# International Conference on Human Resource Development for Nuclear Power Programmes: Building and Sustaining Capacity

## Human Resource Management in the Belgian TSO Bel V

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**Abstract**. Within the Belgian TSO Bel V, an integrated management system (IMS) has been developed and is certified according to ISO 9001:2008. One of the main processes of the IMS is the Human Resource Management (HRM) process. This process is subdivided into three sub-processes: Administrative & Social HRM, HRM & Development by competences and Assessment of the HRM Process. This presentation will summarise the structure and content of all documents and procedures of the HRM process and will describe how the process is implemented.

In particular the following sequence of activities will be presented:
1. Definition of all the roles necessary to fulfil the regulatory functions attributed to Bel V, with description of all the tasks and duties assigned to each role and to each staff member, including the qualification requirements.
2. Identification of the individual existing competence (KSA) gaps using the SARCoN tool, on the basis of a reference list of KSAs and the role descriptions.
3. Periodic evaluation of the training needs on the basis of the competence gaps leading to the definition, organisation and evaluation of the training activities by application of the systematic approach to training (SAT).

The recruitment process will be described: actually, the analysis of the competence gaps may lead, in addition to training of present staff, either to internal job rotations or to announcement of new positions through the Bel V website if no internal expertise is available. In the frame of the competence gap analysis, the interaction between competence management, knowledge management and a new interpersonal effectiveness development project will be explained.

## 1. The Belgian Regulatory Scene

Since September 1st, 2001 the supervision of nuclear activities is within the responsibility of the Federal Agency for Nuclear Control (FANC), which constitutes the Safety Authority. This mission has been given to the FANC by the Law of 15 April 1994. According to articles 14bis and 28 of this law (as amended), the FANC may call upon the assistance of recognised bodies for health physics control, or on legal entities especially created to assist it in the execution of its missions. The FANC has made use of this provision and, for all Belgian nuclear facilities, including nuclear power plants, has created Bel V in September 2007, a subsidiary with the statute of a so-called 'foundation' as defined in the Belgian law. Bel V is given a mandate to perform regulatory missions that can be legally delegated by the FANC, without consulting the public market. The FANC delegates different tasks to Bel V, a.o. on site routine inspections. Other class I facilities (including the Research Reactors) are controlled in a similar way by Bel V. It is through the association of FANC and Bel V that all the core and secondary functions of a regulatory body are ensured in Belgium.

## 2. Bel V Integrated Management System

The FANC and Bel V have each developed their own management system in light of the specific requirements to which they are subject. Bel V has set up a management system which is fully described and integrated in procedures. Tasks, requirements, objectives, organisation and structure are defined in the Bel V Quality Manual (QM). The Bel V Quality Management System (QMS) is certified under quality standard ISO 9001:2008. Bel V's QMS is actually an Integrated Management System (IMS) as defined in the IAEA Safety Standard GS-R-3.

Level 1 processes are defined in the QM and are divided into four functional processes (A02, A03, A04, A06), two management processes (A01, A07) and five support processes (A08 to A12). Bel V has defined a process chart for its level 1 processes, defining level 2 and level 3 processes associated with each main process, with the interactions between the elements of which it consists. All the procedures are written down and tightly controlled. The written descriptions include objectives, main inputs, resources, methods, management and verification of customer satisfaction.

Bel V has defined the criteria and methods required to ensure effective operations and process control. Bel V organises the measurement, monitoring and analysis of these processes and takes actions required to achieve the planned (expected) results and continuous improvement. In particular, this occurs during the performance evaluations of each process (feedback report) and the Management Reviews.

## 3. Human Resource Management process

One of the level 1 processes is related to the management and development of human resources (A08 process). The objective of the process is to describe the Bel V strategy for Human Resource Management (HRM) and to describe how to implement that strategy.

The A08 process is composed of 3 level 2 processes: Administrative and Social HRM (A08.01), HRM by competences (A08.02) and HRM process assessment (A08.03).

### 3.1. Administrative and Social HRM

The process A08.01 (Administrative & Social HR Management) consists of 5 sub-processes:

- Salary policy (A08.01.01). This policy fixes the individual salary according to function, as well as its technical evolution (from starter salary (trainee) to expert salary) and its hierarchical evolution (if applicable). Both evolutions are based on an annual individual evaluation. The policy document is established by the Steering Committee (management) and approved by the Board.
- Recruitment (A08.01.02). If no internal expertise is available, vacancies are published through the Bel V website and selected jobsites, mentioning the job description as well as the required competences and qualifications. Each candidate for a position in Bel V undergoes an evaluation in 3 steps: technical, general « HR », and a psycho-technical test by a specialized external agency. The Steering Committee takes the final decision for recruitment.
- Management of individual personnel files (A08.01.03). The Payroll & Mobility Officer keeps an individual file for each staff member. It contains all documents concerning the employment, originally signed by Bel V, as well as all official

documents submitted by the employee. The file also contains modifications or amendments concerning the employment contract.
- Company rules and regulations (A08.01.04). These are established and kept up-to-date by the HR Manager, in accordance with the applicable legislation. In case of modification, the staff will be officially consulted through the legal procedures.
- Personnel evaluation (A08.01.05). The staff evaluation procedure is established and applied by the Steering Committee (management). The evaluation takes into account the Individual Development Plans. The conclusions of the evaluation committee (Steering Committee and concerned Mid Managers) are registered. The global budget for salary increase and the attribution of bonuses is submitted to the Board for final validation.

