FQS FORUM: QUALITATIVE SOCIAL RESEARCH SOZIALFORSCHUNG

Volume 5, No. 2, Art. 37
May 2004

The Market for Facility Programming: A Study of Client Preferences and Decision-Making

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Key words: facility programming marketing, architectural services marketing, professional services marketing, service marketing, professional services, client decision-making, buying behavior

Abstract: This paper illustrates the application of qualitative research methods within the field of marketing in terms of methodological considerations as well as structure, logic, and format of the narrative as a product of qualitative thinking. The paper demonstrates the investigative potential of qualitative methodology for understanding unique and emergent situations that are not well known or researched. The research outcomes presented in the paper are intended for informing architectural programmers' marketing strategies, plans, and actions. The research approach is based on Grounded Theory and Symbolic Interactionist principles, as well as on the methodological propositions of naturalistic inquiry. The content area of the paper is situated in the field of marketing of facility programming services. Facility programming (or architectural programming) is a phase of the building planning process. (The term "facility" is not related to the use of the term within focus group research.) Programming provides architectural designers with information about building user needs and patterns of use of space. This information is utilized in the process of architectural design decision-making. The goal of the article is to understand the clients for programming, the way they think, and the decisions they make. The paper is organized in five parts. The methodological part displays the research philosophy and methodology. The second part discusses the contextual forces that shape the considerations and concerns of facility programming clients. The third part provides thick descriptions of the thinking and behavior patterns of the clients. The forth part culminates with a discussion on client needs and wants and the peculiarities of the demand side of the programming market. The fifth part presents concluding remarks and methodological reflections. The paper is intended for researchers interested in the application of qualitative methodology in marketing as well as design and programming firms concerned with improving their positioning within the market.

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1. Introduction and Methodology

1.1 Introduction: The power of qualitative methodology

The purpose of this paper is to illustrate the application of qualitative research methods in the field of marketing, both in terms of methodological considerations and the structure and logic of the narrative. In this respect, the paper has to live a dual life—in the realm of marketing of facility programming services (or architectural programming services, which do not involve focus groups) and in the realm of qualitative methodology. Regarding qualitative methodology, the paper demonstrates both the application of a particular qualitative approach, the Grounded Theory approach, and the ensuing narrative as a product of qualitative thinking. [1]

The article centers on the market for facility programming services in a large Midwestern metropolitan area in the United States. The goal is to understand clients, the way they think, the issues and influences they take into account, and the decisions they make. The reason for researching clients (the demand), their buying behavior, and the considerations affecting their decision-making is to assist providers (the supply side) in developing marketing strategies and construing their market niches. The paper is a part of a larger project on programming methodologies, clients, providers, and their interaction on the marketplace. [2]

The paper presents a study that can be located at the crossroads of marketing and facility programming. The study of the market for facility programming is an

unusual project in itself for of at least two reasons. Facility programming is a new service, and therefore is not yet fully institutionalized. In addition, hardly any similar studies have been done before, as will become evident in the presented conclusions from the literature review. This creates an uncommon situation, the uniqueness of which has spurred the search for non-traditional research approaches. [3]

In the last decade, the competition among quantitative and qualitative approaches and paradigms reemerged with a new strength. After a wave of positivist euphoria in the social sciences and unquestionable successes in a number of areas, many researchers started to feel and understand the limits of quantitative thinking. The emergence of deconstructionism created a new philosophical and epistemological context and accelerated this process. Against this background, the deficiencies of positivist thinking become more obvious. With all due respect to positivism, we have to consider its limitations regarding a number of research tasks, and we must search for paradigms and approaches that are more productive in these areas. [4]

Most social scientists, and especially marketers, have embraced positivist and other objectivist approaches to the study of social reality. In a number of cases, these approaches have yielded pretty good results and have helped society to organize a number of actions much better than they had been organized before. Approaches of the positivist type are based on a well-prepared, systematic and thorough survey of a large number of respondents, selected at random according to particular rules for ensuring a representative sample. Examples can be brought in from opinion polls and various marketing studies. This approach is very good as long as there are enough materials before the start of the study to prepare an adequate questionnaire and to select the proper sampling technique. In addition, the approach also depends on site-specific conditions to carry out the survey and to sustain the integrity of the sample. However, when these prerequisites are difficult to maintain, quantitative research methods often become irrelevant and yield misleading results. [5]

In the case of this study, after an initial literature search, it was established that there was not enough information to borrow or create a conceptual model with which to guide the development of the survey questionnaire. My strong belief is that in order to develop a thorough and systematic study, we will need a conceptual guide for formulating survey questions. It is important to understand the phenomena and to develop a strong model. After such a model is developed, we can codify it in the questionnaire and develop our research procedures. Without such conceptual basis, the study becomes an ill-defined omnibus survey picking at bits and pieces in a number of disparate areas. And there is an additional problem: if the population is hard to define or hard to reach, the conventional sampling methods and procedures will not work properly. The conventional survey might be sent to too many respondents who have nothing to do with the content area, and thus a researcher runs the risk of receiving misleading information and irrelevant opinions. [6]

Following this way of thinking, my perception was that the major methodological problem stems from the esoteric nature of the phenomenon I was going to study. I had considered a number of options using conventional objectivist methodologies from the realms of positivism and dialectical materialism. There were many suggestions from other colleagues to proceed with a survey. However, my methodological and epistemological convictions presupposed that I had a good understanding of the target phenomenon before developing a quantitative research design. The situation stimulated the search for new methods that should be productive enough to yield meaningful information and to contribute to the understanding of the target phenomenon. Considering the state of the art in qualitative methodology, as well as the traditions, publications, and intellectual resources in the academic community that I was associated with—along with my own competencies—my choice was Grounded Theory. [7]

Grounded Theory is well explicated in comparison to other qualitative approaches. It comes with the epistemological and methodological apparatus of Symbolic Interactionism. It offers the power of interpretation and intellectual appropriation that allows a researcher to start from scratch and move towards unveiling the intricacies of the social world. It is an indispensable tool for studying human action and interaction, including market relationships and relations between clients and providers. One classic study on clients and providers is *The Patsy and the Subcontractor* (GLASER, 1972). My decision to work with the Grounded Theory approach was reaffirmed after reading a number of other methodological texts and narratives on the use of Grounded Theory in marketing and management (LOCKE, 2001; LOWE & GLASER 1995; SAYRE, 2001; SIMMONS, 1993). [8]

The narrative of this paper illustrates the power of Grounded Theory for understanding the nature of social processes and interactions, their components, and their major relationships. Although the major function of the text is to unveil the way of thinking of programming clients, it also illustrates the logic and patterns of qualitative research design and presentation. While the typical quantitative study displays pages of tables with statistics and numbers, leaving only a page or two for a discussion of relationships, qualitative narratives strive to present the big picture, thick descriptions, and rich detail. The detailed representations in this text illustrate the method and the structure of narration it typically entails. [9]

1.2 Making a case for this study

Before I continue in the content area, a clarification will be made regarding the term "facility." In this paper, the word "facility" has nothing in common with the term as it is used in focus group research. Instead, it should be interpreted within the context of the fields of architecture and planning. In the architecture and planning fields, "facility" is a term that stands for a building or edifice itself, together with the social organization that is accommodated by it. The term "facility" has a sociospatial nature and implies an understanding that a building and the people who use it function together towards achieving particular goals

and objectives. However, the emphasis is still on the building component rather than the social organization. Within the context of this paper, its closest synonyms are *building, plant* (e.g. manufacturing plant), and *architecture*. Very often, the discourse will involve the phrase *facility programming*. It is also synonymous with *architectural programming*, *design programming*, and *building programming*. Below, I will continue with additional terminological clarifications. [10]

I will also talk about the facility development process, which sets the context of facility programming. Facility development is a complex and diverse system of activities that starts with the need for a new building and ends with the delivery of the building to its owners and users. The main groups of activities are, in a consecutive order, needs assessment, feasibility studies, master planning, programming, design, construction, and occupancy. The activities that take place before design are often conceptualized as one large domain called facility planning. The nature, boundaries, and names of all these components of the facility development process are blurred, overlapping, and often confusing, even for seasoned professionals. The reason has to do with the complex nature of the process and the multitude of traditions, approaches, and methods it involves. [11]

