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NEW TRENDS IN THE OUTSOURCING OF MAINTENANCE/OPERATION SERVICES

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Abstract

The contracting-experience of maintenance/operation work in our group can today be considered as rich with the first generation of contract implemented more than 15 years ago. The incumbent contract was started in 1997, so it is now into its 4th year. Certain improvements that have already been implemented has had a large impact on our contract culture e.g. performance indicators. The next re-tendering is now approaching and with this borne in mind, the author will discuss through various sections of this report the following main points: firstly, an overview of the trends today in this area; secondly, comparing these trends with implemented practices; and finally, what can be future development in the outsourcing of the maintenance/operation of the Cooling & Ventilation services.

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1 INTRODUCTION

A review has been undertaken in preparing ourselves for another tender process that is aiming to produce a contract for the maintenance and operation of our cooling and ventilation equipment at CERN. Although, the in-house experience is relatively rich we found it important to study which trends reign outside CERN in the outsourcing of technical services on comparable industry sites. I will explain below the results of some of these findings, and discuss how they are applicable and relevant in our own environment.

2 WHAT DO WE WANT TO OUTSOURCE, AND WHY?

The first criterion that probably comes to most people mind on this topic, is the core-activity issue. "Never outsource a core-activity!" Then you enter into endless discussion on what the core-activities really are.

As the maintenance/operation of the cooling and ventilation is a service towards a core-activity of the laboratory (which I hope you agree with me that the accelerators are), and as such, it will be closely associated with this core-activity of CERN. Is it therefore wrong to outsource this service? I think that a firm position against the outsourcing of such activities is simply impossible with the overlaying policy in the reduction of the number of CERN-staff.

We frequently hear about the irreplaceable commitments that the CERN-staff has towards the perfect functioning of our accelerators or our machines. The factual difference between the CERN-staff's employment conditions and those of most of our contract-staff does, of course, not help in the transmission of the loyalty towards these core values of our laboratory. I don't believe that we should concede to this. There are, after all, plenty of examples from outside, where contract staff have the same motivation as their own personnel. To make it happen, or to come closer, we must evolve in certain fields of which I will give a couple of examples below:

- The present perception held of contract workers, (in that they are less qualified, educated, skilled etc. than CERN-staff) must change.
- Areas where we really need highly qualified contract-personnel, we must be ready to admit and specify this as well as be ready to pay for what it cost on the marketplace.
- The partnership concept towards common performance-objectives, discussed further below, would help in this context.

3 PARTNERSHIP

The partnership-concept in contracting of operation and maintenance services is probably the issue that has evolved most during the last five years (since our previous re-tendering). I will therefore, develop some ideas, which I feel are important, and discuss how these could be adopted in our area.

I can give a few subjective definitions of partnership, with no pretension to be absolutely complete:

- A contractual relationship to enable both parties to face the same way.
- Working together to identify mutual objectives.
- Jointly seeking to resolve problems, non confrontational.
- Providing continuous improvements of joint benefits.

What comes across is certainly the idea of common objectives, and therefore common results. I would in this context draw the conclusion that the monitoring of these results is an entirely neutral activity. If we would adopt a secretive approach towards the monitoring of performances, we can be assured that the confidence between the two parties quickly will be lost.

The key issue is to have service level agreements that are clearly defined at the beginning, thus avoiding the risk of false expectancies between the parties. A typical service level agreement can be defined as from the time of a telephone call, until the moment when the on-call technician is on site, or the overall downtime of a certain type of equipment specified as less than a set value.

All these criteria should, at best, be defined when the contract is signed. This is so that the contractor can make sufficient resources available for the contract fulfillment. Furthermore, we should have some key performance indicators, which in a simple and unambiguous way translate the performance into real numbers. I would here underline the very positive feedback we have since implementing some performance indicators into our present contract. It is important to attach a small, but significant, financial incentive/penalty to those results. I would, however, recommend refraining from too weighty incentives/penalties, as those are probably not enforceable from legal point of view, and can in addition lead to inappropriate behavior.