Administrative and social HR management is necessary to ensure in addition to the contracts for pension plans and health & travel insurances and the payments according to the salary policy.

## 3.2.    HRM by competences

The process A08.02 (HRM by competences) is related to the management of competence.
It consists of 5 sub-processes:
- Describe roles and qualification requirements (A08.02.01)
- Competence Gap Analysis (A08.02.02)
- Training programme of staff (A08.02.03)
- Organise & Manage Training (A08.02.04)
- Manage individual development plans (A08.02.05)

The objective of A08.02 process is to ensure the competence of the staff and an appropriate match between the needs of the organization and the available resources.

At Bel V, the competence needs (both number of staff and required competences) are periodically evaluated at the level of the whole organization; the evaluation may lead to publication of new positions, internal job rotations or adapted training for the staff members.

The initial phase of competence management consists of defining an organizational structure and describing the different roles necessary to fulfil all the functions assigned to Bel V. Actually, 36 roles are described with the associated qualification and competence requirements and one or several roles are assigned to each staff member according to an IMS procedure entitled: "Tree of roles and affectation of people"

## 4.  Competence Gap Analysis (CGA)

The Bel V competence management process is being adapted to include SARCoN in the evaluation of the competence needs. SARCoN stands for "Systematic Assessment of the Regulatory Competence Needs". It is an IT tool developed by the IAEA which can be used to analyse competence gaps of each staff member, and on the basis of this analysis, allows the identification of training needs and establishment of training programs.

SARCoN is a step-by-step approach to identify the gaps between the existing and the required competences or KSAs (Knowledge, Skills and Attitudes) using a quadrant model of competence as a structure (4 quadrants and 18 quadrant areas).

### 4.1.    Description of CGA process

In Bel V, a specific reference list of KSAs tailored to the individual characteristics of the organization has been established by adapting the list provided by the IAEA safety standards.

The competence gap analysis process is described in the procedure A08.02.02. The process consists of 3 main sub-processes:
- Determine the competence profile for each role (levels of required KSAs) and then for each staff member taking into account all the assigned roles; this is the responsibility of the managers.
- Determine the existing KSA level by a self-assessment, followed by an evaluation interview with the supervisor in order to agree on the results of the self-assessment.
- Perform the competence gap analysis using the SARCoN tool (by training manager)

### 4.2.    SARCoN pilot application

A pilot application of SARCoN has been launched recently, consisting in the use of the SARCoN tool by 9 staff members: the individuals chosen are mainly newcomers with a role of inspector or safety analyst. A training session has been organized to familiarize the 9 persons with the use of the tool. Then the competence profiles have been defined for each individual (they have only one role) and a self-assessment of the existing KSAs has been performed by each individual.

It can already be stated that the software tool is easy to use. However a detailed analysis of the results of the pilot application is ongoing with the goal to taking a decision about the suitability of the SARCoN tool and approach to satisfy the Bel V expectations, *i.e.* to improve the establishment of training programs by use of a systematic assessment of the training needs.

## 5.  Training programs

A significant effort has taken place since the creation of Bel V in April 2008 for recruiting new people in order to reinforce the resources and expertise of the organization. Actually, on a total number of about 80 staff members, more than 30 new engineers were hired during the last 6 years resulting in increased training needs.

The training approach is fully incorporated in the Bel V IMS where the role of each key actor is defined. Actually, the training of newcomers is emphasized and in particular the role of a dedicated coach or mentor for daily guidance during the evaluation period of 6 or 9 months: he is in charge of defining the initial training program and ensuring the good development of the KSAs of its newcomer and of its successful integration in the organization.

The TRC (Technical Responsibilities Centres) Annual Reports, as well as the staff's Individual Development Plans, indicate training needs in the short and long term. The Training Manager is in charge of the elaboration and follow-up of an annual training program.

### 5.1.    Training Needs Assessment

In the future, a systematic assessment of the training needs will be performed on the basis of the results of the competence gap analysis. A correlation between KSAs or quadrant areas and available training courses will be established in order to choose the most suitable training course to fill a gap. It is important to keep in mind that not only classroom based training

courses should be considered. Competence can be acquired by other methods, such as on-the-job training, distance learning, self-study and coaching or mentoring.

## 5.2. Systematic Approach to Training (SAT)

A training approach based on SAT is adopted in Bel V in order to bring and maintain the competence of their experts to a level commensurate with the state of the art in radiation protection and nuclear safety. SAT is an approach that provides a logical progression from the identification of training to achieve these competences and subsequent evaluation of this training. SAT consists of five interrelated phases

Training programs are developed for all staff members, and in particular for newcomers, on the basis of the role descriptions and the related needed competences. A key element of the initial training of newcomers is the program of internal classroom based training sessions organized by the technical training manager with the help of experienced experts (mainly from Bel V and FANC) as lecturers. The program is structured according to the SARCoN quadrant model of competence.

## 6. Conclusions

Bel V has nearly doubled its staff since its creation in 2007. Among the newly recruited technical staff, an important number arrived without previous work experience in nuclear safety and radiation protection. Significant efforts in training and integration in the organization as a whole have been undertaken. SAT was developed and implemented in order to strengthen the competences.

The challenge remains for the upcoming years. Efforts need to be pursued to maintain the competence of Bel V experts at an appropriate level.

The next step consists in the further implementation of SARCoN.

## Appendix 1: References

[1]   IAEA Generic Saferty Requirement GS-R-3, The Management System for Facilities and Activities

[2]   IAEA Safety Report Series N°79, Managing Regulatory Body Competence