



## METHODOLOGICAL PROPOSAL FOR THE DEVELOPMENT OF PROSPECTIVE SCENARIOS FOR SUCCESSION IN SMALL FAMILY BUSINESSES

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### ABSTRACT

Family companies represent a significant number of the formally constituted economic organizations, both in Brazil and in the world. In order to contribute to the longevity of these organizations, the incorporation of an agenda related to how to conduct the generational succession should be the object of reflection of the partner-owners, given their relevance to both the business and the families. In terms of fundamentals, the present study analyzes and systematizes the scientific literature related to the succession process and to family companies. From a methodological perspective, the study is based on the main models in the technical-scientific literature related to the prospective analysis of scenarios. The main product is the development of a methodological proposal for the creation of succession scenarios in small size.

**Keywords:** Prospective scenario analysis; Family businesses; Succession in family businesses.

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## 1. INTRODUCTION

The understanding of the phenomenon of entrepreneurship, encompassing its motivations, benefits and challenges, has been the target of investigations by researchers from the areas associated with business, economics and psychology, as well as the interest of organizations that provide support to entrepreneurial practice and also the business community willing to understand and improve their processes.

One relevant aspect to be considered concerns the fact that most ventures actually involve family organizations. According to Oliveira et al. (2012), family enterprises constitute a type of organization that predominates in several sectors of activity and contributes significantly in economic and social terms.

In this case, close relatives such as couples, children, siblings, uncles, and cousins establish, in addition to kinship relations, a business. Small family businesses present particularities to be considered, such as: superposition of kinship with professional relationships; the power of the founder/patriarch is very significant, as there is, in some cases, submission of collaborators and relatives; the relations with the employees are rarefied in terms of professionalism and, often, confused as extension of the own family (Nóbrega, 2012; Bottino-Antonaccio, 2007; Gersick et al., 1997).

Also with regard to family companies, it is observed that the main challenge encountered by this type of organization concerns the succession of the entrepreneur. According to the IBEF-SP (2011), one of the greatest risks faced by any family business is the transition from one generation to the next. According to Lodi (1987), in the succession process from the first to the second generation occurs the crisis of succession, motivated by several aspects: leadership crisis among successors; compatibility between the children and relatives; immobility, a tendency to maintain a "status quo"; power sharing/political crisis; need for professionalization of the firm; and size and multiplicity of business.

In addition, the study conducted by PwC-PricewaterhouseCoopers (2014), with family firms from various sectors in Brazil, found that 34% say they have a succession plan in force for some or all senior functions, while the overall average is 53%. Another aspect of the succession process evaluated by the mentioned study indicates that only 11% (Brazil) and 16% (in the world) of family companies have something that can be qualified as a robust succession plan.

Yet according to PwC (2014), a succession plan that is not written is not a plan, but an idea. It is important that family businesses approach the succession process with the same commitment and energy dedicated to professionalizing other aspects of the business. Succession is an emotional issue,

so it needs to be managed professionally, not personally. Another important point about the succession process is that many family businesses still treat succession as a single event, not as a long-term process.

Thus, in order to contribute to the longevity of these organizations, the incorporation of an agenda related to how to conduct the generational succession should be the object of reflection of the partner-owners, given their sensitivity to both the business and the families.

Despite the theme relevance, in contrast to the prospection of scenarios for large companies and industries, where a robust set of publications is observed (Saurin et al., 2008, Ratcliffe 2006, Wrigth 2005, Franco et al., 2011), and the application of robust computational techniques to specific situations (Silva et al., 2015), there is little support in terms of technical and scientific literature on models capable of helping small family firms to appropriate the fundamentals of analysis of prospective scenarios and support reflection on possible/desirable futures, especially as regards the succession process.

In this sense, the present study aims to propose a method of prospective analysis of scenarios customized, supported in the literature, able to support the creation of prospective scenarios for the succession process in small family businesses.

The study presents itself as relevant in that it proposes to reflect on the need for systematization and customization of models of prospective analysis of scenarios for the reality of small family businesses. In addition, the study can serve as inspiration for small family businesses that experience the succession problem and the inherent risks of this important milestone in their life cycle.

In methodological terms, the evaluation of some of the most well-known and relevant methods for the elaboration of scenarios is carried out. The present study is based on models established in the technical-scientific literature related to the prospective analysis of scenarios (Schwartz, 1991; Godet, 1993; Grumbach, 1996; Macroplan, 2007).

In procedural terms, through the analysis of the four aforementioned methods, the main stages of the process of creating prospective scenarios were identified. The method for creating scenarios proposed in this paper is composed of eight steps, which were considered central. It is also identified the need of customization of the methods studied in the literature review, for the constitution of a methodological proposal more adjusted to the contour conditions of most family firms<sup>1</sup>. Given the nature and boundary conditions of

1 Regarding the educational level of entrepreneurs in Brazil, ac-



the case of interest, the method relies on fundamentally qualitative variables, in order to enable the method to be understood and used by family entrepreneurs, eventually interested.

As regards structure, this article is subdivided into four sections. The first offers a preamble of the discussion of family businesses and the succession process in this type of company. The second includes a brief review of the family business literature, with a special focus on the succession process and the prospective analysis of scenarios. In section 3, a critical analysis is performed on the methods of prospective analysis of scenarios discussed in the previous section, and a model of scenario creation for the succession process in small family enterprises is also proposed. In the fourth and last section, the conclusions are drawn and suggestions are presented for future studies.

