

THE MAKING OF DECISION MAKING

A ELABORAÇÃO DA TOMADA DE DECISÃO

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ABSTRACT

Quantum Electronics was a Brazilian startup in the 1990's that was acquired by an American equity fund in 2012. They are currently the largest manufacturer of vehicle tracking and infotainment systems. The company was founded by three college friends, who are currently executives at the company: Camilo Santos, Pedro Barbosa and Luana Correa. Edward Hutter was sent by the equity fund to take over the company's finances, but is having trouble making organizational decisions with his colleagues. As a consultant, I was called to help them improve their decision making process and project prioritization. I adapted and deployed our firm's methodology, but, in the end, its adequacy is shown to be very much in question. The author of this case study intends to explore how actual organizational decisions rely on different decision models and their assumptions, as well as demonstrate that a decision model is neither absolutely good nor bad as its quality is context dependent.

**Keywords:** organizational decision making; decision-making models; bounded rationality.

RESUMO

Quantum Eletronics era uma startup brasileira na década de 1990 que foi adquirida por um fundo de participações em 2012. Atualmente, a empresa é a maior fabricante de rastreadores de veículos e sistemas de entretenimento. A empresa foi fundada por três amigos de faculdade e que atualmente são os executivos da empresa: Sr. Camilo Santos, Sr. Pedro Barbosa e Sra. Luana Correa. Sr. Edward Hutter foi enviado pelo fundo de participações para administrar as finanças da companhia, mas ele está tendo dificuldade de tomar decisões organizacionais com seus colegas. Como consultor, eu fui chamado para ajudá-los a serem melhores na tomada de decisão e priorização dos projetos. Eu adaptei e implantei a metodologia de nossa firma, mas sua adequação é bastante questionável no final. Por meio deste caso de ensino, o autor quer explorar como decisões organizacionais reais contam com diferentes modelos de decisão e seus pressupostos. O autor também quer demonstrar que um modelo de decisão não é absolutamente bom ou ruim uma vez que sua qualidade depende do contexto.

**Palavras-chave:** tomada de decisão organizacional; modelos de tomada de decisão; racionalidade limitada.

## THE ASSIGNMENT

Toward the end of my second year at a consulting firm, I had already been assigned to a dozen projects in different industries. Regardless of the varying levels of stress and workload due to demanding clients or uncooperative client staff, my team and I always managed to generate positive outcomes and get great feedback. It was in July 2014, in Brazil. As usual, it was a busy week interviewing client staff during the day and discussing the findings with the team during the evening. It was 9pm and the team and I were about to call it a day when my laptop alerted me that I had a new e-mail. Before I could check it, my cell phone rang. It was Mr. Smith, our company's country director. I thought it very unusual, since he could have just called my manager if he wanted an update on our project. Mr. Smith told me he needed some help to write a proposal, so I grabbed a pen and paper to take some notes, but he was brief: he asked me to drive to Quantum Electronics in the morning and talk to Edward Hutter, the company's CFO (Chief Financial Officer), who was having difficulties getting the other Chief Officers to make decisions and define next year's budget.

I looked up the company on the internet. Quantum Electronics was a startup from the 1990's that supplies electronic alarms for the automotive industry. The company was acquired by an American equity fund at the end of 2012. They are currently the largest manufacturer of vehicle tracking and infotainment systems. The company was founded by three college friends: Camilo Santos, Pedro Barbosa and Luana Correa.

The next morning, I drove to the company's central office, a five-story building annexed to their main manufacturing facility. Edward Hutter was waiting for me in a meeting room.

## THE BRIEFING

As explained by Mr. Hutter, the founders held the following positions in the company: Mr. Santos: President/CEO (Chief Executive Officer) and head of management; Mr. Barbosa: Operations Director/coo (Chief Operating Officer) responsible for day to day operations at two manufacturing facilities and distribution. Mrs. Correa: Commercial and Marketing Director. Victor Barros joined the company at the end of the 1990's as a Development Engineer and, several promotion later, became the Engineering Director.

Mr. Hutter came from the us to work for Quantum Electronics after it was acquired by an American private equity fund. It was not the first time he had been assigned to take over the finances of an acquisition. According to Mr. Hutter, he was a long standing and trusted executive of the fund managers. Part of his job was to submit a yearly budget plan, from August of the current year, to the Shareholders' Committee. This budget plan included revenue forecasts, production costs and the overhead cost. The overhead cost was broken down into many items, one of which was Internal Projects.