In this context, design is seen in terms of imagining and organizing space and materials, molding them into a building, and delivering a set of drawings and other documents which instruct the construction teams as to what to build. This is the realm of architectural design/architecture. Design provides information input to construction. Design drawings or blueprints specify what construction teams should do. However, architectural designers also need some specifications regarding what they are going to design. These specifications are usually presented in a narrative format and are referred to as the facility (or architectural) program. The process of creating the facility program is called facility programming. [12]

Facility programming is concerned with developing an information basis to support design decision-making. At the programming phase, the needs and behaviors of building users are researched; priorities about allocation of resources are made, and conflicting requirements are taken into consideration. Facility programming is a complex process that involves information-gathering, decision-making, and spatial reasoning. This view is based on a number of sources that have already become established references (DUERK, 1993; FARBSTEIN, 1986; HERSHBERGER, 1999; PENA, 2001; PREISER, 1985, 1986, 1993; SANOFF, 1989, 1992). [13]

The facility program defines the design problem by specifying the requirements that the design solution should satisfy (PENA, 2001). In addition, the program provides background information for interpreting these requirements, as well as for supporting design decision-making. The program describes the desired and expected design solution in a planning language and serves as a document for communicating these expectations to the designer. It also serves as an unofficial addendum to the design contract, specifying the characteristics and quality of the design product that the client will be willing to accept. [14]

From a societal perspective, programming is a service. The service point of view implies the roles of a client and a service provider. Several related notions emerge when programming is viewed as a service; these include market, demand, and supply. In this paper the emphasis is on programming as a service rather than as a methodology or an object of research in and of itself. [15]

For decades, programming has been performed by designers as part of a package that included the design project. However, since the late 1960s, there has been a tendency toward delineating programming as a separate service. Courses in programming have since been offered at schools of architecture and in training for professions like educational administration. There is a tendency for sophistication, specialization, and differentiation/autonomization of programming as a service of its own, with varying degrees of integration with and segregation from architectural design. In the 1990s programming became officially approved by the American Institute of Architects as a professional service with separate fee. This definitely suggests that architects are in the habit of considering programming as an area that falls within their purview. [16]

On the other hand, among students of programming, there is a strong belief that programming is a profession with a market of its own, with specialized firms and with opportunities for future growth. However, businesses that market themselves as programming firms are difficult to identify and contact. It is interesting to examine what market opportunities exist for firms that specialize only in pre-design services and programming in particular. The fact that few such programming firms are readily apparent suggests that the time is right for a study on the programming market, the clients, and their buying behavior, as well as the type of most common providers. The intent is to prepare information for decisions regarding future business specialization and positioning on the market. The underlying idea is that by understanding the demand side of the market (the client), professionals can better program and plan the supply (the service). [17]

Several additional terms related to the professional interactions at the programming stage and important for the understanding of paper will be clarified here as well. *A programmer* or *program provider* is the person or the firm preparing the program. *A client* is an organization that commissions facility programs. The abstract notion about a client is reified by decision-making bodies that can be conceptualized similarly to *buying centers* (HUTT & SPEH, 2001) or *decision-making units* (COXE, HARTUNG, HOCHBERG, & LEWIS, 1987). Their members are professionals authorized to make decisions about initiating and commissioning programs. These professionals will be referred to as *facility development officers*. [18]

1.3 Initial literature search: Making a case for the qualitative research approach

The literature review started with the intention of finding out the necessary information and achieving the project goals without field research. However, in the course of the review, it appeared that the subject area was seriously underdeveloped, and that the available literature revealed no information about programming clients, their reasoning, and their buying behavior. The literature sources and any theoretical assumptions were "bracketed out" during the study and were consulted again only after the analytical and interpretative parts of the study were completed. After that, the available information was used as interpretative background. There are no grounds for suspicion about "contamination" of the research process. The topics that required literature references emerged spontaneously out of the data collected. [19]

The review of the literature on *facility programming* revealed only two monographs (WHITE, 1982, 1991) and one book chapter (PREISER, LOOYE, & SAILE, 1993) that deal mostly with issues like what architects should study to become good programmers, the level of their engagement in programming projects, and the institutionalization of programming as a specialty. The information provided was not relevant to resolving problems and issues of marketing planning. In the literature on *facility planning*, and in particular in the guidebooks intended for clients/building owners, there were chapters on how to select and contract a design consultant (provider), but no instruction of this type in respect to programming services. [20]

Because programming can be viewed as a service, several domains of service marketing were reviewed. Most important among them were *professional services* and *consulting marketing*. These are generic areas regarding programming marketing. In the last two decades, over two dozens of books on marketing architectural services had been published. Unfortunately, the texts were focused on design services and did not deal with programming. Following a number of assumptions about the nature of user research, there was no reason to presuppose similarities with programming services. A mirror image was found in the literature on consultants. These texts were prepared for clients who need to make decisions about selecting and retaining providers. Again, the texts referred to the consultant as a generic category, and the information was generalized to cover all types of consultancies, including medical, engineering, and legal. The literature provided recommendations and guidelines regarding how to act, but there were no accounts of the actual client behavior and reasoning. [21]

1.4 Methodology

Research approach. After the initial literature search there were many questions remaining to be discussed in respect to the formulation of the problem and the goal structure of the project. The lack of information relevant to the present study was a major obstacle for conceptualizing the research situation in detail and clarity needed for designing a survey or using other positivist research tools.

Under these circumstances, a decision was made to develop the study following one of the qualitative traditions. The author focused on interpretative orientations and, within that area, on the Grounded Theory approach. The research design was based on the principles of Grounded Theory (GLASER, 1978, 1992, 1998) with additional methodological and epistemological considerations following GUBA and LINCOLN (2000), LINCOLN and GUBA (1985), and LOFLAND and LOFLAND (1995). [22]

The goal structure of the study. The problem formulation and the goal structure of the study were developed in accord with grounded theory methodology, in a long process of analysis and interpretation. *The problem* was construed regarding the insufficient information about client behavior in the field of facility programming. In an anecdotal mode, questions arose about what was happening with programming, how brisk the programming business was, in what formats it was conducted, what the sophistication level of the providers/performers appeared to be, and how clients were reasoning, as well as how their behavior was influencing the configuration of the supply side. *The goal of the study* was to better understand facility programming clients. The *objectives* were to construe the way clients think, the issues and influences they take into account when selecting a programmer, and the decisions they make, as well as the ensuing implications for the market and provider selection. [23]

Two-stage research design. The actual actors in the field, the clients who commission facility programs, were not "visible" over the course of the study. Because of that, the universe of clients was construed in terms similar to "hidden populations" and "hard-to-reach participants." The problem of "reconstructing" the target population required a special inquiry to identify client population and to sample prospective interviewees. This problem led to organizing the investigative effort in two stages. The research design had to accommodate a reconnaissance investigation with the purposes of delineating the population of program providers and of providing information for sampling. [24]

Data collection methods. Two separate interview guides were designed for the two stages of the study. The major thematic areas were developed around the interaction between the client and the service provider. The *interview guide for service providers* had two objectives: first, to identify experienced program providers who had projects with many clients; and second, to obtain information about their clientele. The guide was organized around two major thematic areas. The first area was about the realm of the clients—their expectations, requirements, sophistication, and ability to relate project situations and types of programs, as well as typologies of clients and references to particular clients. The second area was about alternative types of program providers (competitors). The *interview guide for clients* explored the decision-making process both in individual and institutional planning. In addition, it probed for information regarding client needs, requirements, problems, preferences, and evaluation criteria. The interviews lasted up to two hours. [25]

Sampling. The research situation can be construed in terms of professional services marketing for business clients (industrial marketing). The philosophy of industrial marketing sampling is based on the premises that the demand is concentrated and that the number of buyers is very small compared to consumer marketing. The logic of this market, as well as qualitative research principles, presupposed the use of non-probability, theoretical sampling. In addition, an important methodological objective was to exploit information-rich typical cases (the principle of intensity sampling). The sample was developed through "snowballing" and continued until theoretical saturation. [26]