### Literature revision: family businesses

Bernhoeft (1989) and Lodi (1998) define family business as the organization that has its origin and history linked to a family and maintains family members in the administration of business in succeeding generations. According to Oliveira et al. (2012), family firms generally experience three characteristic territories: stock control; involvement in business management, and; the multigenerational transition. The participation of the family in one or more of the above-mentioned dimensions confers the familial character of a company. According to Andrade et al. (2005), the family business has its origin in an organization controlled and directed by an entrepreneur, who is usually the owner, and who initiates the process of formation of the enterprise through professional dreams, with commitment and individual investment. The entrepreneurial owner may or may not be supported by relatives. According to Laimer et Tonial (2014), the family business is supposed to be controlled by a family and to have one of the family members in its management.

According to Freire et al. (2010), there are large companies controlled by families in Brazil, such as Banco Itaú, Gerdaud, Pão de Açúcar, Imaginarium, JBS, Sadia, Tam, Andrade Gutierrez, Globo Comunicações e Participações, Gol, Luiza Magazine, Odebrecht and Camargo Corrêa. Additionally, the indicators of success of these companies are associated with two common factors: core values consistent with internal and external coherence, and the ability to separate family dynamics and business.

According to SEBRAE (2012), only 14% have at least complete higher education. In 2003, there was a decrease in the percentage of entrepreneurs with only the first full grade (from 58% to 39%) and an increase in the number of high school graduates (from 29% to 47%).

According to Nóbrega (2012), at first, power in the family business is directed to the founder-owner who started the business, risking his capital, working together or not with other members of the family. In addition, the power of the founder is present in virtually all existing processes in the company, from the selection of employees to the choice of business strategies. For Lodi (1987), the generation of the founder of the family business has the following characteristics: tendency to be autocratic/concentration of decisions; human isolation and family sacrifice; cult of personality; barriers to professionalization; and difficulty in training and evaluating children.

According to Werner (2004), for understanding a family business, one must first analyze family dynamics; in the same way, one cannot understand family dynamics without first analyzing their relationship with their company. The interaction of the two inseparable aspects creates the necessary conditions to study the whole of the family enterprise.

According to Estol et Ferreira (2006), the initial models developed to describe family businesses considered that this type of organization was formed by two superimposed systems: family and management. Such systems have their own norms, admission rules and value structure, thus fostering conflicts between family and business circles and ultimately affecting the people involved in the parties. For Gersick et al. (1997), family firms rely on the coexistence of three independent or overlapping axes or systems: property, family and management and in the interrelationships between them (Figure 01).

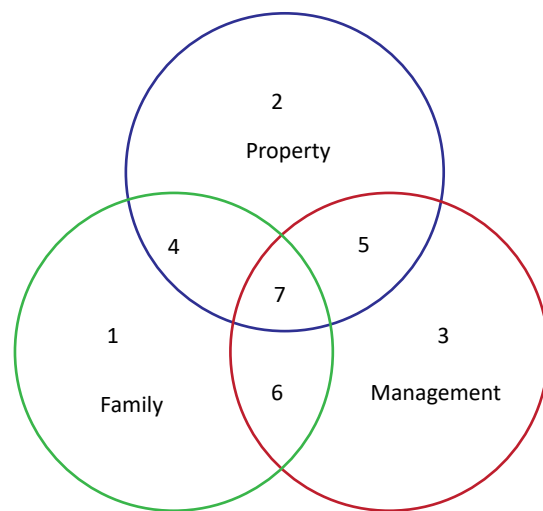


Figure 01. Model of three family business circles

Source: Adapted from Gersick et al. (1997)

The numbering from one to seven, illustrated in Figure 01, represents how people are located in the company and their interests:



1. Member of the controlling family, who does not hold any shareholding or management position.
2. Person outside the controlling family, who holds shareholding, but has no job position.
3. Person outside the controlling family, without shareholding, holder of position and management.
4. A member of the controlling family, who holds a shareholding and does not hold a management position.
5. Person outside the controlling family, who holds shareholding and holds management positions.
6. Member of the controlling family, without shareholding, with management position.
7. Member of the controlling family, which holds a shareholding and holds a management position.

For Almeida (2010), the separation of ownership, management and family is one of the fundamental concepts of family governance and an evolution of corporate governance to the specifics identified in family businesses.

According to Bottino-Antonaccio (2007), the following aspects are consequences and specificity of family businesses: reproduction of family beliefs and values in the company; distribution of the most important positions among family members; "obligation" to continue family business; the appreciation of the affective bonds between the relatives and between the employees.

For Gersick et al. (1997), family firms constitute a peculiar organizational form, which usually presents the following aspects: family dynamics can interfere in business relationships; roles in the family and company can become confusing; company pressures can undermine family relationships.

Souza (2001) considers as factors that affect the management of the family business: the lack of professionalization of the company's management; interests above the company's interests; resistance of owners in admitting the need to change, especially to themselves.

Table 01 consolidates the main attributes of the family business discussed in the literature review.

The main advantages and disadvantages of family firms identified in the literature, according to Bottino-Antonaccio (2007) are shown in Table 02.

Dyer Jr. (1994) found that 80% of the first-generation companies have a management style and paternalistic culture. In the second generation, more than two-thirds of these companies adopt a more professional style. In addition, it states that power and decisions are more concentrated in the first generation than in the next generations.

Souza (2001) states that the great challenge for family businesses lies in the families that conduct their businesses often intuitively and unprofessionally; thus not applying administrative principles rationally. Since family businesses overcome their family problems and are grounded on a solid professional base, such a company can achieve and maintain its success continuously.

According to Martins et al. (2008), the survival of family enterprises has a strong relation with the succession process, with the professionalization of staff, lack of information and conflicts between family members.

