

ARAO Efforts, Advantages and Disadvantages in Implementing of Process Management, Renovation of the Public Service Process Supported by Information Business System - 10123

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ABSTRACT

In 2004 the Slovenian National Agency for Radwaste Management (ARAO) decided to upgrade its performance in the field of the institutional radioactive waste management. With the aim to improve the efficiency of the institutional radioactive waste management the public service has been completely renovated and supported by contemporary tailor made Information Business System (IBS). The IBS has become necessary tool in the ARAO working process and it has been used as a support during various analyses, automatic generation of forms and reports for different purposes, data tracking, transparency, different overviews and working on different locations. The most important barriers that have been identified among ARAO staff during the IBS implementation and testing phase can be attributed to fear of change, vagueness of the subject and desire to preserve the status quo. The success of this experience is based on the relevance of the quality assurance program in the public service and on motivation of leading staff during the whole process. At the end the entire organization has been mobilized with the one aim: providing a higher standard of quality management of institutional radioactive waste.

INTRODUCTION

The Slovenian National Agency for Radwaste Management (ARAO) is a public institution established in 1991 by the Slovenian government [1]. Its objective is to provide the basic conditions for assuring safe and environmentally acceptable way of radioactive waste disposal in Slovenia. By the governmental Decree on the Mode, Subject and Terms of Performing Public Service of Radioactive Waste Management [3] from May 1999, the ARAO was assigned to perform the public service of institutional radioactive waste management. This activity includes collection of waste at users' premises, transportation, treatment and conditioning and storage at the Central Storage Facility (CSF) for storing institutional radioactive waste arising from medical, industrial and research applications.

In this paper we are:

- presenting the ARAO organizational structure and transformation from the vertical organizational to the combination of the vertical and horizontal organizational structure,
- discussing advantages and disadvantages of horizontal management (process management),
- describing the process of institutional radwaste management (public service) which is one of the main ARAO activities,
- presenting the process reengineering and
- discussing some practical issues arisen during the implementation of Information Business System.

ORGANIZATIONAL STRUCTURE OF ARAO AGENCY

The founder of management philosophy Henry Fayol specified the main management tasks or processes that are still around today (Table I) [7].

Table I: The Main Management Tasks

1	Planning	Deciding on how to use resources in order to achieve given targets.
2	Coordination	Communication between organisation's functional units.
3	Organization	Organizing people to get best out of their potential.
4	Staffing	Hiring, motivating and developing people as the most valuable resource.
5	Controlling	Supervising, supporting, communicating, motivating and guiding people to achieve required performance.
6	Budgeting	Planning and securing financial means for organization operation.
7	Reporting	Enabling flow of information and control of policy implementation.

Until the year 2004 ARAO was vertically organized agency and have been divided into three main sectors with common administration, financial, quality management, law and radiation protection services.

In 2004 ARAO started with the preparation for the certification for ISO 14001 – Environmental management systems. At that moment in ARAO has been realized that the quality assurance is the key component for success, because the customers will not use and financers will not finance services that do not meet their standards of high quality and environmental oriented management. Almost at beginning of preparation for certification it has been realized that ARAO's vertically managed organization was outdated. The new strategic goal of ARAO has been proclaimed and the main emphasis has been put on the quality, efficiency and customer's satisfaction. The vertical organizational structure has been changed and upgraded into combination of horizontal and vertical process oriented organization structure.