The study and the target populations were delimited to the Blue City metropolitan area. (From this point forward in the text, the name of the actual city, as well as the names of architectural firms and other organizations, have been changed to protect the identities of study subjects.) The Blue City metropolitan area hosts a population of about 1,500,000 people. It is in the northern part of the American Midwest, a region often referred to as the Rust Belt. Within this metropolitan area are located the headquarters of major corporations, and this presupposes the availability of experienced and sophisticated facility development departments. Because of its size, the metropolitan area is a natural hub of several large design firms. [27]

In accord with the two-stage research design, theoretically, there were two samples. At the first stage, the purpose of the sampling was to discover units of study for the second stage. The target population was conceived to include both providers and clients with a lot of experience in developing large and complex facilities (the building types that most often require separate programming services). Following these criteria, the population was construed to include the largest 25 client organizations (corporations and government agencies) in the Blue City metropolitan area, as well as the 10 largest architectural firms and 4 facility planning/programming operations well known for their expertise. [28]

In the sample[1], the service provider side was represented with 6 of the 10 biggest architectural firms in the metropolitan area, as well as 2 facility planning operations. The sample for the second stage involved 10 client organizations, each of them represented by one person, all of them at the level of the highest-ranking officer responsible for facility development. The participants worked in a number of major building types: hospitals, prisons, schools, offices, libraries, large public facilities, and even a convention center. [29]

Data quality procedures. The major concern was about the trustworthiness of the information (LINCOLN & GUBA, 1985). It was construed in terms of truth value, applicability, consistency, and neutrality. The truth value concern was interpreted

1 The architecture firms that provide facility programming services were assigned the aliases AD Architects, Capital Architects, Down Town Architects, Morgan Architects, Olsen Architects, and Williams Architects. The two facility planning operations that were active in programming are PD Consultants and Uptown Consultants. The (client) organizations commissioning facility programming projects were coded as Blue County, Blue School System, Intelligent Buildings, Mesetz Developers, Michigan Investment Bank, Mitchel Library System, Prairie Insurance, Saint Nicholas Hospital, Stagg Convention Center, and Stagg Utilities.

through the concept of credibility. Regarding credibility, several techniques for ensuring quality of data were employed during the data collection stage: methodological log, triangulation by source, triangulation by method, member checks, peer debriefing, and referential adequacy. Persistent observation and prolonged engagement at a site were possible in only one case. However, they prove to be very productive. [30]

In order to track the most important methodological decisions made during the development of the research design and data collection process, a *methodological log* was developed. Special attention was paid to the changes in the initial perceptions, attitudes, and methodological assumptions, as well as to any decisions about modifying the interview guide. *Triangulation by source* was used for cross-referencing the information sources. The information from different respondents was compared with the goal of identifying similarities, differences, or inconsistencies within problems and situations that seemed quite alike. Information from previous respondents was often used to develop probes for the consecutive interviews. This approach contributed both to triangulation objectives and to more efficient interviewing. *Triangulation by method* was applied through the use of documents supplied by the interviewees. Only in one case, it was possible to triangulate also with observation methods. *Peer debriefing* was done periodically with two colleagues. This procedure increased the awareness of the researcher regarding his assumptions, biases, and views. Debriefing reinforced both the substantive and methodological reflection in the process of investigation. *Member checks* were limited because many of the participants were unwilling to spend more time on this project. [31]

During the analysis and interpretation stages, several other methods were used; these included negative case analysis, establishing referential adequacy, obtaining structural corroboration, and practicing reflexivity. *Negative case analysis* was constantly employed. Because the situation was very heterogeneous, there was a lot of contradictory information coming in. The negative cases stimulated new probing directions and provided complementary perspectives. It is interesting that after very thoughtful and open-ended discourse, most of the contradictions were accounted for. *Structural corroboration* was continuously applied in conjunction with establishing *referential adequacy* and negative case analysis. Particular attention was paid to conflicting interpretations, and referential adequacy checks were run all the time. *Practicing reflexivity* was interrelated with the methodological log as two complementary reflexive techniques. The purpose was to track changes in the interpretations in the light of new information and emergent findings. [32]

The concern for *consistency* was construed in terms of quality and, in particular, dependability of instruments. This type of concern emerged because of the specifics of the facility development process in different building types, and hence the differences between the cases. Another reason for caution in terms of consistency was that in such situations, the researcher felt obvious pressure to stay within the "track" provided by the respondent. The modifications of the interview tactics, interview guide, and probes, as well as emerging insights and

digressions, fostered legitimate concerns. The techniques used for dealing with these threats involved an overlap of methods, stepwise replication, an audit trail, and a dependability audit (LINCOLN & GUBA, 1985). [33]

Data analysis techniques. The techniques used during coding and interpretation were adopted from publications by GLASER, STRAUSS, and LOFLAND. The interview texts were processed with open, axial, and selective coding. In addition to the most common methods of the Grounded Theory approach, there were several complementary techniques suggested by LOFLAND and LOFLAND (1995): questioning, analysis of phrases and words, flip-flop techniques, comparisons, use of conditional matrix and conditional paths, and "thinking units." Multiple comparisons were made between clients of different natures (different in terms of building types and type of organization). Close-in comparisons were made between, on the one hand, architectural firms, and on the other, clients who were operating under similar building type and organizational conditions. [34]

1.5 Limitations of the study

The two basic constraints that shaped the scope of the study were time and resources. For these reasons, the project was limited to the Blue City metropolitan area. This decision saved the sample from important methodological compromises, but did so at the expense of missing the nationwide picture of the phenomenon. Although the sample refers only to Blue City, there are grounds to believe that the findings are pertinent to all similar settings—primarily multimillion metro areas (but not regional capitals), but also smaller cities as well. At the national level, there is a small percentage of exceptions based on industry principle, rather than on regional principle. The exceptions are mainly in industries like health care, corrections, research, and industrial facilities. The clients from these industries display a tendency to retain specialized program providers. [35]

2. Market Agents and Institutional Influences: Towards Understanding Client Behavior

This part of the paper will elaborate on the social context and considerations of the study and will highlight the social genesis of professional behavior. The overall pattern of understanding was construed through the process of coding and interpretation. After several rounds of analysis and interpretation, two overarching and intersecting notions emerged and created the unifying framework of the narrative. One of them highlighted the institutional and organizational aspect of the facility development process and represented the social context of project management decision-making. The other notion stimulated a perspective towards understanding the decision-makers both as social agents and as individuals, and added an existential aspect to the study. The emerging point of view centered the emphasis on the social forces that shaped agents' motivation and professional behavior. [36]

2.1 Understanding the system: Accountability and risk

The institutional and organizational aspect of the facility programming generates the unifying framework of the study. This is translated into the conceptualization of the natural order of things in industrial marketing, as well as the behavior of organizational buyers and the procedure of hiring service providers. This aspect also embraces the understanding of role structure and office politics in the facility development process and presents the institutional context of project management decision-making. However, in this capacity, it also intersects and intertwines with the existential aspect of the decision-makers. [37]

The individual or existential aspect of the facility development process is demonstrated clearly in the major concerns of the facility officers. This conceptualization presupposes first to consider the organizational context of their lives, and second to reconstruct the motivating forces that lead them through their social trajectory. Facility development officers behave like rational agents who consider the environmental conditions and restrictions and construct the optimum response strategy. In order to understand their rationale, we need to take into account the context of their actions. This methodological move directs us again toward the organizational realm. In the process of interpretation, it becomes obvious that the ideas of accountability and risk produce a background for the understanding of the choices made in contracting pre-design services. The concepts of accountability, uncertainty, and risk bridge the institutional and existential aspects of analysis. [38]

2.2 Buying professionals services: Uncertainty and risk

2.2.1 The nature of professional services

According to KOTLER (2002), a service is any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product. A professional service is a service provided by a professional in a given field; it is related to solving some problem of the client. Architectural design, programming, master planning, feasibility studies, and marketing research are professional services. Services have four basic characteristics: intangibility, inseparability, variability, and perishability (HOFFMAN & BATESON, 2002; LOVELOCK, 2001; MORGAN 1991; SWARTZ & IACOBUCCI, 2000). With the exception of perishability, these characteristics of programming services influence the decision-making regarding the selection of a provider. [39]