### Family succession process

According to Bottino-Antonaccio (2007), succession represents a complex process that requires the reorganization and readaptation of the people participating in the three circles - family, management and ownership of the company. According to Estol et Ferreira (2006), the succession process entails the emergence of new leaderships that, at times, present symbolic patterns, beliefs and values that are different from those that hitherto existed in the organization, which can promote changes in the style of business structure, company structure and culture.

For Dyer Jr. (1994), there are three main options or paths for succession/professionalization of family businesses: professionalizing a family member; professionalizing a non-family employee and/or bringing in a professional from outside the company. The first two options do not bring dramatic changes in organizational culture.

According to Zilber et al. (2010), the succession process represents an inevitable fact that will occur throughout the existence of the family business. In addition, succession is a phase to be studied in order to identify the factors that characterize and influence it, in addition to identifying strategic changes motivated by its necessity. Bottino-Antonaccio (2007) points out that succession is an important process by which all companies go through, whether they are familiar or not, and usually encounter difficulties.

According to Oliveira et al. (2012), succession is one of the topics most discussed in the literature on family businesses. In addition, one of the reasons for this focus on succession is that the succession process is considered one of the



**Table 01.** Main attributes of the family business

Attributes of the family business	Souza (2001)	Gersick, et al. (1997)	Bottino-Antonaccio (2007)	Estol & Ferreira (2006)	Werner (2004)	Nóbrega (2012)	Oliveira et al. (2012)	Laimer & Tonial (2014)	Bernhoeft (1989)	Lodi (1998)	Lodi (1987)	Dyer Jr. (1988)
Lack of professionalization of company management	X											
Resistance of owners in admitting the need to change	X											
Family dynamics can get in the way of business relationships		X	X	X		X						
Roles in the family and company can become confusing		X	X	X	X	X						
Pressures from the company can undermine family relationships		X		X								
Reproduction of beliefs and family values in the company			X	X								
Distribution of the most important positions among family members;			X									
“Obligation” to continue family business;			X									
The valorization of the affective bonds between the relatives, and among the employees (paternalism)		X	X			X						X
Independent and superimposed systems: property, family and management		X					X					
Centralized management (founder’s power)		X			X	X					X	X
Family-owned company								X				
Family members in company management								X				
Family members in managing the business in succeeding generations									X	X		
Obstacles to professionalization											X	
Difficulty in training and evaluating children											X	
Multigenerational Transition							X		X	X		

most critical situations faced by family organizations. According to Grzybovski et al. (2008), succession appears in organizational theory as a determinant of success or failure, and consequently of continuity or rupture of the family business.

For Duarte et Oliveira (2009), the succession process involves the replacement of the executive and the managers of a company, with the purpose of providing business continuity. The authors assert that this process represents one of the most difficult phases of the family business life cycle, since it has a direct impact on their survival, development and continuity. In addition, for these authors, the succession process must be properly conducted so as not to compromise the survival of the enterprise. Succession planning should be emotion-free and decide whether the command is with a family member or an outside professional.

According to Bottino-Antonaccio (2007), succession in family businesses should be considered as a continuous pro-

cess of change, since it involves difficult decisions, planning, training and a series of adaptations (in people, in company, in family). Therefore, it cannot be considered as a point event.

For Nóbrega (2012), the lack of planning of the succession process in family companies can lead to the crisis in the corporate sphere, resulting in the company’s disruption, which sometimes leads to bankruptcy or, at least, the sale of the company to 3rd parties. The aforementioned planning has as its goal the protection and continuity of family patrimony, with the creation of corporate, tax and conduct mechanisms, for the preservation of activity and property in the family group.

According to Gersick et al. (1997), the evolution of the succession process is related to the life cycle of the family business and the way in which the family relations of their owners evolve.



Table 02. Main advantages and disadvantages of family businesses

Advantages	Disadvantages
Long-term vision.	Informal structure - hierarchy and division of tasks are not clear.
Greater autonomy to act independently of stock exchanges.	Financial tension - imbalance between contribution and compensation.
Family culture as a reason for pride and feeling of belonging, commitment and identification.	Nepotism - distribution of positions among family members and tolerance of unfit members.
Resilience in difficult times.	Difficulty in attracting and retaining good employees and the possible accommodation of employees who perceive a limitation in their careers.
Knowledge of the business acquired very early, when the children follow the decisions of work at home.	Lack of attention in the market - globalized world in constant change.
Recognized and unquestionable authority - everyone knows who the company leaders are and do not question their authority.	Confusion between ownership and administration, and between being an heir and being a successor.
Unique and centralized control, allowing quick reactions in emergency situations.	Difficulty in separating what is intuitive-emotional and what is rational
Lean structure	Influence of individual behaviors and relationships on company decisions
Loyal and dedicated internal organization	Expectations of high fidelity of employees.
Sensitivity to employees and the community where they operate	

Source: Adapted from Bottino-Antonaccio (2007) and SEBRAE (access in 05/20/2015)

According to Casillas et al. (2007), the difficulties in anticipating succession of ownership and management represent one of the main problems of family businesses. Zilber et al. (2010) point out that the lack of preparation for the succession process can cause serious problems in the management of the family business. Gersick et al. (1997) and Oliveira (2006) reinforce the assertion, indicating that 70% of family-owned companies close their activities with the death of their founder, and that of the 30% surviving the second generation, only a minority lasts until the third generation.

For Lodi (1987), there are three groups of measures that precede the succession process: the basic formation of the successor; the successor's development and training plan; and organizational and legal measures. In addition, the choice of successor should be free of emotions. The most common mistakes in this choice are: let relatives enter without entry criteria; offer any function: any vacant position; place successors in advisory functions; leave your child in the central office.

According to Souza (2001), Brazil presents a high mortality rate of family companies in the first generation due to the placing of family interests in detriment to those of the organization.

