

IMPROVEMENT IN THE SERVICE TO THE CLIENT ORDERS IN A METROPOLITAN REGION IN BRAZIL

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SUMMARY

To give adequate electrical service to the orders coming from a population of more than 4 million inhabitants in the Belo Horizonte metropolitan region (the third most populated in Brazil), CEMIG has continuously improved the administrative infrastructure of the supplied service. This improvement also includes the location, ambience and management of the agencies, the expansion of the call centre and the enhancement of the relationship with its more than 1.3 million clients located in the same area.

INTRODUCTION

The Companhia Energetica de Minas Gerais (CEMIG) is a public utility company in Brazil responsible for generation, transmission and distribution of electrical energy in 96 % of the state of Minas Gerais, corresponding to an area equivalent the France territory [1].

Since its creation, in 1952, CEMIG has invested intensively in its generation (5,068 MW in December 1997) and in the transmission (20,321 km) and distribution (274,960 km) systems. This network, one of the largest in the Southern Hemisphere, was built with the target of giving adequate service to the company's around 4.5 million clients in the whole area [2].

Among the areas supplied by the company, there is the Belo Horizonte metropolitan region, which is considered the third biggest urban area in the country (after Sao Paulo and Rio de Janeiro). It corresponds to a population of more than 4 million inhabitants and 1.3 million clients of electrical services. CEMIG believes that these clients deserve the easiest and the best way to be treated. Because of this, the company adopted a policy of investing in the relationship with the clients through some difference ways, like an administrative restructure, the agencies remodelling, the call centre expansion etc., as described below.

ADMINISTRATIVE RESTRUCTURE

Until a very recent past, the areas of customer attendance in Belo Horizonte metropolitan region were dissociated from the areas responsible for the electrical network expansion, the customer connection and the service inspection. As a consequence of not dealing directly with the clients, the last areas couldn't feel their necessities in a proper way. Then, it was decided to put together the people involved in the

engineering processes and the people involved with the consumer market, under the same management. As a result of this modification, we can mention:

Improvement in the work atmosphere - The understanding difficulties finished, as the priorities became the same. The proximity of the involved employees turned the solutions easier to show to the clients;

Quicker answer to the client - The workflow became shorter, as the design experts were closer to the client for a solution to special situations;

More development of the employees - The daily interaction of employees with different skills and activities gave an opportunity of know-how exchange, resulting in better prepared professionals, with a larger range of expertise;

Better service quality - The better professional preparation turned the services better done, with higher quality, resulting in less rework and less man-hour spent in managing client complaints;

Better client and employee satisfaction - A harmonic work atmosphere, the client satisfaction and the professional development are factors that lead to employee satisfaction. On the other hand, the happy employees are those who have more capacity to hear and understand client necessities, searching for a better solution;

Higher business profitability - All the mentioned factors were important components in the reduction of operational costs, the improvement of productivity and the incoming increment, resulting in a better economical performance of the business units.

ATTENDANCE AGENCIES

CEMIG considers his clients as the main reason of the company existence. According to this point of view, the attendance agencies were prepared to be an agreeable and friendly place, proper to receive the client, as he deserves.

Location and Identification

The place of an agency is regularly planned considering the population density, the public access through the transportation system, the vehicles traffic flow, the parking possibility and the proximity of banks or any other alternative collect posts.

A big illuminated sign, in the standard colours with the logotype of the company, identifies the exact location. The access is also easy for handicapped people, with appropriate ramps.



Figure 1 – External identification of an attendance agency

Internal Ambience

Although the internal configuration of the agencies may vary, according to each situation, there is a basic layout, with some components, as follows:

Entrance Room. In the entrance of the agencies, there is a special room that is open 12 hours a day (in some agencies it is open 24 hours), where the self-attendance machine stays for some simple services. There are also some telephones connected straight to the call centre, for other information and services. If necessary, a receptionist can teach the client how to use these facilities. But, if the client still wants to talk to an attendant for a specific information or service, he can enter the agency, from 8:30 AM until 4:30 PM.

Waiting Room. In this room, the clients can wait for the attendance sitting on comfortable chairs, that are in quantity compatible to the client flow and the average waiting time of the agency. There are also restrooms and a water fountain. Although the waiting time must be the least possible, there is a TV set with a VCR, which shows some institutional films about the company and educational programs concerning the safe use and conservation of the energy.