Internal projects are initiatives undertaken by the middle managers, who reported directly to the directors. In general, these projects aim to implement improvements in specific areas for each director, although they encompass a wide range of subjects: from strategic initiatives (e.g. the development of a new product/service or the expansion of a manufacturing facility) to operational items (e.g. improving the ergonomics of the production line workbench, acquiring new software systems, IT infrastructure, etc.).

The budget for internal projects was the issue for Mr. Hutter. Since the total sum of this budget had always been greater than the financial resources available, the directors had to decide which ones would be implemented the following year. The issue had always been how to decide which projects should be prioritized. According to Mr. Hutter, the Shareholders' Committee demanded that this decision be consensual, which means that the majority of the directors had to agree on which projects should be prioritized. This gave the Shareholders' Committee a guarantee that the needs from all the different areas of the company would be taken into account.

In mid-2013, the Shareholders' Committee requested a budget plan for the coming year. Budget planning wasn't novel to the Brazilian executives and they were used to plans that spanned the next two or three months. But, this time, the new budget plan template was much more detailed and comprised a significantly longer period.

The effort took longer than expected and they ran out of time before they could prioritize the internal projects. So, the executives decided to budget a pool of US\$ 5 million and agreed to meet and decide, together, whether or not funding would be approved on a project-by-project basis.

Over the course of the year, managers would come up with projects, and fill out a project charter (document) to submit to the board of directors. The board, attended by the president and directors, would regularly meet every fortnight to deliberate on whether a project would be approved or denied. A voting system was used to decide. Each project would be analyzed and they (Mr. Santos, Mr. Barbosa, Mrs. Correa, and Mr. Hutter) could each vote for or against, with final approval depending on a majority vote.

According to Mr. Hutter, this system worked fine for two months, while the pool was big enough to fund most of the submitted projects, and the interests seemed to be balanced.

As the budget pool shrank, the board members realized that if they continued to approve each other's projects, they would not have the funds to implement projects from their own teams. As the members started to vote against projects from the other teams, the board meetings became unpleasant and stressful. In the measure that they denied each other's projects, the directors would argue and demand explanations on why a project that would clearly benefit the company should not be approved. Of course, no one confessed that they wanted the funds for their own projects, so their arguments were usually shallow, leading to further debates and even more stress. Eventually, one or two directors would give in and approve a project. But, as Mr. Hutter said, it seemed that the board meetings had become a stage for a series of diplomatic decisions instead of rational ones.

The middle managers had mixed opinions about the board's decisions. Some of them applauded the ability to request funds for a project as the need

emerged. Others said that the board lacked transparency, since the decision making process was unclear to them, and thus unfair.

By the end of the year, despite the fact that the projects delivered the expected outcomes, Mr. Hutter knew that the voting system was not working and that a new, more structured process was needed.

Mr. Hutter asked my opinion and I told him it was clear that such an unstructured prioritization process was a problem. He agreed and asked if I could work out a suggestion on how to implement a more structured approach within a week. As I thanked him for his time, he conducted me to the exit and said: "I hope you convince my Brazilian colleagues next week. Good bye!"

Those last words from Mr. Hutter intrigued me and, as I drove back to my current client's office, I kept wondering why I would need luck. But, since I had other commitments, I just focused on the day's schedule and decided to call Mr. Smith in the evening.

## THE PREPARATION

I called Mr. Smith in the evening and appraised him on what I had discussed with Mr. Hutter. As I briefed Mr. Smith, I made sure that he understood their unstructured approach was the cause of their problem and emphasized the consequences using Mr. Hutter's own words. "Well..." - said Mr. Smith - "if that is the problem, we have a solution in our toolbox. I will send you the documentation for 'Project Prioritization'. Take a look at it, suggest some improvements and prepare a presentation to explain our approach. Let's talk about it the day after tomorrow, over lunch. See you! ... Oh, before I forget, Good job!"

That compliment upped my motivation and I spent the rest of the evening reading about the project prioritization methodology.