According to Len Van (2000), the main difficulties faced in family management in the transition to third

generation members are: failures conducting the succession process; conflicts, rivalries and divergences of strategic vision of future and business objectives between the members and even between the generations of the family; absence of professional criteria for entering/contracting relatives in the company; fragility of communication and consequent asymmetry of information among family members. For Almeida (2010), the complexity in the succession process occurs due to the expectations and individual desires of its owners, mainly of the second to third generation.

Table 03 consolidates the main attributes of the succession process in a family business, identified in the literature review.

### Prospective scenario analysis

According to Cardoso et al. (2005), the prospective view arises as a counterpoint to the traditional view of planning. It differentiates itself by dealing with a turbulent and constantly changing reality, in which the future is not a continuation of the past.

According to HBR (2012), based on Macroplan's contribution, scenario planning differs from the traditional strategic







**Table 04.** Comparison between traditional planning and scenario planning

	Traditional planning	Planning under scenarios
Approach	Partial and static	Holistic, systemic and dynamic
Variables	Quantitative, objective, known	Qualitative and quantitative, subjective, known or unknown
Explanation	The past explains the present and the future	The future is the reason for being of the present
Scratches	Hides the risks	Explains and underlines the risks
Method	Deterministic and quantitative models (econometric and mathematical)	Qualitative and stochastic models (systems analysis and cross impacts)
Posture facing the future	Promotes inertia and simplification of organizational thinking	Stimulates flexibility and organizational creativity

Source: HBR (2012)

For Silva et al. (2012), in the elaboration of the scenarios it is necessary that the scenario designers considers a set of forces that act on the system under study, through the adoption of a pluralistic approach of the future, parameterized by restrictive forces and by propulsive forces that act on the variables of the system, evidencing, also, a set of different methods and techniques for the exploration of futures, analyzed below.

**Some of the main methods for scenario development**

Godet (1993) states that, in practice, there is no single way to develop scenarios; however, there is a variety of methods for construction, some simplistic and some sophisticated.

For Gomes et Costa (2010), the nomenclature, emphasis and order of the stages of scenario elaboration vary from author to author. In general, the methodologies cover the following steps: goal setting; survey, analysis and description of the relationship of the variables; filling in the states of the variables and verifying their consistency; definition of the main theme of each scenario based on the main variations identified; and construction of the narrative of at least two scenarios: a reference and a contrast. The scenario can be constructed from the identification of trends and uncertainties to assist managers in decision making.

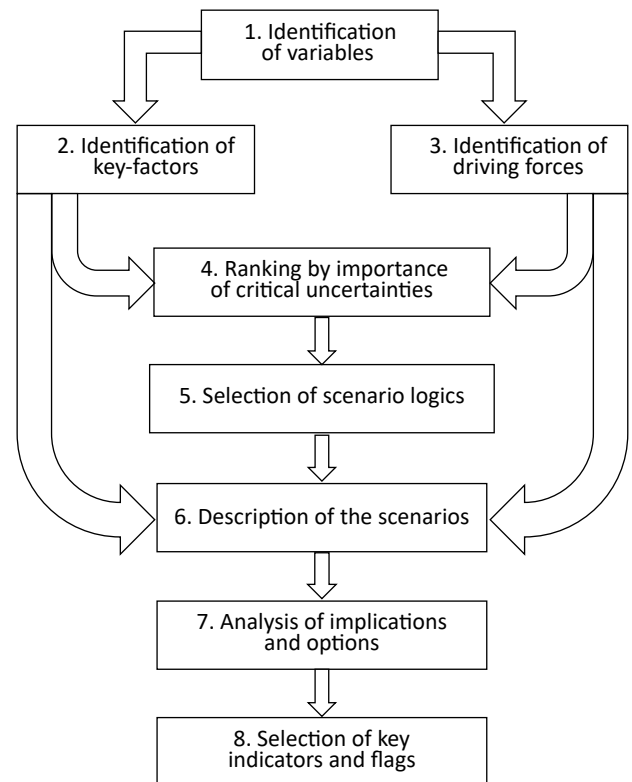
For Schwartz (1991), there are some basic steps in the scenario building process, whether for a small business, for an individual only or for a large company. These steps are: to improve a decision; research; look for key elements; create/try new entanglements; and rehearse the implications.

**The Schwartz method**

Schwartz (1991) used the scenarios primarily in some of the world’s largest businesses and government institutions.

However, he points out that the scenarios process can be used in several situations, such as: planning a new small business, finding a job, evaluating an investment or even making personal decisions about diet and health.

Figure 02 illustrates the scenario prospecting method described by Schwartz (1991). According to the author, at all stages one must take into account the “mental models” of the leaders - their worldview, their concerns and uncertainties.



**Figure 02.** Long-term vision art method  
 Source: Schwartz (1991)





- Step 1: definition of the strategic issue that motivated the construction of the scenarios. It defines the dimensions – space and time – that the study will cover, and a list of possible long-term consequences that is elaborated;
- Step 2: identification of the main determinants of success or failure of the study object, also called key factors;
- Step 3: Identification of the driving forces, which are linked to the macro environment. The driving forces identified and classified in predetermined elements and critical uncertainties are analyzed. For Schwartz (1991), the predetermined elements are the forces that know what will happen to them in the chosen time horizon. Critical uncertainties are related to the elements of change that can act unpredictably and influence the future.
- Step 4: hierarchization/ordering of key factors and driving forces according to two criteria: the degree of importance for the success of the issue being studied; and the degree of uncertainty surrounding these factors and trends. The author suggests identifying the two or three most important and uncertain factors or trends;
- Step 5: analysis of the behavior of the variables classified as critical uncertainties (conditioners of the futures to be constructed), that must be positioned in the axes (trajectories) along which the scenarios will be described;
- Step 6: Scenarios should be presented in narrative form, explaining in detail the evolution of the world during the pre-established time horizon;
- Step 7: After the scenario development, we return to the study object defined in step 1. We must analyze: what the vulnerabilities and potentialities of each scenario are, and what the necessary strategic changes are;
- Step 8: Define key indicators and flags to track what the future holds for a particular industry and how it can affect the strategies defined in the previous step.