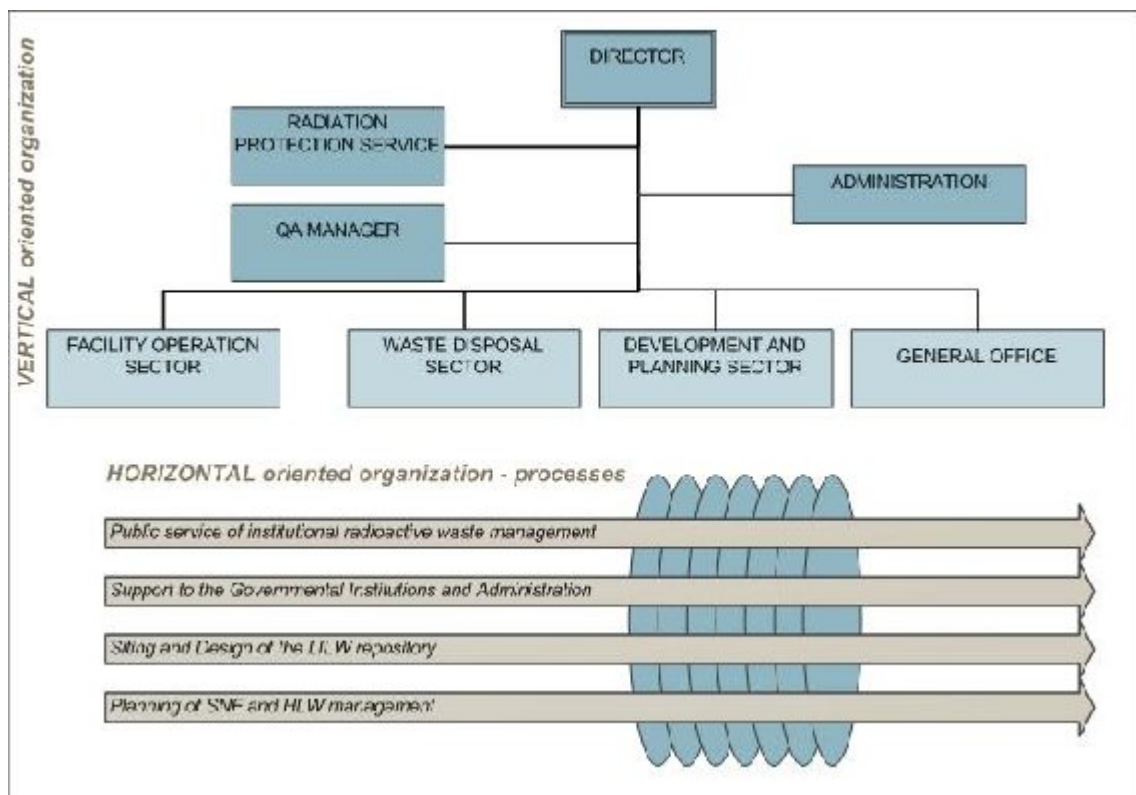


Fig. 1: The organizational scheme of ARAO agency with main processes [4]

On operational level, management was concerned with optimizing and controlling the use of ARAO resources to achieve specified objectives. It has been recognized that the most important resources are knowledgeable, experienced and resourceful people and agency capabilities and awareness on how to perform – the ‘know-how’!

Table II: The advantages and disadvantages of vertical and horizontal organizational structure – case study ARAO

Vertical (functional) organizational structure	
Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Coordination within functional areas, ▪ In depth specialization. 	<ul style="list-style-type: none"> ▪ Slow response on changes in the external environment and customer’s needs, ▪ Limited view of organizational goals, ▪ Absence of creativity stimulation and initiatives, ▪ Poor communication among functional areas.
Horizontal (Process) organizational structure	
Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ More efficient work flow within the organization, ▪ Defined responsibility – so called <i>process owners</i> are responsible for an entire process, ▪ Team work – the basis for organizational design and performance, ▪ Cross-trained work teams. ▪ Empowered individuals and teams to make decisions directly related to their activities in the work flow. 	<ul style="list-style-type: none"> ▪ Can be used only with the certain type of product/services.

PROCESS OF PERFORMING THE PUBLIC SERVICE FOR INSTITUTIONAL RADWASTE MANAGEMENT

During the transformation of organizational structure the public service for institutional radioactive waste management was recognized as one of ARAO’s main processes. The process of institutional radioactive waste management is span across several sectors. Majority of activities is preformed within the Operation facility sector and the Radiation Protection service. The process composes four sub-processes:

- Collecting and takeover of waste at users’ premises,
- Transport of waste,
- Treatment and conditioning of waste,
- Storing of waste in the CSF.