## THE APPROACH

The methodology approach was really straightforward:

1. C-level executives would outline the key goals of the company for the coming year.
2. From those goals, a number of criteria would be defined.
3. The managers had to list and specify their projects, filling out a descriptive form for each project, before sending them to the board.
4. Projects would be evaluated and ranked according to the criteria.
5. The top ranked projects would be the prioritized ones.

Since I knew that defining the key goals and criteria (steps 1 and 2) were key aspects of the process, I suggested a 4-day, off-site retreat for the board members to take a break from their routines, get up to date on industry information and trends and consider the company's future through a series of workshops.

For the 3<sup>rd</sup> step, I decided to organize a one-day workshop with the managers. The workshop would start with the president and directors presenting the key goals for the company as their vision of the future.

Step 4 would be done solely by the team of consultants, using the criteria to prioritize the projects.

The final step would be a presentation of the ranked projects. The quantity of approved projects would be defined according to the budget, starting from the highest ranked projects and working down until the budget runs out.

So, I prepared a presentation and discussed it with Mr. Smith over lunch, as previously agreed. Again, Mr. Smith congratulated me for sticking to the methodology and suggesting interesting ways of implementing it. At the same time I was glad that he approved my approach, I felt a bit uncomfortable as, should our clients dislike the approach, my ideas would be the only ones to blame. I confess that made me somewhat anxious about presenting it to our clients.

## THE PRESENTATION

The following week, I drove to Quantum Electronics. This time, Mr. Smith was coming and we would be meeting with all of the board's members: Mr. Santos (CEO), Mr. Hutter (CFO), Mr. Barbosa (Operations Director/COO), Mrs. Correa (Commercial and Marketing Director) and Mr. Barros (Engineering Director). The goal of the meeting was to present our approach and get their approval.

On entering the board room, we were met by Mr. Santos, Mr. Hutter and Mrs. Correa. But, Mr. Barbosa and Mr. Barros were not in the room. I was a bit nervous and thankful that Mr. Smith had come along. He started with some small talk (soccer, I believe) to break the ice as we waited for Mr. Barbosa and Mr. Barros. Mr. Smith was a very experienced professional and the room felt quite relaxed after a few minutes, with them joking about each other's teams.

Suddenly, Mr. Barbosa hurried in looking upset and said: "Ok, we can start. What is the topic?"

Mr. Hutter said, with an unusually tense voice: "You know. The project selection process. The consulting firm is here to...." Before he could finish his sentence, Mr. Barbosa checked his cell phone and interrupted: "Ok, go on..."

I was about to ask if we should wait for Mr. Barros, but Mr. Smith nudged my arm and whispered: "Just start...."

Despite the tension Mr. Barbosa had injected, I was able to present our approach within 10 minutes. Surprisingly, no one asked anything during the presentation. At the end, Mr. Barbosa looked at Mr. Santos and Mrs. Correa, leaning towards them and asking "So, is that what you want to do?" Mr. Santos said, in an ironic tone: "It can't get more structured than this, can it?" and looked to Mrs. Correa, who looked down, smiling and said "Nope..." Mr. Barbosa then leaned back while looking at Mr. Hutter and said "Ok, you can go on." before turning to me and asking: "Anything else to discuss?", while picking up his notebook and placing his cell phone in his pocket, making to leave the meeting.

I wasn't expecting the question, and, in fact, I was still trying to understand what had just happened. I was thinking that they might be making fun of

our approach, or perhaps I had made a mistake. Before I could even try to answer, Mr. Smith intervened and said “Yes, of course. There is a very important definition pending.”

Everyone looked at him in surprise. Mr. Smith smiled and said: “The 4-day, off-site retreat, should it be near the beach, or in the countryside?” Everyone laughed. Mr. Smith had managed to break the ice again. To my surprise, Mr. Barbosa didn’t leave and all of them, including Mr. Smith, talked about the wonderful resorts they had been to for almost half an hour. I sat there quietly, just staring and wondering what had just happened. All I remember is that, at the end, Mr. Santos kindly asked Mr. Hutter to pick a location since he was the foreigner there and, despite having been in Brazil for over a year, he hadn’t had many opportunities to visit places.

