

Brazilian Aerial Survey

Market Thoughts

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Writing about the Brazilian market of aerial survey has never been considered taboo, but few or almost no one has ventured on it. It is not possible and it is not a desire to make a conclusive text. I put here some facts, ideas and situations in an attempt to provoke your reflection on the current market and some of its problems.

I am tempted to believe that the number of cases of failure in the services of aerial survey is higher in the current days than in previous decades. Even considering that there has been a large increase in demand, complaints on the part of contractors, mainly regarding compliance with delivery terms and the quality of the services provided, seem to be higher in percentage. The wonderful high-technology avalanche that we have reached in recent years has given to the market the misguided notion that it is enough to have modern and updated equipment in order to generate high-quality product. Our market is not a fully automated factory of pixels or points; in addition to the high-technology equipment, good methodology is indispensable, along with rigid criteria in execution and professional experience. The human component in recruiting, managing and implementing is, and will be for a long time, one of the main ingredients of the recipe for success in any service hired or supplied.

Although not the only ones, the most frequent reasons considered as causes of failure are quality and service deadlines. Historically, guilt has always lain on the contracted companies. In several cases I was able to witness, that is the pure reality. However, a significant portion of blame, unfortunately known by few, should be attributed to the contractor, whether for the lack of appropriate supervision technique, the lack of experienced professionals, delays in closing the contracts, political injunctions, lack of planning, lack of criteria in the choice of the contractee, or for the low remuneration for the services, the latter being what I think is currently the greatest villain in the aerial survey market. We cannot fail to mention that several companies in the market have always played their role in exemplary manner, whether they are contractors or contractees.

Although in a very shy way, the market begins to show, if not a reaction, at least the desire to change this reality. It is commonplace that, in many cases of success, merit be placed on both, i.e. contractor and contractee will always be together and conjugating the same verb to win. One of them wins quality and schedule compliance, and therefore pays a fair and reasonable price; the other, in order to be able to earn in a fair and appropriate way, must provide a quality service within the established schedule. An important contractor in our sector calls it "Win - Win".

There was a time in which aerial mapping companies worked almost exclusively for customers of city, state and federal governments. Nowadays services are also sought by many clients of the private sector. New technologies, methodologies and the consequent increase in the accuracy of surveys were the great starters for new applications, especially in the engineering area. We are living a growing demand for services, and the market appears to crave for a change in the relationship between contractor and contractee, or consumer and supplier. This change may be necessary not only for the increasing demand, but mainly for the great importance that the surveys

have in any engineering project, in the management of disasters, in the rural, urban, strategic planning, and numerous other applications where a good "map" is the basic tool, and, therefore, essential.

It is essential, for the contracting party, that a cartographer or specialized professional be present to responsibly provide assistance during the phases of planning, procurement and execution of the job. Unfortunately, that doesn't always happen. This professional, in addition to specifying the services, should guide the choice of the best company, taking into account the financial and technical aspects of the survey to be contracted. During the execution of the service, it is up to this professional, together with the supplier, to elucidate and to assure the contractual object is met. Here we find the reasons for several cases of failure, since technical requirements of methodology, quality control, and clauses of not subcontracting or outsourcing prohibition almost always fail to be followed, leading to failure. Even worse is discovering, at a late stage during or after the implementation of the project, that the surveys used as a reference for the project were riddled with errors.

Many are the cases of failure due to lack of planning. Many of the survey activities require favorable weather conditions. It is not rare to have the contracts start being executed, by imposition of contractors, exactly in the worst season of the year for that. Of course, there are always reasons that have led to such a situation; however, these same reasons could also be used to justify the failure, whether due to failure in meeting the schedule or to low quality because of unsuitable climatic conditions. In some cases, the process of purchase is inefficient, bureaucratic, and so long that it takes more time to sign and start the contract than to perform the contracted service.

Some years ago, a major Brazilian state instituted the modality of "pregão", or reverse auction, for the purchase of services. This same state realized, after several cases of failure, that for engineering services, such as aerial mapping, the reverse auction should not be applied, under the great risk of failure of the whole enterprise. This state, in a bright attitude, gave up, and not only banned the practice of reverse auction for engineering services, but started to require that the process of purchase necessarily be "technique and price" or "best technique". However, some contractors, not tied to the government or from other states, continue to use the modality "pregão". The Reverse Auction has been destructive to the market, because in their eagerness to win, some companies are irresponsibly submissive to the pressure from their internal commercial goals, and/or from the auctioneers, ending up not resisting the temptation to practice low, and sometimes ridiculous prices for their services. A few companies have even decided to adopt the arrogant policy of believing that "if there is any competitor that can do it for this price, we can do it for a little less"; and thus the prices fall into the precipice. Therefore, in order to avoid losses, they are obliged to either give up the contract or, even worse, to end up running the service without the required criteria, which would be of fundamental importance for the maintenance of quality and schedule.