A relevant aspect of the scenario building process is related to the number of scenarios that will be created. According to Schwartz (1991), one must develop two or three future potentials that allow treating certain possibilities and rehearse their answers in each one of them. For the author, from four constructed scenarios, the analytic complexity is extremely increased, since human beings cannot follow all the ramifications in their own minds.

Another important factor raised by the aforementioned author is the choice of the scenario development group. For Schwartz (1991), this choice must be guided by three considerations: support and participation from the highest levels of administration is essential; a broad spectrum of functions and divisions must be represented in the scenario development group; and, finally, looking for creative people with open minds who have the ability to work in teams.

### Godet's method

The aforementioned method of scenarios was largely applied in large companies and public administration, helping to stimulate collective strategic reflection and communication in the company; for the best preparation for certain possible ruptures; for the reorientation of options according to future contexts.

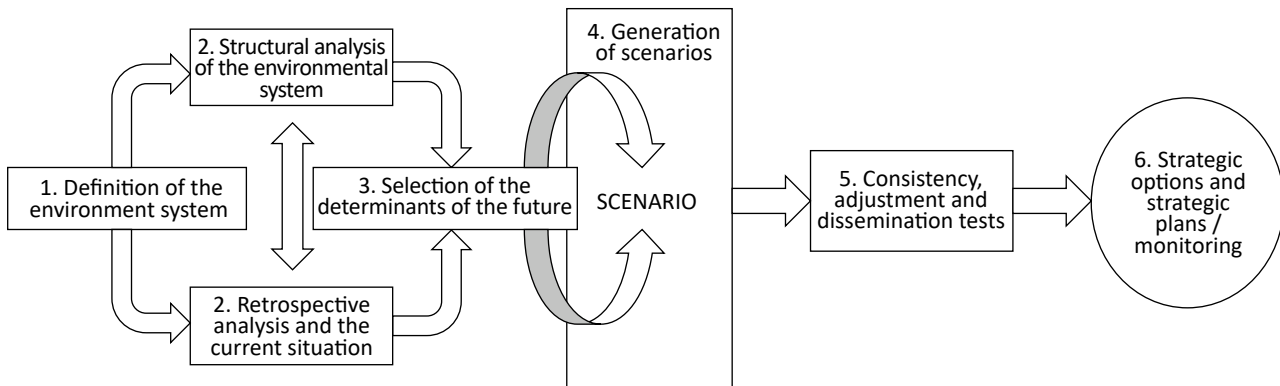
Figure 3 illustrates the strategic prospective method proposed by Godet (1993).

- Step 1: The system is delimited by the object of study, its time horizon and geographical area;
- Step 2: Preparation of a preliminary list of the relevant variables of the system and its main actors. Techniques such as expert meetings and brainstorming are used. Subsequently, the retrospective analysis of the system is performed, highlighting the mechanisms and the determining factors of its past evolution. And the diagnosis of the current situation of the organization.

After the study of the current and historical situation of the organization, the preliminary list of variables and actors is reviewed. After reviewing the list, one must cross the variables to identify the influence of one over the other (matrix of structural analysis of variables). Variables are then analyzed for their motor and dependence, and classified into explanatory variables (great motor and little dependence), of connection (great motor and dependence), of result (low motor and much dependence) and autonomous (little motor and dependence).

Subsequently, the most influential actors in the system are identified by crossing *actors x variables*. From the influence analysis of the actors, it is possible to identify which actors should be studied more thoroughly.

- Step 3: Based on the analysis of the variables and actors, we obtain the conditions of the future. In addition, we classify the events in system invariants, weight trends and predetermined facts. For Godet (1993), the invariants represent the events that do



**Figure 03.** Strategic Foresight Method  
 Source: Godet (1993)

not undergo variations in the time within the horizon of the scene. Weight trends refer to quite likely movements of an actor or variable within the horizon determined in step 1. And the predetermined facts are events already known and certain;

- Step 4: Morphological analysis, which is the basis for the generation of alternative scenarios. Godet (1993) notes that the combination of all future possibilities (morphological analysis) generates a large number of scenarios. Therefore, it suggests the use of the Cross-Impact Systems and Matrices method (SMIC), from the attribution of probability to the hypotheses obtained consulting experts.

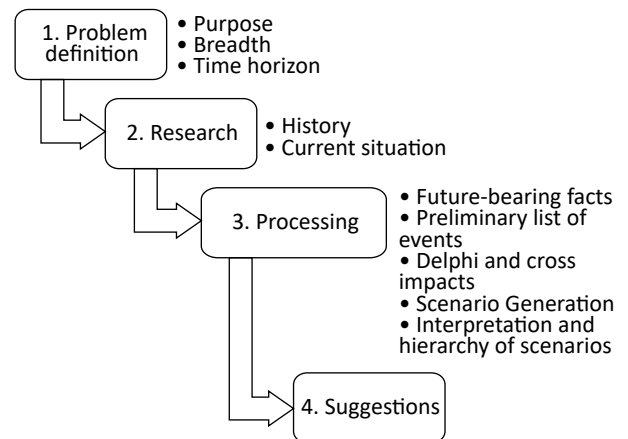
Development of scenarios based on key variables, weight trends, actors' strategies and the future-bearing events already identified in the previous stages.