Intangibility of the services means that they do not have physical expression before they are bought. Quality of service cannot be evaluated before the service is delivered. The evaluation of the program service can be performed only after the program is delivered, and in fact, the real test will come several years after, when the building is in use and the building users start reporting problems. This peculiarity of the program evaluation process influences the evaluation of the providers as well. Considering that the evaluation of providers is a prerequisite for

their selection, the phenomenon of intangibility acquires a major role in understanding client considerations and decision-making. The effects of intangibility will be discussed in more detail in the next section (2.2.2.). [40]

Inseparability is the second major feature of a service. Authors in services marketing claim that a service cannot be separated from its provider. The inseparability of the service and the provider makes the provider the only tangible component that clients can perceive and evaluate before signing the contract. The connection between the service and a provider is actually one between the professional qualities of the consultant and the usual quality of their work. The notion of inseparability has important implications for predicting the quality of the service by assessing the competencies of the provider. This relationship is used by clients to predict the quality of the service they buy. Clients typically look for indicators of good performance: previous experience, professional record, area of expertise, and ability to meet deadlines. [41]

Variability of the service refers to the fluctuation in the quality of the service provided by the same professional or firm. The variability is due to natural changes in a provider's professional performance because of a myriad of factors, including personal, motivational, health, social, and general environment influences. Often, clients have a lot of bitter experience with variability, and therefore they have developed mechanisms for assessing the risk. When dealing with a firm, clients often want the personal resumes of all professionals that will work on their project. Clients may even dare to ask for information about other projects that are in progress as well as their due dates. Client officers know that a large workload may significantly influence the quality of the service, and for this reason, they may hire only firms that are well staffed. They often develop stipulations that the servicing firm will not engage in other large contracts while working on their project. [42]

2.2.2 The effects of intangibility: Uncertainty and risk

Buyers face uncertainty in all types of buying situations, such as when buying a new car, home, or a computer system. However, the uncertainty is very high when buying professional services, and when contracting design and programming in particular. Buyers of professional services have the common problem of evaluating the characteristics of an offer prior to the purchase and use of the service. In programming, and to a large extent, design, buyers often have difficulties evaluating the service even after its purchase and use. [43]

The intangibility of services like programming and design makes it hard for clients to differentiate between competing proposals. Clients usually do not differentiate by methodology or by content of information. Often, a lack of programming education and experience makes it difficult for the clients to perceive important differences between the proposals of competing providers—differences that may include unique offerings or superior characteristics. The intangibility of the programming services reduces the perceived variation in quality and blurs the grading levels. In most cases, clients receive indications of a poor facility program

only after the building is constructed. In such cases, the indicators are typically user complaints. However, at that time it is too late; programmers and designers trade the blame, and nobody perceives or mentions whether the program is done really well. [44]

Every service presupposes uncertainty and risk because no one can predict the result and its quality until the moment the service is delivered. In the case of programming, this uncertainty is even larger, because clients do not have clear criteria for assessing a program. In addition, the evaluation of the program might be as labor-consuming as the preparation of the program itself. There is also an uncertainty in respect to the time schedule and regarding whether or not the provider will meet the deadline. Clients can partially reduce the uncertainty by knowing what criteria to use in evaluating offers for design and programming, as well as how to manage the service providers productively. Client education and experience plays a crucial role in this process. [45]

It is the intangibility that creates the uncertainty and risk when contracting a service, particularly within the fields of programming and design. The failure of the program provider is perceived as a failure of the facility development officer who had selected the providing firm. In case of failure, the provider's reputation may suffer irreversibly, as one of the facility development officers suggested (Stagg Utilities), but the facility development officers might significantly lower their status within the organization and may eventually lose their job. This way of thinking leads to the notions of risk and accountability as a major explanatory pattern for clients' behavior. [46]

2.3 The pressure of accountability

The theme of accountability rarely appears directly, but it is implicit in the organization of the facility development process. It emerges out of the analysis of the facility development structure of the organizations, which happens to be quite complex. This structure consists of supervising and executive committees, project officers, and task forces. The division of responsibilities and power presupposes a complex loop of communication running from top to bottom and back again. The functioning of the organization is based on the notion of delegation and its constituent categories: responsibility, power, and accountability. The behavior of the facility development agents will be construed in the context of the phenomenon of delegation and, in particular, with respect to accountability. [47]

Facility development officers operate in a real business organization, a corporation. Understanding the functioning of this organization is essential for understanding the behavior of individual agents regarding facility development. For this purpose, three basic organizational subsystems will be considered: decision-making, control, and individual motivation. [48]

Organizational decision-making is a managed problem-solving process with many people involved. To ensure that the job will be done, the workload is usually segmented into portions and assigned to many people. The delegation of tasks

and duties enables an organization to accomplish efficient decision-making. Delegation is also needed because the variety of problems in an organization is enormous, and therefore it is necessary to assemble staff with diverse expertise. Such an approach also allows for specialization and better performance. [49]

In this regard, it is important to look at delegation in relation to categories like authority, responsibility, and accountability. Authority is the power to make decisions. Responsibility is the obligation that is created when an employee accepts authority. Accountability relates to the system of control. Responsibility, authority, and accountability will be used as major concepts in interpreting the behavior of the facility development officers. The principles of human behavior regarding accountability and control highlight the reasoning of the decision-makers in the facility development process. [50]

When people have the responsibility to do something, it is necessary to periodically evaluate performance and to determine whether agents have successfully discharged their responsibilities. By enforcing accountability, the organization is able to control the behavior of its members. Accountability also presupposes that employees will be judged by the extent to which they have fulfilled their responsibilities. The knowledge that accountability is forthcoming makes agents consider the implications of their performance in terms of possible sanctions and rewards. The prospect of rewards and penalties becomes a potent force that shapes the motivation of the facility development agents as human beings in organizational environment. [51]

2.4 The coping strategy: Risk avoidance and control

In the most general and fundamental sense, what the corporate clients see when buying a professional service is uncertainty and risk. The feeling of uncertainty is not necessarily articulated by many clients, but it is there. Uncertainty with service outcome implies risk of failure, and failure has negative implications for one's professional standing. Client behavior reveals the urgency of accountability for service providers; clearly, attaining clear means of accountability is a major objective of client officers who are in charge of facility development projects. [52]

Clients are usually aware of and expect several major threats; among these are hiring the wrong consultant, breach of deadlines, and low quality. A major threat is the risk of hiring the wrong consultants. If the consultants have not acquired adequate expertise for the project, they can deliver programming documents of poor quality. The program requirements will be useless or confusing, client money will be spent in vain, and valuable time will be lost in an abortive attempt. Another major threat is lack of schedule discipline and missed deadlines. In a tight facility development schedule, missing the deadlines may compromise coordination between different agents and cause major disorganization within the whole project. The pitfalls associated with quality usually appear when different participating specialists pass products to the next-in-line specialty. Some of the collaborating parties in this process complain about the quality of products they

were given and the difficulties they encounter because of working with faulty information. [53]

For example, designers usually complain that the design program delivers conflicting information. Sporadic inconsistency and contradictions of programmatic requirements and project restrictions compromise both the credibility of the program as a document and the professionalism of the facility development officer who has contracted a poor provider. Designers' dissatisfaction and complaints regarding the program may provoke an inquiry into the quality of the program, and hence the programming service. This will lead to an inquiry into the procedures and decisions made for selecting and hiring the program providers. Such a situation can spur a major assessment of the performance of the facility development officers and bring about disciplinary actions against them. Many of the interviewees, both facility officers and program providers, shared information in this spirit. In brief, a problem with the design program may compromise the credibility and standing of the facility development decision-makers, and this could be detrimental to their careers. [54]

The risks ensuing from the intangibility of the programming and design services present the major threat for the facility officers. Clients concentrate on avoiding the risk and construct their strategies with regard to this objective. They rely upon two major principles to reduce uncertainty and risk. The first principle can be conceptualized as *reputation*. This principle means that a facility development officer should hire a provider with excellent reputation—that is, a provider who will be unanimously accepted as the best possible choice in case an inquiry into the selection process is launched. The second principle is strong *control* over the process. Client officers may try to cope with the risk by exercising as much control over the process as possible. They may employ the same means of control by which they are controlled themselves: *responsibility* and *accountability*. They may try to transfer to providers the responsibility for quality, and they may also try to create a clear chain of accountability. [55]