Attendance Room. The furniture for the client attendance was planned observing privacy for the client and functionality, practicality, ergonomics and comfort for the attendant. All the necessary materials and equipment, like terminals, printers, telephone, forms, calculators and standards, must stay at hand.

Special Client Room. This room is used to discuss or negotiate with big companies and authorities, in more

complex situations. Sometimes, it can also be used to attend clients with odd behaviour, or in situations that demand more privacy.

Support Area. All the processes that complement the client attendance, including engineering processes, are performed in a contiguous but separate area from the attendance room, to avoid noise interference in each other.

Demonstration Room. In some special agencies there is also a free space reserved for demonstration of efficient equipment, like new electrical appliances, that are promoted by the producers, or can even be financed by the company in a near future.



Figure 2 – Internal ambience of an attendance agency

Attendance Management

A computer system was specially developed for the agencies, with the following objectives:

- Control and organise the client traffic and attendance in the agency;
- Follow the current legislation, allowing the preferential attendance for elders, handicapped and pregnant people;
- Adjust the necessary resources, considering the historical data of the required services during the day;
- Identify previously the required service and orient the client;
- Collect data for management analysis and the statistics of the attendance;
- Supply a dynamic tool for “on line” supervision and decision support;
- Contribute to the better company’s image, increasing the client satisfaction level, through the search for excellence in the attendance.

The system has four integrated modules, connected through the communication network:

Reception Module. It is used in the first contact with the client. The client type and the required service are

identified. For the simplest services, the receptionist orients the client to use the self-attendance machine. For the others, a sign is printed with a number and the estimated waiting time.

Attendance Module. The clients are called according to the sign number sequence, except for elders, handicapped and pregnant people, that have higher priority. The called sign number is displayed over the image that is going on the screen of the TV set of the waiting room. The message is also reproduced in a “digital voice”, at the same time.

When the client seats at the table for the attendance, all the required services and times are recorded for statistics. The system allows the navigation through the commercial and any other corporate systems of the company. There is also a traffic light displayed in every screen, that shows if the other clients are waiting for a time under (green light), one client is waiting for a time over (yellow light), or more than one client are waiting for a time over (red light) the historical average time for the agency. It helps the supervisor activate the necessary quantity of attendance positions, at this moment.

Manager Module. This module supplies the analytical reports, graphics and screens that can be divided in four groups. The time reports can measure the average times either in a daily, weekly, monthly basis, or in any desired interval time. The main considered average times are:

- Average waiting time, that measures the time between the client enters the agency and he is called for the attendance;
- Average service attendance time, that measures the time spent in each service type;
- Average attendance time, that measures the time spent with the same client, independent of the quantity of services.

The productivity reports allow a complete analysis of each employee, with the average time for each service type, week day and hour interval. The flow reports allow the detail of the quantity of clients and attendance executed in each hour. The service reports measure the quantity of clients and the average time for each service type.

Server Module. This module runs in the network server with operational functions, including daily backup of all the system database.



Figure 3 – Example of a screen of the attendance management system

Self-Attendance

The people from Minas Gerais State are usually considered very conservative. They don't accept innovations easily. Therefore, CEMIG decided to develop a machine for self-attendance to give the clients an alternative of not going to the agencies to order some kind of services. The first models were tested in shopping centres, showing the need of some adjustments. After that, a new model was developed, offering the client information about his energy consumption, existing debts and a second copy of the bill. The machine is usually located in the entrance room of the agencies, as mentioned before.



Figure 4 – Self-attendance machine

Alternative Collect Posts

For many years, the clients of CEMIG could pay their bills only in banks. In the times of high inflation, the banks were paid for this service just with the money floating. But now, the inflation in Brazil is very low and the banks charge the collection. The charge is lower if the bill is automatically debited in the client bank account, but many clients don't have a bank account. So, the clients were given an alternative to pay their bills in lottery houses, that charge less than banks, are open in extended hours and are located in many places where there are not banks. The good results of this experience lead to expand their services, by using Internet services, like giving information about the client debts and printing a second copy of the bill. Obviously, this kind of work, like any other third party service performed for the company, is a tendency, but needs to be expanded and controlled very carefully.

CALL CENTRE

The call centre of the Belo Horizonte metropolitan region is responsible for receiving the calls either reporting an emergency situation, like an outage of energy, or asking for service in the commercial aspects, like a new client connection. In the first case, the clients can use the

telephone number 0800 310 196 and, for the second case, they use the number 0800 310 120. Both numbers are toll free and available 24 hours per day and 7 days per week. They were created as different numbers to permit that the line for commercial orders can be held in situations like a storm, to leave free space for more emergency calls.