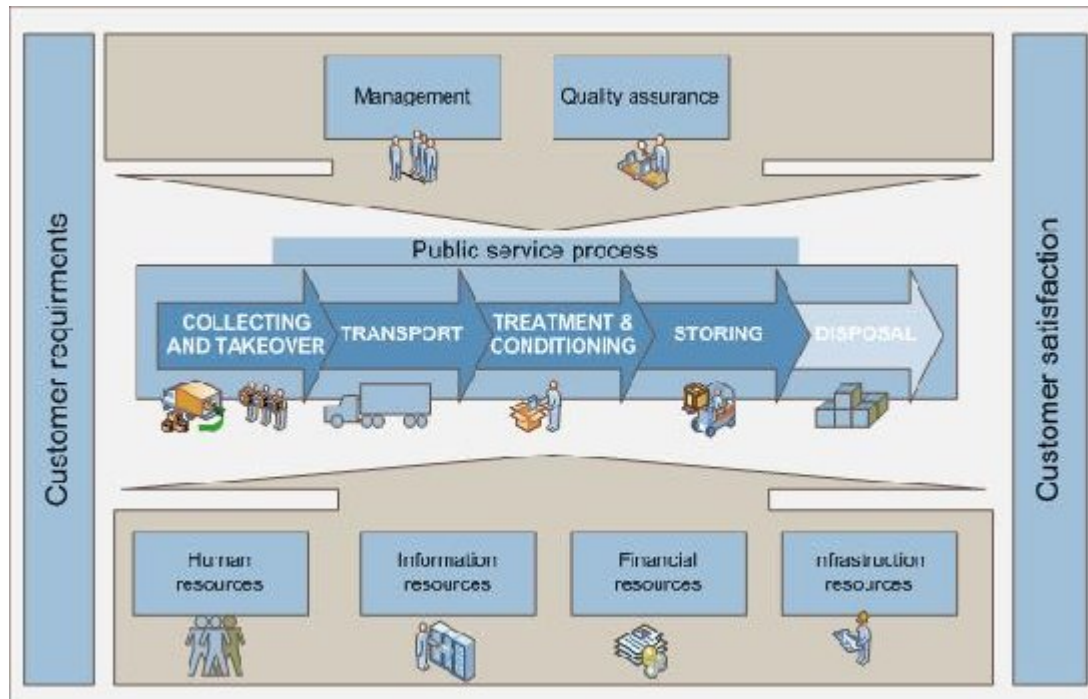


Fig. 2: The Public service process with sub-processes and supporting processes

All sub-processes are connected and performed consecutively. In special cases some of them can be skipped or must be repeated. Process owner is the head of the Operation facility sector [6].

PROCESS REENGINEERING, IMPLEMENTATION AND METHODOLOGY

Logical step forward after the implementation of horizontal management system within the ARAO was the business process reengineering (BPR). The team who was in charge for project used the five-step approach to BPR model [8]:

1. Develop the business vision and process objective;
2. Identify the business process/sub-processes to be redesigned;
3. Understand and measure the existing process/sub-processes;
4. Identify the IT levels;
5. Design and build a prototype of new process/sub-processes.

Duration of BPR was seven months. During BPR the most important issues were defined: the process with sub processes, supporting processes and services, their connections and interactions, competencies and responsibilities. The BPR project required managing a massive amount of information. The tailor made Information Business System was developed and constructed to support the whole process of public service. It was very important that IBS architecture structure was opened for the future necessary improvements and upgrades. During implementation process and now when the IBS is fully operational it has been realized that performance improvements have to be well illustrated and documented in order to be understandable. This helps in removing usual barriers when addressing some aspects of process improvement. BPR changes the way of public service operates on a daily basis. As long as the working practice is considered new, the management has to keep pressure, i.e. to keep the change momentum up. If this is not the case, there is a tendency to go back to the old practice. The most significant problem in achieving changes in individual attitude towards public service is the need to change long standing, deep-seated customs and practices. The most important barriers that have been identified among ARAO team during BPR, IBS implementation and testing phase can be attributed to fear of change, vagueness of subject

and desire to preserve the status quo. Other barriers such as information technology problems, regulatory framework and financial resources were also successfully resolved.

The critical role in process of change is always of so-called 'change manager', i.e. the person identified by others as key promoter and supporter of change. Such a person in the ARAO's case had technical background with good understanding of environmental aspects of the radwaste management and with interest to identify the areas where organization can improve its services. The success of change process depends on dedication and commitment of internal change manager and change agents – field operators. In ARAO's case, their technical knowledge and abilities were not matched with that of decision making powers and that was the reason why the support from the top management was crucial for the success of this project.

On this project the early achievement of some visible results was also proved to be very important. The early achievement of some visible results boosted the confidence of change agents, increased their recognition by management and provided stronger support and extra good will from the management.

CONCLUSION

With the implementation of horizontal oriented management ARAO definitely meet higher quality of performing the public service and a more consistent approach to business. The horizontal (process) oriented organizations are superior to vertical (functional) organizations in many situations. On ARAO's case the main advantage of horizontal system is that it supports organization needs for constant process improvement. Of course, obtaining proper mix of vertical and horizontal structure within one the organization like ARAO was not an easy task.

In ARAO's case initial change from the traditionally vertical organization to more horizontal dramatically changed the role of human resources. Working together with other employees and managers to define competencies helped in building commitment and trust within ARAO. Once the competencies were defined, employees focused on continuous learning and career development. Therefore, our experience strongly suggests organization of awareness and motivation workshops for ALL employees in an organization at the outset of implementing BPR and IBS. Awareness and motivation examines 'whats' and 'whys' of BPR and IBS. Training can be carried out in a formal (training courses) and informal (meetings and workshops) ways for different target groups and on various subjects. An important training objective should be to develop a positive 'it can be done attitude' among employees. Such confidence will improve their 'self-efficacy', i.e. ability to adopt and implement the process of change.

Direct result of this project is modernized and more efficient public service. It is needed to be aware that the flip side of BPR is high project risk. There are many hard and soft barriers that have direct influence on the project success. When teams work in the spirit of cooperation, share confidence and mutual respect, this enables them to make decisions effectively and with minimum internal disagreements, which will lead them towards achievement of the established targets. Competent and motivated workforce will be able to proficiently manage day-to-day uncertainties, always improving its ability to do so, and measuring the effect of an action, with feedback to adjust the next action, thus improving skills and learning by doing.

IMPLEMENTATION SUCCESS

One of the biggest mistakes you can make in life is to accept the known and resist the unknown. You should, in fact, do exactly the opposite. Challenge the known and embrace the unknown.

Guy Kawasaki, Co-Founder Apple Computer, Inc., 1996 [9]

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