Later that day, Mr. Smith called and told me that Mr. Hutter called, saying that the 4-day off-site retreat was “a smart move”. Still later, I wondered if all that tension had been just in my mind. After all, we managed to get our approach approved and the client was satisfied.

## THE IMPLEMENTATION: THE RETREAT

For the retreat, the board members and our consulting team traveled to a resort in Florianópolis. The morning of the first day had nothing specific scheduled as the directors and president would still be in transit. In the afternoon, all the board members gathered with our team of consultants and Mr. Smith presented the plan for the retreat. Everyone looked relaxed and agreed to the plan, except for Mr. Barros, who didn't understand why they had to be isolated to "discuss the budget", as he grumbled during check in. We should definitely have waited for Mr. Barros for the presentation.

The retreat was basically a series of workshops to gradually build up the key goals for the company. Once the goals were set, they would define the project prioritization criteria. Mr. Smith conducted the workshops and the other consultants and I took notes. Every evening, as the board members would go out for dinner, our team gathered to wrap up the day and draft the final presentation. It was a lot of work, because each consultant had a lot of information.

On the first day, Mr. Smith presented a report prepared by our firm's specialists. It was on trends in the automotive industry and the competition. After that, the board members engaged in a brainstorming on the future of the company, what should change, be improved, etc. As they discussed, Mr. Smith drew up a list of possible objectives for the company, according to what was being discussed. To close the day, Mr. Smith and the board members reviewed the list of objectives. Some words were changed, certain items included, others deleted and the first version of the goals was ready. The next day would start from that version, in an incremental process.

During the wrap up of the day's discussions, one of our consultants commented "It looks like this company doesn't care about their finances...". I asked what he meant and he showed me a sketch of a presentation, explaining: "Mr. Smith asked me to classify the goals. As I was trying to group them, I noticed they have goals to expand production capacity, improve their product quality... they also want to expand the product portfolio and develop new products, get to new markets, expand to Latin America... and they want

to develop new features for existing products, see?”. He pointed to an item, “increasing revenues is the only thing related to the company’s finances.”

I was initially surprised, because as far as I could remember, Mr. Hutter had suggested several goals, e.g. “positive net cash flow” and “improve profitability”. I asked the other consultants to review their notes to see if they had got those, too. And they confirmed that he had, indeed, suggested those goals and many others. I wondered where they had all gone as I looked at the first version of the list.

We spent the next hour reviewing our notes and realized that most of the goals suggested by Mr. Hutter’ were either immediately brought down by the other members or expurgated later, during the discussions. As we came to that conclusion, I initially wanted to deny it, but I could not avoid myself from thinking that our methodology was flawed. I rushed to Mr. Smith and explained what was going on. “What do we do?” I asked. Mr. Smith thought for a second and just told me: “Relax. Prepare one slide presenting what you just noticed. I will start with it, tomorrow.”

The following morning, Mr. Smith started with the slide showing the lack of objectives that would benefit the company’s finances. I thought he would, as I would have, start pointing fingers at the directors, accusing them of forming a coalition and ruining the methodology. Instead, he simply said: “Do you see any problems?” and looked at the president and directors. Complete silence took over the room for a few seconds. Suddenly, Mr. Santos asked Mr. Smith “Do you see any problem?”

Calmly, Mr. Smith said “For some reason that is beyond my reasoning, the group is not giving the company’s finances its proper attention.”

“Well...”, Mr. Barros said, “this version of the list of objectives was consensual, everyone joined the discussion and could support or oppose. I don’t see a problem. Unless the methodology is not suitable, which I don’t think is the case”.

Mr. Smith replied: “This methodology is a best practice, validated by administrators all over the world. And the board did approve this approach....”

“But...”, interrupted Mr. Barros “if I had been present that day, I would not have agreed! This approach is too expensive, it takes too much time;

are decisions supposed to be expensive? Why are we isolated? No one can anticipate all the consequences of what we decide. I do not make decisions by myself. I usually consult my engineering team. Seriously, how effective could this process be?”

Mr. Hutter said: “Mr. Barros, I understand you, but I have to remember that the final result of this process is to define the internal projects budget. It is part of the budget plan. Remember that the budget plan will be submitted to the shareholders’ committee. We have to show them that the figures were carefully planned. Otherwise, they will refuse our budget plan and it will take even more time and resources to discuss it again.... you know what I mean. I have to show them that we have planned rationally.”