In the modality of reverse auction, without good criteria for admissibility, the probability of contracting services at low prices is almost as big as the probability of obtaining poor service. Already, there are in the market some cases of success from the practice of reverse auction, but the luck factor has likely been the main reason for that. Our company, by principle, avoids participation in this tender method - we think it is an affront to our professionalism. However, if it is the will of the current market, we have the obligation to try to understand this trend, and, therefore, we have participated in such tenders with certain frequency, more as observers than as competitors.

In reverse auction tenders, it is common for companies to submit, at first, a price little bit higher than the one they could practice, and enter in the dispute by offering price reductions in order to get to the

real value - usually a little below that. However, an absurd situation has already happened in which a company won the auction for less than ten per cent of its first offer. Disregarding the hypothesis that, during the auction, the company detected an error in its original composition of cost, it seems not "ethical" that it won the auction with a value so inferior to that of its first offer. Moreover, it does not seem to be a responsible attitude of the contractor to purchase services for a price that he himself knows is not sufficient to remunerate the work respectably, which would lead us, in part, back to the problem of lack of specialized professionals in the subject. Some contractors, in order to resolve this, secure a minimum value for the reverse auction. It has been common for contractors not to require any qualification from the contenders in the dispute of prices, which represents a great risk, but is supposedly justified by the quest for lower price, and, of course, not for the best service. We have already witnessed a case in which the technical and paper requirements only came to scene after the auction, and the company finally chosen was the fifth placed in terms of prices, because the preceding companies could not meet the requirements. If the first four hadn't offered such low prices, our company possibly would have made a better offer and not given up the tender at the time prices fell down into the precipice, and perhaps we could have awarded the contractor with the best price.

In the market there will always be companies that offer their prices in accordance with the probable value expected by the customer, and not based on their costs. This, in various situations, is quite commendable and seems to be an interesting approach and transparent to the market. However, in the great desire to satisfy the need for low prices by their customers, they end up harming, sometimes irreparably, their financial health. A good indicator of a company's health is its balance sheet. In general, here in Brazil, balance sheets do not reflect exactly the financial situation of a company, but are a strong indicator of it. The analysis of the balance sheets should be done not only individually, but also in comparison to all the other companies participating in the tender or on the market. There are balance sheets that are true works of art or science fiction. Low prices practiced by a company do not always mean that it is efficient and productive, or that it is well managed.

Companies exist to fulfill their reason of existence: being profitable. In order to last for a long time, they need, in addition to being profitable, to fulfill their social function of generating jobs, good services, and positively contribute to the advancement of the nation. Only by profiting can a company remain on the market and invest in their technical and technological improvement. Some contractors clearly show that they do not allow their suppliers profit margins above a determined and modest percentage. We have been in a case, during the negotiation phase, in which we were being questioned because our profit margin was a little above that limit, when, at the same time, the press announced that the profit margin of that contractor was more than three times the profit percentage intended by us. Later on, it was easier and more peaceful to argue and negotiate the profit margins of our services.

The process of procurement done only through pricing criteria allows the contractor no room for maneuver in his choice. The market of geo-technologies is not different from other markets, and it is not difficult to find, among aerial services providers, enterprises whose main characteristics are seriousness, opportunism, resourcefulness, ingenuity, responsibility, irresponsibility, thoughtlessness, and "money-searching", among others. I call "money-searchers" those companies that, as well as some contractors, seek only the best financial result, and do not hesitate to provide, or purchase, a low-quality service provided that their profits are maximized. Obviously, this policy is not overt, but disguised as, most of the times, effective management or management-by-results.

It is not rare to find companies, considered "technologically naive", that overestimate the technology that they have. They sometimes provide low-quality services precisely because they do not know the

true potential of their technology and neglect the methodology, the criteria for fulfillment, and quality control. Others even mistake their objective, which is the provision of service and development of software and/or equipment for sale. With some exceptions, most of those initiatives simply do not succeed, because marketing their "products" means to have their competitors as potential customers. This, in addition to conflict of interest, may not have good acceptance in the market. In the long run, it becomes difficult to invest in high-cost development and maintenance for just a few clients. Summarizing, a businessman in the sector, who I admire very much, always says to me: "it makes no sense seeking to reinvent the wheel".