In the process of facility development, hundreds of important decisions are made by different agents, at different levels in the corporate hierarchy, in different firms (both the client and provider firm), and in different phases of the project. Many times, it is unclear who actually made the decision and who, therefore, has to assume responsibilities for failures and losses. This happens most often when decisions are made across corporate and departmental lines or when two or more organizations and departments participate in the decision-making process. In addition, it might be unclear who actually has to assume the responsibility when authority for decision-making is given to several providers, either intentionally or unintentionally. [56]

Participating parties may be of several types: feasibility study providers, master planners, programmers, or designers. Each party works on the basis of decisions made by another party or in a previous phase. However, providers may also introduce a strong personal bias when they perform the work that must occur at their stage. In addition, several types of specialists render advice on different

matters, and they may require modifications in the decisions made by their colleagues. Once a decision is modified, its original authors may see the changes as violations of their vision, as well as a compromise to their overall plan. The original party may decline to take responsibility for the modified decision on the grounds that it violates basic premises of the program. In this regard, in a design process that involves several providers, coordination and the distribution of responsibility is controlled by different contracts. The control can be exercised only at the time of product review and evaluation. This organization of the facility development tasks can fragment the process, causing it to become prone to inconsistencies. [57]

The solution to the problem that facility development officers have found is simple: they try to avoid hiring several independent providers to work cooperatively on the same job. Rather, they try to hire one general provider who can pledge responsibility and accountability for as large a portion of the contracted services as possible. Following this logic, clients try to assign the package with preconstruction services to one provider. Usually, this includes the master plan, the program, and the design. However, in some cases when marketing research is needed, the configuration becomes a bit different. In such situations, marketing research, feasibility study, and a basic design program are assigned to one provider; programming and design are packaged together and assigned to an architectural firm or even to a design-building firm that will also provide construction services. In this way, clients communicate with one firm only and, therefore, can maintain a tight grip on that firm, holding it responsible for any potential problem. By doing so, clients are able to minimize the risk of failure and to make their work and life easier, which is also a strong motivation for public or corporate employees. [58]

3. The Purchasing Policy: Buying Like Hiring

The social forces and behaviors presented previously in this paper are conceptualizations at the macro level. In this part of the paper, a complementary perspective is developed in order to account for more specific levels of facility development officers' professional behavior. This perspective, one which is universally familiar to the officers, involves a service-buying metaphor that dovetails with the notion of hiring. The concept of hiring is used to provide a framework for understanding the events happening on the meeting ground of clients and providers. Two levels of decision-making are clearly identified as a result of the coding and interpretation work: strategy (the broad picture or plan) and tactics (the implementation). The first level, strategy, is viewed in terms of hiring policy. The problems of clients are interpreted with the help of the categories "job description" and "job specification." These categories help shape the major decision in terms of the type of the provider. The second level, tactics, is conceptualized as the process of selection of the particular provider. Its core is formed by the selection criteria: experience, references, personnel, and expediency. Taken together, the job specification and the selection criteria that clients formulate provide the cues about their needs, demands, and influences on the market. [59]

3.1 Switching the frameworks: From the risks of buying to the politics of hiring

The fact that services are intangible and, therefore, difficult to differentiate by quality has already been discussed. Likewise, the performance of the service provider might vary in terms of quality. Therefore, services are difficult to evaluate before buying. In such situations, clients have a hard time avoiding the risk of failure. The only solution is to hire the best professional provider available. A good professional presupposes good performance, a good job, less risk, and less uncertainty. Clients realize that if it is not possible to evaluate the service beforehand, then the alternative is to evaluate the service provider. If the person or the firm has satisfactory qualities, these characteristics may become good predictors for the actual performance. [60]

When clients buy services, they actually evaluate what exists at hand: the person/ firm, past performance, and past successful cases. This is quite similar to hiring a professional, and in fact, it is a form of hiring. The difference is that the relations between the client and the professional are not administrative and managerial, but legal. Responsibilities, due dates, and compensation are defined and legally codified. For contracted service providers, the chain of command is replaced by the contract obligations. [61]

In this regard, buying a service is similar to hiring. The principles that apply when hiring a person also apply to purchasing a service. Clients can apply their personnel hiring expertise to the process of finding the best provider. Buying services is not dissimilar from "buying" professionals; in both instances, clients rely on resumes, references, history, expertise, and so on. The risks of hiring professionals who are either unsuitable for a job or cannot perform to the level indicated by their credentials is the same in both contracting for services and hiring of employee. [62]

Employers have developed very sophisticated procedures for hiring. There are three distinct groups of procedures that need to be performed in order to hire successfully: job analysis, recruitment, and selection. Most clients follow all of these procedures diligently and within the possibilities of the particular case. [63]

The first phase of hiring is to understand the components of the job. An elaborate job analysis leads to a thorough understanding of the nature and requirements of the job. When a person is hired, both management and employee must have a clear understanding of the job to be performed. The second phase of hiring is *recruiting* a pool of people that can be considered for possible contracting. The third phase is the actual *selection* of a service provider. [64]

Job analysis includes *job description* and *job specification*. Job description is based on the understanding of tasks, duties, and responsibilities required in a job. Job specification involves the identification of skills, knowledge, and abilities that someone needs to perform the job adequately. These notions can become a

methodological instrument for understanding how clients conceptualize the steps in contracting a service provider. [65]

3.2 Job description: Conceptualizing the major problems to be solved

3.2.1 The project as a temporary job

The job description is the basis of the whole process of staffing. It supplies thorough information concerning the scope of problems that the employee has to solve. The job description identifies the tasks, duties, and responsibilities of a job. Performance standards should follow directly from a job description, informing a potential employee what the job must accomplish and what level of performance is considered satisfactory in each area of the job description. The reason is clear: if employees know what is expected and what constitutes good or poor performance, they have a much better chance to perform satisfactorily. [66]

The concept of job description provides a tool for understanding client conceptualization of the buying situation. With regard to buying services, the job description is transformed into the notion of conceptualizing the major issues to be addressed. Sophisticated clients are quite aware of the different pre-design tasks and phases. They know what they need and what to ask for. Facility development officers often see several issues simultaneously, but they also differentiate among them in terms of importance and interdependence. The officers hold particular perceptions about the nature, complexity, and importance of the issues. Clients perceive two major types of thematic areas in programming. The first one centers on the work processes that will be supported by the building. The second area has to do with translating this information into spatial requirements and solutions. These two thematic areas form the basics of the "job" description that will provide the grounds for compiling the "job" specifications. [67]

3.2.2 The importance of work operations

Experienced clients conceptualize the purpose of the building in terms of providing support for work processes. Advanced clients perceive the organization and description of work operations as a major task in planning a building. The client corporation or agency may use the occasion of developing a new building to engage in operations improvement and the ensuing spatial implications. Clients think in terms of business functions, operations, necessary conditions, efficiency, and other business-related issues. Most clients choose to discuss their operations with specific terminology, in professional jargon. When they have to select architects or consultants, clients are strongly interested in the ability of the service providers to understand how they talk about their organization and how it actually works. [68]

This is the way of thinking displayed by clients who have to respond to strong market forces, who perceive their operations as unique and complex, and who strive to adopt the latest innovations in the industry, to become technological

leaders, and to foster the reputation of a cutting-edge company. Such cases can be observed in all building types, but most often, they occur in the domain of health care facilities. However, since the influx of new office work practices, it is not unusual to find such clients in the domain of office buildings. In the area of assisted living, nowadays even small operators wish to adopt the latest trends in servicing and methods of care, while also accommodating changes in the legal environment. [69]

3.2.3 The problem with spatial thinking

Another class of problems that clients encounter is the "translation" of work operations into spaces. The spatial implications of operations, as well as the impact of spatial decisions on the operations, can be a major problem for clients. It is not uncommon for good management consulting professionals to make drastic mistakes when they estimate the square footage of the premises. The future building users who participate in various program committees and supply information to programmers might be great experts in their own field, but they often have major problems envisaging spaces and dimensions. People without experience in facility planning and design usually do not take into consideration the area needed for walls, horizontal and vertical communications of all types, or a number of support spaces. Altogether, these considerations may account for 30 to 40 percent of the area of the building. [70]