Mr. Barbosa said, caustically: “So, do you mean we are irrational? What are we now? Animals?”

“That is not what I said, Barbosa”, said Mr. Hutter. “Let’s stick to the facts. I mean, look at the chart. I will simply have to tell them that our budget was the result of anything but reason. How could I tell them that we have taken the budgeting process seriously if we have ignored the financial aspects of our business? I won’t...”

Before the discussion could go further, Mr. Santos said: “Mr. Smith. I want to improve the methodology given this context. So, let’s do this now.” while looking at the other members. “I suggest that each group of objectives have the same number of goals. That simple. Do you agree?” he asked, raising his eyebrows.

I thought to myself “Oh.... he can’t be doing this. He is changing the methodology without even thinking... this cannot possibly work.....” Yet, to my surprise, the directors nodded yes to Mr. Santos. They all seemed satisfied with his suggestion.

Once this rule was set, the discussion became more balanced and, again to my surprise, the definition of the key goals advanced.

That evening, I was in the lobby, waiting for our team to finish dinner so we could start our wrap up session, and Mr. Hutter left his room to get the shuttle service to go out and have dinner. Since he was early, he stopped by and told me he was glad that everything was fine: “Finally the Brazilian

side of the company understood the value of a structured process to define our project portfolio... you are doing a great job!” I couldn’t help thinking... “What does he mean? Our client had to fix our methodology!”, but I simply said “Thanks. Your feedback is very important.”

On the morning of the last day, Mr. Smith presented the final version of the goals and the criteria that had been defined. We went through the presentation carefully, making sure that the board members agreed with each goal as stated in the list. There were no further discussions.

By the end of that day, the goals had been clearly defined, and so had the criteria.

## THE IMPLEMENTATION: COMMUNICATION

The start of following week was the time to roll out the one-day workshop with the managers. As planned, the workshop started with the president and directors presenting the company's key goals as their vision of the future. Then, I presented the project prioritization process and the selection criteria: each project would be evaluated according to each criterion and points would be awarded. The more points a project gained, the higher its ranking.

As I finished presenting each criterion, the HR manager would complain about them. He argued that they favor tangible benefits (sales, profit, savings, rates, cost, time) at the expense of intangible benefits (quality, satisfaction, etc.). I explained that these criteria had been carefully designed and aligned with the company's strategy. The manager insisted: "So, our company does not intend to be a great place to work? Employee satisfaction and a work/life balance is not important?"

I understood the HR manager's point, but I simply didn't have an answer. Should I say that, if that was important to the company, then a criterion for employee satisfaction would have surfaced during the retreat? Or should I say that those aspects might have been overseen during the process? Wouldn't that jeopardize our methodology?

I decided to stick to our methodology and answered: "That is a great question! You will have to make the intangible benefits tangible. For example, when people are satisfied, the employee turnover is lower, isn't it? If you don't have to spend time hiring or training new employees, then that could be a saving! Or you might avoid strikes...."

The HR manager didn't seem convinced: "But the saving is minimal, our reputation is the most important benefit. I believe that this methodology is unfair with projects that generate intangible benefits."

Mr. Hutter intervened, saying: "The methodology is fair. The criteria have been defined and they are equally applicable to every project. I don't see how it could be unfair."

The HR Manager still appeared unconvinced, but bowed to Mr. Hutter's opinion.

## PROJECT RANKING

The following week, the managers started to submit their projects using the forms, which came in two parts: a project charter and a questionnaire. The questionnaire comprised 30 different questions about the project with multiple choice answers. The questions were based on the prioritization criteria and, thus, the answers would determine the project score for each criterion.

Over the course of that week, the number of projects added up to surprisingly large number: 300. That was, of course, too many projects, evidenced by the fact that the year before they had only implemented about 50 projects. I decided to talk to some managers to find out what happened. What they told me was that, since they had a clearer view of the goals, they had many ideas to implement. Furthermore, they also said they planned some projects as contingencies, since they were not sure if the problems they anticipated were actually going to happen. In the past, they would request approval for a project as the need arose. Now, they thought it prudent to request funding in advance.