- Step 5: consistency tests are performed to verify if during the scenario description, some variable or actor is behaving in a way that is not coherent with the logic established in each scenario;
- Step 6: Analysis of the strengths and weaknesses of the organization, as well as the survey of the opportunities and threats of these proposed future environments. In addition, the implementation of a strategic monitoring system.

Godet (1993) states that each problem should be answered with formal methods, but always simple enough to be assimilated. In addition, tools are levers for action, but they do not represent fanciful recipes. The application of a method may prove, according to context, as key to success or failure factor.

### The Grumbach method

The Grumbach method was developed from 1996, aligning ideas from established authors, such as Igor Ansoff, Michael Porter and Michel Godet, to their own conclusions from studies in Spain, providing advice to public agencies and private companies in Brazil. Figure 04 illustrates the method described by Grumbach.



**Figure 04.** Grumbach method of strategic management based on prospective scenarios  
 Source: Grumbach et Marcial (2008)

Step 1 consists of the definition of the contours and limits of the problem, as well as its essential elements: geographic amplitude, depth level and time horizon. In step 2, the external and internal variables of the system are surveyed, as well as a retrospective survey, allowing the construction of an "image of the current state" and an understanding of the causes and origins of the current situation. The objective of this study is to identify the future bearer.

Step 3 analyzes the causes and consequences of the facts of the future bearers identified in the previous step.



Subsequently, for the construction of scenarios, the Delphi method is used to verify the probability of occurrence of an event, according to the experts' view. It is the method of cross impacts, in which the experts will comment on the influence that the occurrence of the events will bring on the probability of the others occur. Other techniques used in the construction of scenarios are the brainstorming, and multi-criteria analysis (Monte Carlo simulation) that is based on the results of applying the Delphi method and the priorities of the decision makers.

Finally, step 4 defines the strategies that the company should adopt based on the scenarios elaborated.

According to Grumbach et Marcial (2008), Grumbach's method of strategic management relies on several techniques and methods, such as: brainstorming; Delphi method; cross impact method; the Bayes theorem; the Monte Carlo simulation; and the theory of games. We can see the intense use of mathematical modeling and operational research tools. In addition, the application of the method is facilitated by two softwares: the Puma (strategic planning system and prospective scenarios) and the Lynx (simulation and management system of the future).

### The Macroplan method

According to Santos (2011), the methodology of scenario preparation used by the company Macroplan has been practiced in Brazil since the 1980's. It has been improved in its methods over time due to the experience lived in numerous projects in the most varied economic sectors. Figure 05 illustrates the methodology adopted by Macroplan for the construction of scenarios.

Step 1 defines the object of study according to physical and temporal space. Step 2 consists of the mapping of the invariant factors and the conditioners of the future pertinent to its object of interest. The identification and ranking of critical uncertainties in relation to the future of the environment displayed is carried out.

In step 3 the generation and development of alternative scenarios of the future is performed, emphasizing the dimensions related to critical uncertainties; Step 4 is intended to compare and analyze scenarios with an emphasis on anticipating opportunities and threats to the organization; Finally, step 5 develops the strategic positioning of the organization against the scenarios.

### Tools used in the scenario building process

In relation to tools used in the stages of the scenario building process, based on Grumbach et Marcial (2008), Table 05 consolidates the main objectives of the use of these tools.

### Critical appraisal of the scenario construction methods analyzed

Regarding the identification stage of the study object, it is observed that all four methods are aimed at delimiting the system according to the object of study, its objectives and its temporal and geographical limitations. Creativity techniques are used, such as: brainstorming, synectics, morphological analysis, questionnaires and interviews. At the system analysis stage, the objective is to analyze the internal and external environment of the organization and identify the driving forces and key factors. In relation to the tools, the methods approached use the techniques of brainstorming, interviews and researches.

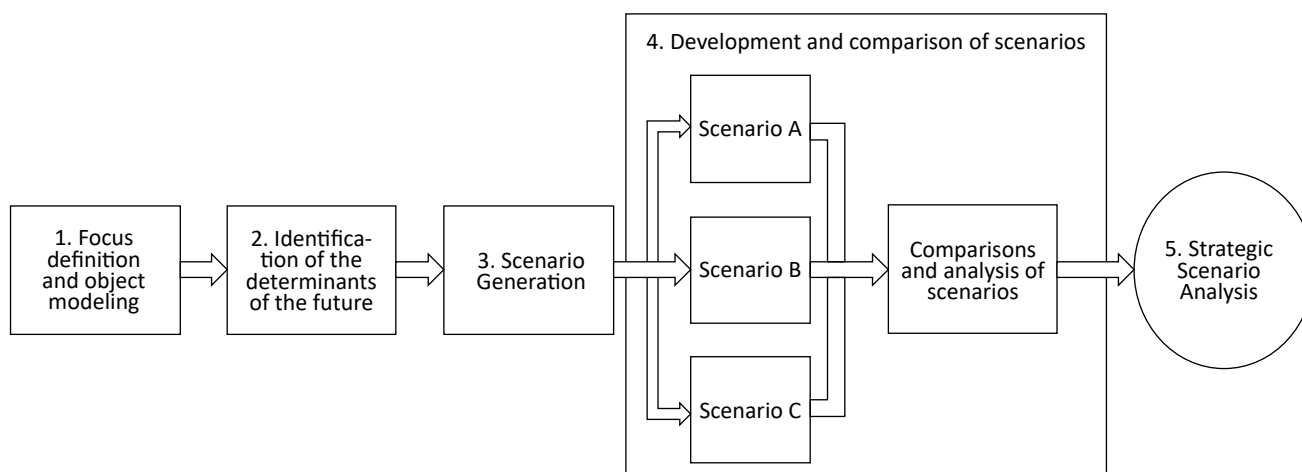


Figure 05. Macroplan methodology for prospecting scenarios

Source: Macroplan (2007)