Available Services

Emergency Calls. At present, the call centre can receive any kind of emergency reports from the clients, like:

- Outage of energy;
- Street light turned off at night or turned on at day;
- Accidents involving the electrical network;
- Tree contact with the nude conductors;
- Other objects hang in the overhead network;
- Broken or pending pole;
- Broken conductors.

Commercial Orders. This kind of orders can be:

- New client connection;
- Load alteration;
- Network deviation from buildings;
- Cut the meter service to be repaired;
- Network extension and/or modification;
- Information about the bill;
- Pole removal;
- Information about pending orders;
- Change the meter place;
- Meter reading;
- Change the client name;
- Second copy of the bill.

Structure

To face all these kinds of orders, the call centre has 90 digital trunks of telephone lines, with 2 Mbits each one, connected to a Voice Response Unit, with up to 64 entrance doors. This unit is connected to a computer that supports a network with 60 attendance positions. With this structure, the call centre receives an average of 12,000 calls during regular days. In storm days, the number of calls can be up to 30,000.

Voice Response Unit. In regular days, 11% of the calls are automatically answered through the Voice Response Unit. Through it, the client can verify any pending debt, ask another bill copy, change his name or even report a broken street light. In storm days, this system can answer 30% of incoming calls, informing that the company already knows the area without energy and also estimating the time for repair. In any case, if the client wants to talk to an agent, for a special order or to report a special emergency, he can do that.

Database. The Voice Response Unit can identify the client automatically because there is a file in the computer that associates the client telephone number with its identification for the company. In the same way, it is possible to answer to the client about the areas without

energy because every client is associated to a transformer in the database and the system can identify all the calls related to the same transformer. The database has also the information about each transformer connection to its protective device in the electrical network. So, it is possible to identify the outage correctly and dispatch the line crews to re-establish the energy supply. It is done in the operational centre, which is connected to the call centre through the same computer network [3].

Attendants. There are 103 attendants, 8 co-ordinators and 2 supervisors that alternate in the attendance positions, in different shifts and varied quantity of positions during the day, according to demand. The attendants were recruited from different areas in the company, selected through an internal evaluation that compared the candidate profile with the necessary skills for the position, like:

- Good verbal communication and diction;
- Good reasoning;
- Good ability to hear;
- Dynamism and initiative;
- Good interpersonal relationship.

After selection, the candidates received a 6 week basic training, including:

- Commercial attendance simulation;
- Emergency attendance simulation;
- Rules and regulation concerning electricity supply;
- Voice education;
- Special techniques for dealing with clients;
- Team working.

Beside these people, there are 6 handicapped persons that received the same training and do the same work.

With the shown structure and the mentioned number of calls, the average waiting time for the call centre is around 30 seconds, the average conversation time is around 3 minutes and only 7.5% of incoming calls are given up in the waiting queue.

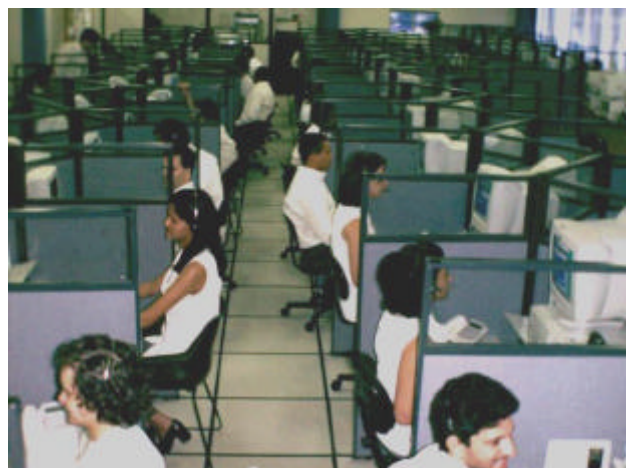


Figure 5 – Call centre overview

Internet. CEMIG has also a home page in the Internet with much information about the company. Through the same

page, any client can get information about his consumption, change his bill name, ask for street light substitution or ask for another bill copy, that can be printed in his own printer. He can also send e-mail to the company, which is received by the call centre and will be answered soon.