Client facility development officers with adequate design education know well how important it is that programmers are able to envisage the spatial implications of work processes. Programmers should be able to estimate closely the required square footage for particular work processes and user activities; to predict how a particular spatial pattern will perform; and what its advantages and disadvantages will be. Capital Architects said that clients usually desire that programmers take responsibility for such decisions (in case programmers are hired before the architects). Clients tend to expect that program provider will consider the spatial implications for them. They want to learn from programmers (as well as from architects) about the functional advantages and disadvantages of different spatial options. [71]

3.2.4 The problem with managing quality

Imagine the number of phases, providers, and contractors in the building delivery process and it will become clear that the management of the project and its quality control is a major problem for the facility development officers. Emerging risks of failure with project management make all clients aware of the difficulties involved in contracting and coordinating the work of several professional firms. These complicated relations present a threat to such goals as quality of the intermediate products, respect for due dates, successful building procurement, and many other considerations. Facility development officers have to consider a number of potential problems, conflicts, and critical issues that influence the quality of the whole building rather than just the program. It is very important for

clients to be aware of these threats in order to develop and apply a methodology for dealing with them. [72]

The resistance of the architects. When several providers work on a project, it is quite common that each one will blame the others for the shortcomings in the solutions. It is very easy for designers to explain building malfunctioning as resulting from mistakes in the program. Programming is like diagnosing. What one doctor will state, another may reject. Architects always seem to find mistakes, express different opinions, and practically reject the program (Prairie Insurance and Stagg Utilities). At the same time, programmers often claim that designers have interpreted the program incorrectly. Programming clients are quite sensitive to possible complains by designers who often display dissatisfaction with facility programs prepared by another firm. [73]

The interpenetration and overlap of different phases. Design is a process that deals with ill-defined problems. The definition of the problem is evolving in the process of solving it. New and different knowledge may be required to assist with the modification of the problem formulation. Continuous information assistance is needed, as opposed to a service relationship that ends with the delivery of the program. A long-standing relationship may be very useful because a program rarely contains all information needed for reformulating the problem and designing a new solution. There is also a lot of information that cannot reasonably be expected to be presented in the program either because of volume constraints or because the nature of tacit knowledge. [74]

The critical nature of design and construction knowledge. The conceptualization of success in the building delivery process is a very complex phenomenon. It is influenced by the interplay of a number of factors and requirements like procuring good-quality construction and delivering the building on budget and on time, as well as providing optimal support for client business operations. In many cases concerns with meeting the budget, the deadlines, and an optimum construction quality overshadow the importance of accommodating user needs and functional requirements. The program provider has to consider and manage problems with budget, site, and limitations of existing buildings, as well as the consequences of employing different materials and structural systems. In this regard, design education and technical competencies are very important for preparing a good and feasible design program. [75]

The way client officers envision these major issues and the way they assign priority to them help to shape client conceptualization of the knowledge, abilities, and skills needed to solve the problems. In this way, clients construe the "image" of the provider who will best solve these problems. [76]

3.3 The "job" specifications policy: Search for operational expertise, design competency, and experience

Job description serves as a basis for the development of an inventory of qualifications that comprise the job specifications—a system of knowledge, skills, and competencies that provider firms must demonstrate in order to successfully perform the job. Factors within these groups include education, experience, work skills, personality traits, organizational and management requirements, and workforce availability. [77]

Job specifications tentatively outline the professional areas from which providers should be recruited. The difference between the job specifications and the selection criteria is that the specifications indicate in broad terms what kind of professionals are most relevant to the project, while the selection criteria are more specific. The criteria are applied to the pool of applicants with the purpose of helping to assess who is best prepared to do the job. The job specification and the selection criteria are commensurate with two successive stages: first, defining the problem for finding the type of provider, and second, selecting a specific person or firm. [78]

The job specification is construed, in this study, in the light of the three major qualifications that clients usually look for when they search for providers: expertise in operations, design experience, and continuity. Requirements of these types are noticed very often when analyzing both corporate staffing practices and the programming clients' behaviors. These categories usually emerge as a natural outgrowth of the problems that clients envisage. [79]

3.3.1 Search for operational expertise: Workflow matters

Clients need program providers who can quickly understand the system of activities and the technological infrastructure. The program providers should be versed and competent in the client's type of industry so that they can understand the nature and functioning of the client operations. The providers should be able to communicate with ease with the workers and operation managers in order to collect information necessary for design. [80]

Clients explicitly require that program providers command a high level of expertise in organizational design and operations improvement. At Request For Proposal (RFP) interviews, clients are very persistent in asking applicants what solutions they might propose for the major operational problems. These interviews are almost like an exam in the operations of the client organization. Most of the conversations are about organizational structure, workflow, and operations, as well as how the applicants view the alternatives. For example, AD Architects said that the program is about how a business works; Capital Architects and Olsen Architects said programmers need to understand client operations, or how the clients work. Blue County's RFP competition was like a quiz in catering and food service. [81]

Many architectural firms hire operations consultants, usually from planning firms, or they make partnerships with them to participate in an RFP presentation. Planning firms are staffed with former administrators and operation managers and bring their expertise into the facility development process. This phenomenon is most obvious in hospital facility development. Health care planning firms routinely hire former administrators, physicians, and nurses in order to provide a wide range of facility planning services. [82]

3.3.2 Design competency: Space matters

Design competency is a major quality widely sought because it brings syncretic solutions to all problems of the clients. Clients perceive several additional qualities of providers as very important: expertise about prototypical solutions in the field of the building type; expertise in relating operations to space; expertise in technical matters, prices, materials, appliances, construction products, and interior inventory; expertise in combining all these aspects of the project so that a feasible and functional solution is reached, and last but not least, expertise in project management. [83]

There is a vast array of problems that require expertise in technical matters, such as costing, materials, construction products, furniture, and equipment, as well as experience in coordinating all of these aspects so that a feasible and functional solution can be reached. This is an area wherein clients feel a deficit of knowledge. They would like someone to step in and help them. Experience in planning and designing in the area of a particular building type brings a complex set of expertise. Such expertise is acquired through site visits, formal and informal post-occupancy evaluations, planning and design, and extensive research in the building type literature. [84]

3.3.3 The benefits of experience

Clients believe that experienced providers can guarantee better quality of service. Facility development officers may even use experience and erudition as performance indicators instead of inquiring about the provider's methodology. Capital Architects said that clients want expertise, not novices that will learn the trade on their project. Capital Architects and Uptown Consultants believe that experienced providers can shortcut trivial matters and invest more time on important issues. In this way, they increase project quality, save billing time, and allocate more time to elaborate special details that otherwise may be overlooked. Experience also enhances the project management aspect of program delivery. Experienced providers know well how to schedule projects, where to press, how to insist, and how to organize and manage their own staff and hired consultants. Such programmers can be more trustworthy regarding delivering the project with high quality and on time. This kind of reasoning strongly affects clients' choices and creates demand for experience. [85]

3.3.4 Providing continuity: Enforcing accountability, responsibility, and succession

A major management problem that clients conceptualize is how to control performance quality of different providers—in other words, how to keep them accountable and responsible for the services they deliver. Clients are vulnerable to providers that blame each other for building failures. The solution that clients see is bringing continuity to the process. Continuity fosters higher overall project quality even when in some phases there is mediocre performance or even glitches. Clients have learned that the easiest way to control providers is to hold only one firm responsible for the work of all professionals. Charging only one party with responsibility for the whole process provides not only administrative leverage (control), but also technological conditions for smooth interaction and transition between the phases and from one service provider to another. The ability to provide continuity in the pre-design stage becomes a major qualification that the applicants for the job should possess. [86]