The volume of information was overwhelming for my team, while the quality of the information provided varied greatly. We spent a lot of time making sure the forms had been filled out properly and asking managers for more information when they hadn't. Sometimes, we were told that they didn't have all the information requested on the form. After two weeks, our team of 5 consultants managed to rank 220 projects. 80 projects simply lacked sufficient information and were therefore left out of the analysis.

There were 55 top ranking projects that amounted to US\$ 6 million.

## PRESENTING THE PORTFOLIO

The next morning, we met the board (Mr. Santos, Mr. Barbosa, Mrs. Correa and Mr. Hutter) and presented the project ranking.

Looking over the final list of projects, Mr. Barbosa noticed that some projects he expected to be in the final list were missing. He insisted that a certain production line improvement had to be done, even if it was not ranked in the top.

Mr. Santos also said that a specific HR project to develop leadership among employees was not among the top ranked projects. He insisted that this project was important because it was part of a long term program to change the company culture and leaving out this project would bring the process to a halt.

Mr. Hutter said that, as long as they keep the overall budget to under US\$ 6 million, it would be fine to remove other projects and prioritize the HR and the production line projects.

I confess this concession didn't please me at all. After all, our mission was to implement a structured approach. I suggested, "If you really believe that those projects are necessary, you should take projects number 54 and 55 out of the portfolio... they are ranked lowest....." As I pointed out those projects on the screen, Mrs. Correa interrupted, saying: "Take out projects number 15 and 30. I don't think they have to be done this year."

The others looked at their handouts to see what projects #15 and #30 were about. Mr. Santos said "Yeah, I agree...", while Mr. Barbosa and Mr. Hutter nodded agreement.

Mr. Santos looked at me and said: "Ok, it is decided then. Please, update the final list of prioritized projects. We have an agreement!"

## TEACHING NOTES

**RECOMMENDED USE**

This teaching case was conceived for studying organizational theory and decision making in undergraduate and graduate business administration programs.

**LEARNING OBJECTIVES**

This case relates to organizational decision making. It is expected that the students:

- a) Articulate different decision making models, with their respective pros and cons (the rational model, Carnegie model, incrementalist model, unstructured model, and the garbage can model)
- b) Define how to transform non-programmed decisions (novel and unstructured) to programmed decisions (routine) and how to improve the decision making process.
- c) Understand the importance of continuous evaluation: “How is the organization making decisions?” “How are the stakeholders’ interests being taken into account?” “How effective are our decisions?”
- d) Analyze the factors that influence decision making, such as dominant coalitions avoiding feasible, rational decisions;
- e) Reassess the decision making process as results are obtained.
- f) Analyze changes in the organization or environment.

**KEY QUESTIONS**

- a) When the internal projects budget was a pool of US\$ 5 Million, which decision model was deployed to refuse or approve a project? What are the pros and cons of such decision models?
- b) What decision model is proposed by the consulting firm? What are the key assumptions and weaknesses of this model?
- c) Does Mr. Barros have a point when he disagrees with the approach? Which arguments could he use to undermine the consulting firm’s approach?
- d) Which decision model was used by Mr. Santos when he improved the methodology?

- e) During the presentation of the portfolio, some changes were solicited and decisions had to be made. Which decision model was deployed?
- f) How do you evaluate the overall adequacy of the methodology? Was it assertive? Was it efficient?

### ***RELEVANT THEORY: DECISION MAKING***

Decision making is the “process of responding to a problem by searching for and selecting a solution or course of action that will create value for organizational stakeholders” (Jones, 2010). It is present at all levels of the organization and defines how the organization approaches problems and generates value.

Within the organizational context, decisions can be programmed or non-programmed. Programmed decisions are part of the organization’s routine, considered more efficient and commonly formalized as standard operational procedures.

Non-programmed decisions are usually related to exceptions, unique problems, and environmental uncertainties. They allow the company to adapt to the changing environment.

There are different models of decision making. Each one has its own assumptions and thus limitations. There is no silver bullet and they are not mutually exclusive. A decision model’s suitability depends on its context.

### ***DECISION MAKING MODELS***

According to Jones (2010), in the past, the omniscience of managers was presumed and the rational process model of decision making was sufficient. However, today, decision making is seen as an inherently uncertain process whose outcomes may or may not favor the stakeholders.