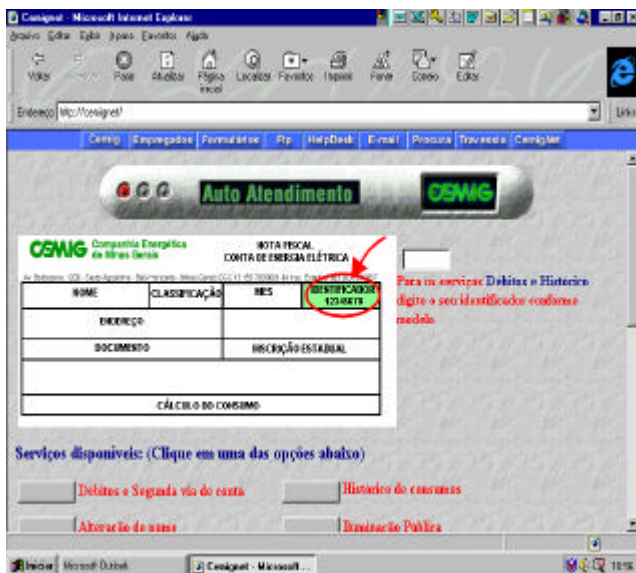


Figure 6 – One of the pages by CEMIG in the Internet

NEXT STEPS

Only One Call Centre

As mentioned before, the described call centre receives the calls coming from the clients located in Belo Horizonte metropolitan area, that corresponds approximately for a quarter of the total clients of the company. The other clients are spread all over the State and are served by other regional call centres and a great number of agencies, with different sizes. At present, less than 40% of the population in the State has a telephone number, but this situation tends to modify quickly, according to the commitment assumed by the telecommunication companies in the privatisation process of that sector. The rates are also expected to become lower, mainly for long distance calls. As a consequence, CEMIG is planning to expand the existing call centre to a larger one, with only one phone number, to serve all the State. The expected benefits are a better standard of the operational proceedings and a reduction in the size and quantity of the agencies, with a consequent reduction of associated costs. But, there are many actions that need to be taken to turn the operation viable, concerning specially a good communication between the call centre, the regional operational centres and the vehicles of the line crews.

Video attendance

Since the agencies are open only 8 hours per day and the call centre acts 24 hours per day, there is a camera located in the entrance of one agency that is remotely connected straight to the call centre. This entrance is also open 24 hours, so that the client can have visual contact with an

attendant, at any time, and ask for services like another bill copy, that can be printed in the self service machine located in front of him. In the future, there will be video attendance terminals in places of great circulation of people, such as in central bus stations, shopping centres, airports etc., after a proved cost/benefit analysis for each case.



Figure 7 – Video attendance

Telemarketing

All over the world, the call centres have proved to be a powerful instrument for a good interaction with the market. On the other hand, the demand for service is not always constant during the day and at weekends. Then, the call centre structure can also be used to call out the clients during the idle hours of the day, on the purpose of:

- Advise the special clients about the programmed outages or electrical accidents;
- Advice about debts and irregular situations;
- Vend of services and products, like electrical appliances, maintenance of the client substation or equipment, electrical facilities repair etc.;
- Research for consumption habits and other market necessities;
- Vend of other products and services not related to electrical energy.

Relationship with the Special Clients

The most important clients have a special phone number to communicate with the company in operational situations. But, much more than this, it was decide, in the administrative restructure, that each region should have an agent in charge of giving special attention to the best clients, through a personal assistance. This agent has received training and tools to give the client the information he needs for the best use of the energy, concerning his business. With the help of some development institutions, sponsored or not by the government, the agent can even identify situations where the client can earn more money through the electricity, as in a real partnership.

ISO 9002

Another important concern of CEMIG has been the standard of the processes and activities performed by the different sectors in the company. Obviously, a special importance in this program has been given to the client attendance. After adopting the total quality control for some years, the company decided to apply for ISO9002 certification. The Meter Laboratory was the first area to receive the certificate. The next proposal is to certify the attendance process of one agency and the call centre. After that, all the agencies and the other processes will be certified.

CONCLUSION

The Brazilian electricity sector is now under an implementation of a restructuring project that establishes, among other measures, conditions for free access to the transmission and distribution systems. Such regulation is vital to establish a competitive electricity market and to increase investments in the sector, since the client can choose the company that can offer and supply the best service [2].

Then, considering what was briefly presented here, we can say that CEMIG is being prepared to participate in the competitive market, since its actions have been oriented towards the best service and the satisfaction of client desires. But, even before the results of this policy can be evaluated through the market share of the electricity in the region, the increase in performance can be verified by some indicators, such as client satisfaction index, average waiting time etc.

ACKNOWLEDGMENTS

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