However well the contract is defined, there is nothing wrong to come back to the service level agreements as well as the performance indicators. All services evolve in time, especially in a laboratory environment as ours, and it would be wrong if the contract agreements do not follow. We should, in this context, bear in mind that a service level can both decrease as well as increase.

It is important to understand that a partnership relation between the service-supplier and the client, as an alternative to a more confrontational contract relation, does not allow any easing towards the full delivery of the service according to the requirements in the contract specification.

Before leaving the partnership issue I would highlight the necessity of very regular communications between the two parties, and at all levels, so that any concern, are addressed well before it becomes a crisis.

4 MONITORING

The monitoring of the contract is an imbedded process in the management tool for all activities related to the maintenance and operation of the concerned equipment. In our case, the equipment are the cooling and ventilation systems for all CERN's accelerators and experimental areas. The tool used for this is generally known as a Maintenance Management System (MMS). The MMS consists of a huge database with description of all assets (equipment), programs for the planned and corrective maintenance as well as modules for spare-parts stores, job-cards etc.

It is important that the contract agreements are well covered for by this MMS, and especially the calculation of the mentioned key performance indicators.

There is no golden rule where this system should be sitting, at the client's site or at the contractor's site. The main user of this MMS can well be the contractor, and examples can be found where the outsourcing company in fact, is the owner of the system. In our case this would be rather unpractical as the database is common to several services, operating with several contractors. Both CERN and the contractor must, however, possess solid knowledge concerning the MMS, as well as qualified operators. It represents, for the contractor, the main day-to-day management tool. And for CERN, the number of qualified operators must enable us to sufficiently well, understand, monitor and enforce the service level agreements. A main issue for people operating this system is to choose which information should be presented to the decision makers. Frequently, key-points can be lost underneath a mountain of irrelevant data. To avoid this happening a balanced score sheet (a list of key parameters) containing no more than 10-12 main points can be used.

5 RISKS

Outsourcing of such important services as the operation of cooling plants is, of course, not without risks, and an effort to analyse those risks can prove to be a very good investment. I will here only mention a few, which I consider are the most important ones.

We must consider that a tender process on the European marketplace does not protect us at CERN from problems due to labour-conflicts. This can lead to a dysfunction of the contract and can, as a consequence compromise the running of our machines. There is a fine balance of how much in-house expertise we need to keep, so that minor disorders of this type can be covered for.

An increased contract-duration, from the present maximum of 5 years, would in my opinion improve the stability, from contract-employees point of view, and therefore improve the overall qualification of the contractor's personnel.

Another risk to be considered is the reduction of hands-on knowledge, on various specialized equipment, which follow the decrease of CERN staff in favour of an outsourcing policy. These are skills, which have developed with a whole generation of CERN technicians, during the building, commissioning and operation of the PS, SPS and the LEP-accelerators. Once again, a core of master-technicians must, in my opinion, be kept, so that a continuing excellence on the reliability of these services can be assured. Furthermore, the quality control process has improved: the level of documentation, the methods, the communication etc. Quality control can therefore be clearly seen to be of central importance in the replacement of the more traditional "man-memory-experience".

6 CONCLUSIONS

In the preparation of an important re-tendering, as for the described maintenance and operation of the cooling and ventilation activity, there is certain analysis which can be of valuable assistance. One concerns the content of the outsourced services, and which resources should be kept in-house. I find it essential not to exposed such a vital activity of CERN to certain risks on the labour-market as well as saving certain key-personnel for the know-how on the more critical equipment.

Alternative management methods through the partnership-concept have been shown to be successful in several examples, and should continue to be developed in our environment. This subject is not unique for CERN as a customer of outsourced services. Looking at examples in comparable industrial areas e.g. power- or water utilities, we can find that the trends towards more result-oriented contracts based on service level agreements gains territory in comparing to the more traditional agreements based on work-hours. These findings confirms our policy, followed during the present contract-period, with a remuneration model which allows a sharing of benefits due to rationalisation and increased performance in the execution of the contract obligations.

With these observations in mind, I think we can confidently head-on for a new market survey in order to find suitable candidates, in our member states, which match our requirement and can deliver the optimum services for another period of five years.