyond your ability to influence. If it is, set it aside, and focus on steps 3 and 4.
- Step 3: Address concerns you can influence. Take each concern you can affect, and build a vision of an ideal situation.
- Step 4: Construct action plans. Develop a set of actions you can take to realize this vision.

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Covey, S. *Seven Habits of Highly Effective People*. New York: Simon & Schuster, 1990.

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[18]R. A. McCain, *Game Theory: A Non-Technical Introduction to the Analysis of Strategy* (Cincinnati, Ohio: South-Western, 2003), pp. 9–11.

[19]Forio Business Simulations, "The Price Strategy Simulator: Anatomy of a Price War, Hewlett-Packard/Compaq vs. Dell," 2001. [<http://www.forio.com/pricing20010912.htm>].

[20]S. B. Covey, *The Seven Habits of Highly Effective People: Powerful Lessons in Personal Change* (New York: Simon & Schuster, 1989), p. 83.

[21]Covey presents these ideas as the Circles of Influence and Concern in *The Seven Habits of Highly Effective People*. This 2 x 2 interpretation has been created with the permission and support of the author.

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