It is common sense in the market that the Brazilian prices are higher than those charged internationally. In part, this is attributed to the "Brazil" cost: we have social security charges unreasonably high when compared to the international market; our import taxes are also exaggerated, and much of the equipment and materials used are imported; the exaggerated policies on health, safety and the environment also raise the prices of services. The excessive concern with the visual or aesthetic appearance of the "map" in detriment of the technical content is a characteristic of Brazilian customers. This makes serious companies take special care in order to meet the aesthetic demands of the customers, and also the content imposed by their own ethics and responsibility, which sometimes just increases their prices when compared to work of less content requirements.

The contractor should always be wary of prices excessively low, because, assuming there are no big technical or technological differences in the fulfillment of the job, those prices should be similar. If they are not, be suspicious, because they might not include all the costs for the realization of the job, for its quality control, as well as the common exaggerated optimism in productivity. If doubts persist, check if the specifications would lead to distinct interpretations. The Brazilian contractors, in general, do not know much about the services they are buying, which ends up making it easy for evil-minded companies to get the job, increasing the chances of failure.

It is not rare for companies to give up financial results in order to have a first supply contract with a contractor. The intention is to become known - I call these companies "debutant". The recurring problem is that someone is always debuting. A new methodology or new equipment in the company also brings a debuting desire, which can sometimes generate a poorly paid, not completed, or worse, a low-quality job, causing a possible and mistaken disbelief by the contractor in the methodology or technology employed. It is also common that this low price become the reference price for future jobs, which contributes to the current "downward spiral" of the prices of aerial survey services. Contradictorily, we must not ignore, ever, that the competition is extremely healthy to the market.

We are living delicate moments in the market; we have a growing demand, but only few companies are economically healthy. This fragility makes the companies vulnerable and greatly predisposed to practicing low prices, mainly under the pretext of at least keeping their teams, which almost always ends up further exacerbating the situation. The moment can be ideal to once again test the popular expression: "an enterprise without a contract does not go bankrupt, but with poorly-paid contracts it will definitely go bankrupt ". I usually joke saying that the best that can happen to our competitors is that they get plenty of poorly-paid contracts.

There is no doubt that the market will, one way or another, adjust itself to reality by creating mechanisms for control, protection, and also punishment. It is common for contracted companies to be penalized for their mistakes. An important contractor of this sector, besides evaluating his suppliers by attributing performance grades, also has ways to penalize those which rendered inadequate services. In the last decade, some companies were excluded from participating in tenders launched by that contractor. Contractors, in general, are already being penalized by receiving a

poorly done or delayed service. But we are yet to see the punishment of people involved in the procurement and supervision of unsuccessful cases, especially people from the government, since the main loss in this case is with the taxpayer, who cannot practically interfere in the process. The best alternative would be the punishment for the bad use of public money, which is already provided in our legislation – this could bring a new horizon not only to the government market, but indirectly to the private market, which has been growing significantly.

The unbridled quest for the lowest price can make sense for the purchase of industrialized products, but, and perhaps never, for the purchase of services. Engineering services should not be bought as if they were paper clips or screws, although we all know that there are clips and screws of good and of poor quality. Therefore, all purchases of services must be made with criteria: the more demanding they are, the better the final result will be. Our market is suffering from the same difficulties as others. The quality of any product in the market is, as a general rule, directly proportional to its price. In the same shop we can, for example, buy a Flat Panel TV of “X” inches for quite distinct prices, and sometimes even the same brand. That is, there are products of different price levels with various levels of quality and features that the consumer cannot always distinguish. What our market is gradually learning is that it receives what it pays for, whether good or bad.

It is up to the service providing companies to navigate these turbulent waters and, in some way, contribute to the development of the market. Lately, the desire to simply survive in the expectation that better days will come has been common on the part of some good entrepreneurs. Others with more courage, creativity, and of course more risk bring to the market different products, equipment or technology, and end up generating new market niches. Other good news come from the market itself: there are clear signals, on the part of various contractors, that the market does not want a predatory competition where the prices are the lowest in detriment of the quality and the delivery schedule. There are many examples of competition where the technical aspects are weighed in the tender. In addition to the purchase using the “technique and price” process, our legislation contains the process of “best technique”. These are processes that not only government buyers, but also private ones have used with much success. Also, there are already several contractors investing in training, qualification and recycling of professionals involved in the processes of purchasing and supervision of those services.

Making comments is not difficult; the great difficulty is to know how to behave and to keep well in this very dynamic and complex market. I believe that, over time, the knowledge of successful cases, and mainly the examples of failure will bring, if not the solution, at least a reduction of problems. The question is: how will this market be in a few years?