The retrospective analysis of the company is not performed by the method of Schwartz (1991) and Macroplan (2007). On the other hand, the other two methodologies addressed seek to understand the behaviors, mechanisms and actors of the past and the current moment of the organization. They use techniques such as documentary analysis, interviews and questionnaires. The next step is to classify/rank the variables identified in previous steps. The Schwartz method (1991) uses the ranking technique by importance and uncertainty to analyze the driving forces and classify them into predetermined elements and uncertain variables. The Godet method (1993) uses the structural analysis matrix of the variables and the actors to identify the dependence relations of the variables (motor-dependence plane) and the main actors of the studied system.

In the identification phase of the determinants of the future, the objective is to analyze the causes and consequences of the facts of the future bearers identified in the previous stages. All methods described perform such identification. Subsequently, the stage of constructing alternative scenarios is performed in all the methods covered. In relation to the tools, it is observed that Godet (1993) uses the variables identified as critical uncertainties (conditioners of the future) obtained through the structural analysis matrix; Schwartz (1991) uses the variables classified as more important and more uncertain (conditioning of the future) identified in the previous stage, to create the logic of the scenarios; Grumbach (1996) uses the Delphi Method and

the Cross-Impact Matrix. Finally, Macroplan (2007) uses the critical variables.

After the scenarios are created, the next step is to compare each of them in order to analyze the scenarios with an emphasis on anticipating opportunities and threats for the organization. The method of Godet (1993) and Schwartz (1991) does not make the comparison. Grumbach (1996) uses multicriteria analysis and Macroplan (2007) compares the scenarios. The following step is not performed by the method of Grumbach (1996). The other methods describe the scenarios in a narrative way, explaining in detail the variables involved.

The next step is the strategic elaboration based on the scenarios and the organization being studied. All methods perform this step. Finally, the last step is to monitor the strategies. Grumbach (1996) and Macroplan (2007) do not perform this step. Godet (1993) and Schwartz (1991), however, use a monitoring system.

#### Elaboration of the scenario-building methodology for small family businesses

The scenario-surveying literature, as observed in the literature review, is oriented to the development of a future study for large organizations, industrial segments or governments. In this sense, it is evident the need to adapt some of the models studied to the reality of the case to be investigated.

**Table 05.** Tools used in the steps of the scenario building process

Tools	Objective	Nature of the data
Brainstorming	Raise ideas and identify key factors (variables and actors)	Qualitative
Synectics	Identify possible solutions to a given problem.	Qualitative
Morphological Analysis	And transfer knowledge and experience from a known technology to another being researched (analogy)	Qualitative and Quantitative
Ranking by importance and uncertainty	Systematic exploration of possible futures from the study of all combinations resulting from the decomposition of a system	Qualitative and Quantitative
Matrix of Structural Analysis	Identify dependent and independent variables. To better understand the relevance of each of its variables, their actions and implications	Qualitative and Quantitative
Analysis of stakeholder games	Identify influence and dependence, as well as evaluate the strategic choices of actors	Qualitative and Quantitative
Questionnaire and interview	Generate ideas, opinions, or information from a particular target population that helps creativity in terms of problem solving.	Qualitative
Delphi method	Raise ideas, identify key factors and achieve convergence between experts	Qualitative and Quantitative
Cross Impact Method	Check the impact of one event on another	Quantitative
Multicriteria Analysis Techniques	Facilitate decisions regarding a problem, when it is necessary to take into account multiple and diverse points of view	Quantitative

Source: Grumbach et Marcial (2008)



Thus, a model of scenario construction directed to the succession process in small family businesses is proposed. This model is based on constant aspects in the four methods of prospecting scenarios compared in the literature review and in the techniques used in the scenario building process. Table 06 provides a perspective of the aspects, attributes and tools considered in the model.

In order to contribute to a better perception of the interrelation between the steps, Figure 06 illustrates the model mentioned above.

**2. CONCLUSIONS AND SUGGESTIONS FOR FURTHER STUDIES**

The present study analyzed some of the main concepts on family business and succession process, emphasizing the importance of succession planning for company sustainability. In addition, it analyzed some of the main methods of prospecting scenarios, and from the adaptation of the mentioned methods a model of scenario construction directed to succession process was proposed in small family businesses.