For most clients, the provision of continuity in the facility development process becomes more important than the search for a high-quality programming service. Moreover, the performance evaluation of the facility development officer is based on the tangible phases of facility development such as construction and design, rather than the intangible activities such as programming. Even educated and experienced clients who understand the limitations of architects as facility programmers may hire them to develop the program. The reason is that the disputes between program providers and designers who constantly blame each other for project failures force clients to retain the same service provider for both programming and design. Facility development officers evidently prefer that architects manage the whole "intellectual" part of the facility development process and consequently take full responsibility for the outcomes. [87]

3.4 The selection policy

Service provider selection can be conceptualized as a process of matching up a job with a professional. The success of the programming project depends on how well providers match the nature of clients' problems. The analysis and definition of the job is the initial step in developing the tools that enable the recruiter to make the best possible match between the job they have, the focus of the recruitment process, and the selection of the applicants. Stated in a more specific way, job analysis provides information about client needs and preferences regarding to service providers. The selection policy of the clients is based on two major premises. The first one may be conceptualized as predicting performance on the basis of provider declared potential. The second one is based on the assumption that the history of performance is a good indicator for future performance. These premises lead to the formulation of the selection criteria. [88]

Experience: the wisdom of trial and error. The major group of selection criteria refers to the record of qualifications acquired through professional experience. The applicants are evaluated and scores are assigned to expertise, erudition, and specialization. One of the questions most frequently asked is about past projects

that are similar to the client's job both in type and in size. This procedure insures against the risk that the provider may experiment for the first time with the client's project. If the provider has an excellent record of experience, and nevertheless fails, the facility programming officers can claim that at least they selected the best possible candidate. This consideration is strongly influenced by the risk-avoidance imperative. This consideration is in line with the traditions of domains like professional services buying and personnel hiring where it is accepted as the basis for applicant evaluation. Its procedural incarnation is the resume. [89]

Personnel potential: size, staff, and management methods of the provider. This group of criteria is both the most formal and the most holistic. The size of the firm and the list of specialists employed provide a general orientation regarding personnel potential. The size of the organization is a good indicator of its ability to allocate enough staff for the project. A large organization can commandeer many people on a project and do it for a short time. Such organizations may easily cope with new projects and residual load of old projects. Some clients even inquire about the organizational structure and the management methods of the provider. These questions also stem from the logic of the risk-avoidance principle. In this way, clients get a kind of guarantee about the ability of the provider to keep to the time schedule and to manage a uniform level of quality. At the same time, such information provides hints about the ability of the provider to control the process, as well as the possibility that the client may easily control the provider. [90]

References: are others clients satisfied? References from other clients are a general method for ensuring that the provider is capable of doing the job. This method is based on history of performance, history of relations, and evaluation of the provider by other clients. Such a battery of insurance policies should satisfy even the most demanding supervisors. Careful attention to references can be viewed as the most viable method of avoiding risk. If a provider has performed well in ten other situations, even if they fail now, it will be considered a mere coincidence. The facility development officers will be saved from accusations about neglecting selection principles and procedures. [91]

Expediency: meeting the deadlines. The history of punctuality is used as a performance indicator and predictor. It is yet another instrument for avoiding risk. In this way, clients can judge the risk of being left in the chaos of unfinished work, with angry subcontractors and prolonged building delivery time to contend with. In organizations that are very sensitive about moving into the new facility on time, this is a crucial criterion that can sometimes overshadow the rest of the qualifications of the provider. [92]

The preceding section of the paper presented the major patterns of thinking and decision-making of facility development officers. The process of contracting a provider was disentangled and a number of components of professional awareness were identified, including considerations, problems, and needs, as well as professional methods techniques. The components and their format in particular highlight the mechanisms of reasoning as well as the major concerns and requirements that shape the logic of contracting behavior. In turn, this

thinking constitutes and shapes to a large extent the market for facility programming services. The section below will shed light on the market and will construe the existing marketing niches of facility programmers. [93]

4. Construing the Market for Facility Programming Services

For the purposes of this study, the demand side of the programming market can be described with several categories, organized in two groups. One group is about building-type specialization and experience; the second set of categories is about provider firm qualities. [94]

4.1 What clients demand and buy

4.1.1 Building-type specialization and experience

The first group of categories that clients look for is building-type specialization. Specialization is perceived as a quality indicator, supported and corroborated by thousands of clients in their long career paths. Specialization is an indicator of experience, and experience indicates expertise. Expertise is believed to contribute to good performance. Clients demand specialization by building type because such specialization provides the most holistic experience. It includes client business operations expertise, the ability to translate operations information into design requirements, design knowledge, and project management experience, as well as the ability to work quickly. In this way, specialization is viewed as the attribute that satisfies several needs at once. This line of thinking models the logic of the clients when figuring out the way to achieve successful building delivery. Such logic prevails among the clients of every professional service, and facility development clients are not an exception. [95]

4.1.2 Broad experience

Clients learn that providers with broader experience regarding different situations in the field of one building type are more flexible and creative, and can better deal with complex and unusual problems. Client organizations strongly believe that operating at the level of the national market helps a design firm to build a broad vision and information about new trends in the building type, including information about new developments in operations management. The "actors" in the national arena are considered much more advanced and sophisticated than the local performers. [96]

4.1.3 Provider firm potential

Service providers who receive a large number of commissions and who are highly respected by clients share some common attributes that, while connected with actual past performance, are generally accepted as good predictors for future behavior. These categories are reputation, staff, and schedule discipline. [97]

Reputation. The reputation of the provider firm is both a holistic attribute and a predictor that clients look for. A firm with a good reputation is considered more trustworthy and is expected to do a better job. In the event of failure, the low performance will be attributed to disastrous circumstances rather then to poor selection by the facility officers. One reason that facility development officers rely on reputation is the way it is built and the way it is lost. It takes years to create a favorable image and good reputation, but s single failure may ruin it all. Stagg Utilities said that in such cases, the word of mouth about poor performance spreads very quickly among peers and the unlucky provider can be ruined for life. [98]

Provider firm staff potential. Clients scrupulously look for all kinds of formal details before they hire a provider. They often go so far as to take into account such attributes as the number of qualified staff, their personal resumes, and their delegated power. This is one possible way to predict whether the provider will be able to complete the project on time without compromising the quality. Large, well-staffed firms are more competitive than small ones. Another attribute that clients demand is a good record of schedule discipline—and especially, a record of finishing jobs on time. Time commitments are very important in the facility development industry. This is true for both the design and construction stages. Clients demand and pay for discipline. The fact that during interviews they assign a substantial score for a strong history of compliance with the project schedule shows the importance of this performance quality and the scale of the real demand for it. [99]

4.2 Preferred providers: The architecture firms

The usual practice of facility development officers is to hire a large design firm that will sign a contract and take responsibility for the whole preconstruction process. Such firms usually have specialized staff that is organized in studios by building type. They rarely keep specialized programmers on staff (with the exception of a half-dozen national level organizations like Hellmuth, Obata & Kassabaum, Inc. [HOK]). However, for large projects, and particularly when the clients demand expertise in operations, design firms might subcontract facility planners or management consultants to become more competitive at the Request for Proposal (RFP) stage. [100]

By subcontracting, architectural firms manage a wide array of facility development situations—from very simple to very sophisticated. When the problem is complex and difficult, sub-contractors are invited. In many cases, the name of a nationally renowned consultant may highly enhance the potential of the design firm to compete for a project. In the last decade, design firms started developing the practice of signing contracts with program providers (facility planning consultants) if they do not keep specialists in a particular building type on staff. These people conduct an inquiry in client operations and user needs, develop the design program, and lay out floor plans. Such cooperation enhances the credibility of the design firm. The architectural firm assumes all responsibility and works to build its own reputation. [101]

Practically speaking, it is very rare that professional programmers are hired to develop the program because architectural firms monopolize the market for programming and design. This trend may ultimately force programming firms out of business, although it is more correct to say that this precludes programmers from entering into that business. According to one interviewed architect, only people who have some other means of financial support can afford to engage in programming. One example would be academics who perform research in this field, but who have their primary employment within a university. This is indicative for the state of both the market and the real practices of the facility development clients. [102]