### ***THE RATIONAL MODEL***

The rational model is a process wherein managers [1] identify the issue; [2] create solutions and courses of action; and [3] compare alternatives and define a best solution.

The problem of this model is that the existence of a best solution is impossible when there is uncertainty regarding the effects of the solution on

the maximization of the stakeholders' interests. This means that the model does not take into account ambiguity, uncertainty and chaos.

For example, it is expected that the decision to close a production line at Company X will be interpreted differently by the union, the market and the investors – this is ambiguity. In the long run, what is the impact of leaving a greater market share to a competitor, say Company Y? In other words, there is uncertainty regarding the real consequences.

By giving Company Y a greater market share, it could obtain a specific competitive advantage. What if this advantage combined with other capabilities creates such a synergy that allows Company Y to enter and beat Company X's leading products. This is an example of chaos, where small changes lead to catastrophic consequences.

So, the rational model is criticized because it does not take into account (1) the limitation of obtaining information; (2) the cognitive limitations of managers to process them; (3) the various preferences and values of managers. Such factors would lead to a failure of managers to agree on a decision.

### ***THE CARNEGIE MODEL***

The Carnegie model is an alternative to the rational model that introduced different assumptions: satisficing, bounded rationality and organizational coalitions.

Satisficing assumes that managers will guide the information search according to a set of criteria for the problem. So, the solution is the one that best suits the defined criteria.

Bounded rationality: this assumption introduces the limited capacity of managers to process the information of the alternatives. This capacity could be improved by determining the analytical skills and the use of technologies. But, decision making is subjective and its quality depends on “previous experience, knowledge, beliefs and intuition.” (Jones, 2010).

Organizational coalitions: if the rational model expects a consensus of managers as the best overall decision (not according to previously agreed criteria), the Carnegie model states that decisions will be the result of

agreements, negotiations and the accommodation of different functions and areas, a coalition of different interests approved by a ruling coalition (the group with final decision making power and resource mobilization). Thus, the Carnegie model contemplates the subjective character to consider the mechanisms by which managers would accommodate their goals and interests.

### ***THE INCREMENTALIST MODEL***

Also known as “muddling through”, the incrementalist model assumes that managers rarely make important decisions that are radically different from past decisions. Thus, managers tend to choose courses of action slightly (or incrementally) different from those used in the past, thereby decreasing the chances of making mistakes (Jones, 2010). A whole new course of action would only eventually occur after a succession of changes resulting from corrections or error avoidance. This model works best in stable environments (Jones, 2010).

### ***THE UNSTRUCTURED MODEL***

This model, developed by Henry Mintzberg, 'presupposes high uncertainty in decision making and is best suited for environments that change suddenly.

It covers aspects of the incrementalist model (series of small steps), the rational model (identifying problems, developing alternatives, and selecting the solution). The differences lie in re-evaluating the alternatives and adjusting the course of action for every obstacle encountered. Therefore, the model is not structured: decision making does not evolve in a linear or sequential manner, and as causality lies in the intuition of managers, decisions need to be reviewed continuously.

The unstructured model explains how and why managers need to make non-programmed decisions and how to improve programmed decision making over time.

### ***THE GARBAGE CAN MODEL***

This model assumes that decision making occurs on both sides: as an

organization dominates a way to solve a problem, it will seek problems to solve. At the same time, managers must find solutions to problems that arise from environmental changes and from the result of managers' actions.

Different coalitions may conflict over an organization's resources and the coalition with the greatest power or influence will prevail. This is known as "organized anarchy" (Jones, 2010). Thus, the decision making is fluid, unpredictable and contradictory, as well as in accordance with the preferences and priorities of the decision makers (Jones, 2010).

This model is totally opposed to the rational model, because decisions are non-programmed and decision making is unstructured.

### ***ACCESS TO CASE INFORMATION***

The information presented in this teaching case was obtained by the author during actual consulting assignments. For educational purposes, different occasions were composed and sequenced in a timely manner. The name of the company and the characters involved (the founders, the executives and the consultants) are fictitious in order to preserve their privacy.

## REFERENCES

- JONES, G. R. *Organizational theory, design, and change*. Upper Saddle River: Pearson, 2010.
- DAFT, R. *Organization theory and design*. Cengage Learning, 2012.

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