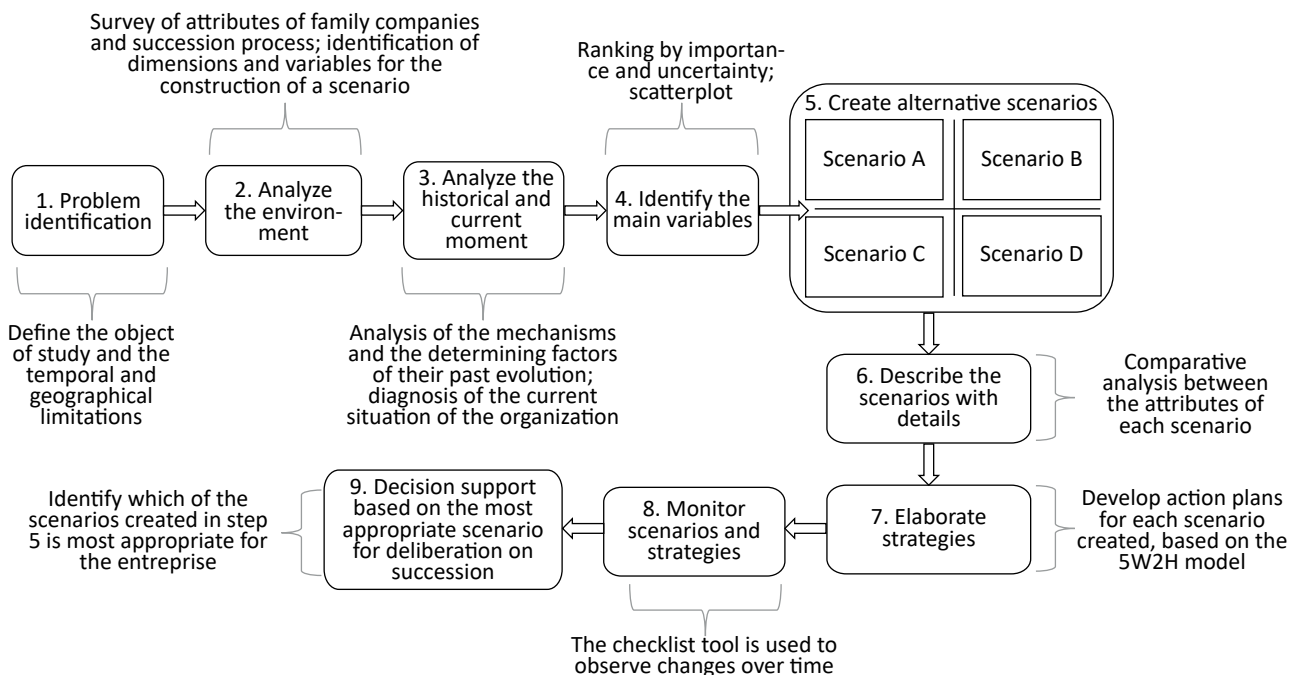
In the effort to systematize family businesses, it is observed that some characteristics are very evident, especially in small Brazilian organizations, such as: the interference of family dynamics in the business scope; the confusion of roles in the family and in the company; the valorization of extensive affective ties to the employees (paternalism) and

the superposition of the systems of property, family and management.

These attributes are relevant for the reflection on the possibilities and challenges related to the succession process in family companies. According to the literature, the generational transition must be a gradual and planned process, in order to contribute to the reduction of resistance in the company and in the families, caused by the change of management style.

Thus, it can be seen that the tools and models used in the process of scenario exploration should be adapted according to each case, some being simplified and others more robust. In order to narrow this gap, the present study proposed the customization of the method of prospecting scenarios for the planning of the succession process in family companies, composed of eight stages of gradual implementation that go from the identification of the specific boundary conditions of family companies, through the creation of alternative scenarios, to the preparation of action plans and implementation follow-ups for a smooth transition.

A limitation of the method refers to the non-application of the method in a small family business that experiences the stage of succession process. Thus, as a suggestion for future study, it is recommended to apply the proposed method in small family businesses, aiming at obtaining primary data for analysis, for validation and/or adequacy of the proposed method.



**Figure 06.** Model of prospective analysis of scenarios for the process of succession in small family businesses



**Table 06.** Method of prospecting scenarios for succession process in small family businesses

Step	Step Purpose	Considerations of the Scenario Building Model for Succession Process in Small Business Enterprises (justification for adoption/inspiration)	Data Collection and Information Analysis Procedures
<b>1. Problem Identification</b>	Obtain the object of study and the temporal and geographical limitations.	Suggestions of all methods are adopted, with customizations necessary to the size and nature of the company studied.	Interview Brainstorming Reports from previous investigations
<b>2. Analyze the environment</b>	Raise the key factors and driving forces of the organization, considering technological, economic, social, family, occupational and local aspects.	The theoretical models studied are oriented to large organizations and global performance. They are therefore used as complex variables with global implications, since political, economic and/or technological changes may compromise or enhance the business of these companies. Due to the size and the pretensions of small family enterprises, it is recommended that the "Analyze the environment" stage for this type of organization can use less robust variables with a more restricted focus on local, managerial and/or even family organization.	Data collection instrument Brainstorming Interview Analysis of the local/regional context
<b>3. Analyze the historical and current moment of the company</b>	Analysis of mechanisms and the determinants of their past evolution.	It seeks to understand the behaviors, mechanisms and actors of the past and the current moment of the organization. They use techniques such as documentary analysis, interviews and questionnaires.	Analysis of historical data of the company Interview with key actors involved
<b>4. Identify the main variables</b>	Diagnosis of the current situation of the organization.	The uncertainty ranking tool of Schwartz's method is also used to identify the most important and uncertain variables. Construction of a scatter plot of variables.	Ranking of importance due to uncertainty of identified variables Scatter plot
<b>5-Create alternative scenarios</b>	Create a desirable scenario that represents the desire of the founders and the family members involved in the management or control of the company. And other possible scenarios, from the main variables identified in step 4.	The critical variables identified in the previous step for the logical construction of the scenarios, proposed by Schwartz (1991), are used.	Scenario logic
<b>6-Describe in detail the scenario</b>	Describe the scenarios in a narrative way, explaining in detail the variables involved.	Identify the potentialities and vulnerabilities of each scenario to enable a comparison between them.	Comparative analysis between the attributes of each scenario
<b>7-Develop strategies</b>	Elaborate the strategy based on the scenarios and the organization under study.	Draw up action plans for each scenario alternative, in order to help the company strategically for all possible futures.	Action plan
<b>8-Monitor the scenarios and strategies</b>	Monitor strategies.	Identify whether the variables or actors involved in the scenarios undergo any changes during the period determined in step 1.	Checklist





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