4.3 Buying a program: Like hiring a design firm

Clients have to develop environmental support for their operations—not the building. When we look at the big picture, it becomes clear that clients "buy" a building, not disparate services. In reality, the direct translation of this interpretation is the "design-build" service, wherein one contractor assumes all the obligations (and benefits!) of delivering a turnkey building to the client. However, in most cases clients separate the planning and design services from the construction services. In this respect, clients engage in buying design services. However, clients rarely think in terms of a programming project. They have a more holistic approach—they think about a design project as the guide for construction. Design is the core of the preconstruction project. [103]

Buying programming services transforms into buying design services. From this moment on, we enter the realm of the architectural design market and get involved with all issues associated with it. The social forces that make facility development officers search for architectural firms as program providers influence client behavior in the architectural market as well. The considerations, strategies, policies, and standards are pretty much the same. However, by definition, the market of design services is a different area of study, no matter how close it is to this project. There is a lot of literature on the market of design services and on topics like how to select and retain design consultant, both from the standpoint of designers and clients. [104]

5. Concluding Remarks

5.1 The marketplace in a nutshell

In summary, this study shows that client facility development officers experience a lot of uncertainty and risk regarding service quality and timelines. Considering the systems of decision-making, control, and accountability in most organizations, the unpredictability of service providers' performance leads to tremendous pressure on facility development officers as social agents and human individuals in respect to keeping their professional status and position. In response, they adopt risk-avoidance strategies and search for the most reliable providers. Clients demand from providers expertise in user operations, design experience, and evidence of process continuity. The major selection criteria include specialization,

experience, reputation, and personnel potential, as well as evidence of discipline in time schedule. Clients usually commission their programming projects to architecture firms. [105]

The practice of commissioning facility programs to architecture firms, rather than to specialized programming and planning businesses, has important consequences for the programming market. The marketplace is, practically speaking, monopolized by architectural firms by the virtue of the control they hold over the whole preconstruction process and the benefits they offer in this regard. This dominance of architectural firms takes place at the expense of professionals with exceptional expertise in business planning and organizational design. The planning firms, unfortunately, cannot guarantee the quality of the preconstruction phase as a whole and cannot establish themselves as a strong voice in the facility development process, mostly because their role is mediated by designers and their firms. [106]

5.2 Implications for future research

The ensuing implications of this situation for facility development as an industry, the impact on user needs and operations, as well as the influence on the progress of the field of facility programming will be a subject of another study. Our belief is that the market should be driven by the demand, rather than by the supply. If the demand side cannot appreciate the importance of particular goals and overestimates other benefits, this should be construed as a social problem. The main issue is the society itself, exemplified through several sub-systems and institutions, has not arrived at a clear understanding of what are the advantages and disadvantages; what are the gains and the losses; as well as who gains and who loses in current practices. [107]

This project sets the foundations for a number of topics to be explored. However, there is one idea that deserves to be mentioned here. It is the notion that the profession of facility programmer/planner needs clear institutionalization, social support, and promotion. However, this is another task and it will take exceptional dedication, mobilization of social resources, and a long time span. In this regard, in order to come up with more concrete ideas, it will be necessary to envisage several projects with the goal of finding feasible ways of procuring such developments. Until then, the advice to facility development officers is the following: commission your programs to architectural firms—even if the program document leads to building inadequacies, current organizational practices and patterns of thinking will protect your professional standing, livelihood, and the welfare of your families. [108]

5.3 Methodological reflections: The power of qualitative methodology

Working within the field of facility programming, I encountered conflicting information and experiences regarding the size of the programming market, the importance of programming that is perceived by the clients, and the clients' ability to appreciate and reward advanced programming methodologies. Residing

mostly in academia, I was excited with the possibilities posed by programming and the belief that clients were ready for sophisticated programming services but were simply unable to find providers. It seemed to me that the supply was lagging behind the demand in terms of theory, methodology, and volume. Some academics that worked in the field of programming had published materials that created the impression of a brisk trade and enlightened clients. I personally hoped that there was a very strong and sophisticated demand for programming, and that the success of the program provider depended upon a grasp of advanced methodologies. However, I also spotted a lot of controversy, confusion, and even strange opinions. As a whole, the picture was somewhat unclear and prone to changing colors. In this respect, facility programming proved to be an intangible object of study. On top of it all, different provider groups conceptualized it somewhat differently in terms of scope, scale, methodology, and effort. The conceptualizations could be plotted on a continuum from "programming is design" to "programming is research." [109]

This information and my perceptions were enough to spot a potential research problem, but far from sufficient for conceptualizing a well-thought-out research design based on theoretical models of the phenomenon that is studied. Initial explorations about creating an interview questionnaire showed that many of the questions didn't yield meaningful answers; in many cases there was suspicion that respondents provided socially appropriate answers. There were indications that respondents were savvy and very quickly guessed the "right" answers. The whole range for questions was so broad that the survey questionnaire started getting prohibitively large. It became clear that the pilot tests followed one after another and there were always indications that the questionnaire needed substantial modification. Even after this work was done, there was no clarity about the object of study and the nature of the main actors on the field. There were too many assumptions and guesses involved in the preparation of the study and the survey questionnaire. [110]

After conceptualizing the study from a qualitative perspective, the work proceeded completely differently and was much more productive. There was no need to ponder over a standardized questionnaire and to anticipate the usual data quality problems associated with survey research. The approach with an interview guide and broad, open-ended questions offered a deluge of information. Now the main tasks were how to make sense of this information and how to interpret it in a way that would help to construe the programming market reality. After a couple of in-depth interviews, an unusual picture started to emerge. The information was more than surprising, considering my beliefs and expectations. At this point it was clear to me that the qualitative methodology that I used would bring interesting results. I also started understanding why my quantitative attempts were futile—the reality was so far away from my beliefs that the standardized questionnaires had no chance to bring meaningful information. Because of the phenomenon of socially acceptable answers, I was not able to understand promptly that the instruments did not work. The standardized questionnaire could not intercept some very important information. Many themes were missed or neglected. There was no way to sense key prompts and hints.

Some indications provided by the respondents were neglected because of research thinking associated with positivist approaches and quantitative methodologies. [111]

The qualitative methodology yielded a completely different set of data. Because the questions were broad, unrestricted information started to emerge. Although most of the information seemed unrelated and almost useless at the beginning, after the second interview some patterns started to emerge. The broad, open-ended questions allowed respondents—and in some cases stimulated them—to provide information that I didn't expect, and at the beginning of this aspect of my research I didn't believe my ears. In the first interviews, I was tempted to interrupt the respondents or just walk away because seemingly they don't have the experience I was looking for. Later it became clear that they didn't have the experience that I believed they should have. [112]

The qualitative methodology required a lot of patience. It was important to have prolonged engagements with the respondents and to collect rich data. It was vital to decide how long to let the respondent veer out of the general direction and to judge what might emerge from this digression. Most of all, an unbelievable amount of information had to be transcribed verbatim, coded, and interpreted. [113]

The study was quite exhaustive because I tried to collect information across several building types and was concerned that each new case might support my old beliefs and expectations and might refute the initial cases. When working with information-rich cases and looking for depth, there are limits of the human mind for dealing with hundreds of pages of transcripts. It became apparent that I needed to consider my processing capacity and keep within it. It is important that every researcher plan the number of cases to be studied with this consideration in mind; otherwise, the analytical and interpretative stages might be prolonged too much, other circumstances might interfere, and the researcher might lose control over the whole picture. Doing interpretation in qualitative research is not like writing a quantitative research report—two pages every day, and the paper is ready in two weeks (you probably have read such advice from particular authors). Although it is advisable to look at the interpretation from a new perspective, and to use peer debriefing and other methods, the researcher needs to be immersed in the study. Immersion and concentration are extremely important for productive analysis and interpretation. It is like the idea of flow. [114]

In conclusion to this reflection, I would like to mention that when working in uncharted territories, exploring phenomena that are not widely studied or discussed in the literature, qualitative methods are indispensable. Researchers can learn much more with them than with quantitative methodologies. The logic is simple—if you don't know what you are going to measure, how can you measure it? [115]

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Citation

Popov, Lubomir (2004). The Market for Facility Programming: A Study of Client Preferences and Decision-Making [115 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *5*(2), Art. 37, http://nbn-resolving.de/urn:nbn:de:0114-fqs0402375.