

Improvement Of The Procedure Of Internal Audit At Tpu (Institute Of Natural Resources)

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Abstract

It is shown that internal audit is an efficient activity for providing independent and objective guarantees aimed at improving the functioning of the institute with consideration for new transformations. It is determined that the suggested measures to improve the procedure of conducting internal audit at the Institute of Natural Resources will be instrumental in determining whether the operation and results in the field of quality comply with scheduled events and requirements of ISO 9001:2015.

Keywords

Quality control (quality management), audit, internal audit.

Introduction

Internal audits are an important tool for assessing the operation of all key processes of the institute. Carefully and objectively conducted internal tests provide the information necessary for more productive and effective work of the institute. In order to improve the process of conducting internal audit at the Institute of Natural Resources (INR), it is preferable to outline the action plan recommended within the framework of the quality management system and aimed at improving the productivity of the operation of the institute:

- specify the stages of internal audit planning;
- itemize the qualifying requirements for individuals conducting internal audit;
- provide a graphical description of the documented procedure;
- change the process map in accordance with new transformations at the university;
- introduce self-assessment at the Institute of Natural Resources;
- change the responsibility matrix;

- develop the qualimetric scale of perfection levels for the process of internal audit;
- inform all the employees of the institute's departments of the operation of the unit as a chain of interconnected processes taking place at the institute.

Internal audit planning

The audit group leader is to prepare the audit plan based on the information contained in the audit program and documentation provided by the INR. The audit plan must consider the consequences of an audit with consideration for its effect on INR processes.

The audit plan must allow of sufficient flexibility so that required changes could be made during the implementation of audit measures when necessary.

The INR audit plan must include: objectives of audit; area of audit; places of conducting audit, dates, expected time and duration of scheduled events of audit; methods used; roles and obligations of group members; distribution of corresponding resources.

The qualifying requirements for individuals conducting internal audit

Auditors, audit group leaders, and the employees who are responsible for the management of the INR audit program must constantly improve and develop their competence. It can be achieved through additional practical experience, training, internships, and self-training. The basic requirements for the knowledge and skills of auditors at the INR include the following: quality-related terminology, in the field of environmental protection, management, organization, processes and production, characteristics, compliance, documentation, audit and processes related to conducting measurements. Measurement and monitoring methodology; the process approach, methods of risk management; the system approach to management; assessment of the life cycle; ecological index evaluation; management of natural resources; efficient resource management during the implementation of life production cycle processes; mutually beneficial relationships with suppliers.

The graphical description of the documented procedure

A documented procedure (DP) is a documented and established way to operate, produce certain work or complete a process. It is important for the organization planning to conduct internal audit to determine what indicators and characteristics can help assess the quality and efficiency of carrying out work at all its stages, how the characteristics are measured and who they are controlled by.

A process map is created at the stage of planning the process of internal audit. It indicates the objectives set for the process, its inputs and outputs, the manager and participants of the process, normative documents regulating the process, resources (financial, technological, material, labor, and informational, by means of which the conversion of inputs into outputs is carried out).

The process map will help in further work at various stages of the system improvement cycle of the quality management system (QMS) of the institution.

The image in the form of a table helps to define the process and briefly present it as a whole and itemized into the main components and parameters. Changes affecting the INR occurred in the university's structure; therefore, the process map requires changes that are specified in Table 1.

Table 1: the map of the internal audit process at the Institute of Natural Resources

Objective		Name		
<ul style="list-style-type: none">• evaluation of the compliance of the QMS as a whole or its separate parts with requirements of ISO 9001:2015 (GOST R ISO 9001–2015), State Standard Educational Specifications of Higher Education, and other requirements set at the INR TPU;• evaluation of the compliance of the QMS as a whole or its separate parts in terms of achievement of objectives in the field of quality defined by the Policy in the field of quality at the INR TPU;• identification of opportunities and ways to improve the QMS in order to improve the performance of a unit;• tests of fulfilment and determination of the productivity of corrective actions and preemptive actions based on the results of the previous audits.	Conducting internal tests			
	Owner	Manager	Performers	
	Vice-rector, director of the INR TPU	Quality Manager, deputy director	Audit group members	
Inputs		Outputs		
<ul style="list-style-type: none">• QMS unit documentation;• the plan of conducting the self-assessment of the institute;• the plan of conducting internal audits;• the order for conducting internal tests;• reports on conducting the previous audits.		<ul style="list-style-type: none">• the report on conducting internal audits;• the report on the functioning of a unit or process;• the report on the availability of QMS documents.		
Suppliers (internal audits)		Consumers (internal audits)		
Unit QMS		<ul style="list-style-type: none">• "QMS analysis on the part of the management";• "Corrective actions"		
Management (internal audits)				
<ul style="list-style-type: none">• Internal (Documented procedure "Internal audit").• External (GOST R ISO 9001–2015; State Educational Standards of Higher Education; GOST R 40.003-2005).				
Resources				
<ul style="list-style-type: none">• Human (auditors, personnel of the units being audited);• Material (means of communication, consumables, office equipment, premises);• Temporal, administrative and informational.				
Performance criteria and indicators				
<ul style="list-style-type: none">• Implementation of the plan of internal audits and the self-assessment plan;• 100% of implemented corrective and preemptive actions have been subjected to supervisory control and assessment of performance.				

Self-assessment is comprehensive assessment, the result of which is an opinion or the judgment about the performance and efficiency of the institution and the level of maturity of the quality management system. Unlike internal audit, self-assessment covers the whole range of the objectives of the institute and its whole organizational system. The main purpose of internal audit is ensuring the confidence of the senior management that the established unit operation system complies with the adopted standard.

The choice of a method of self-assessment is the first issue in the self-assessment of an educational institution (EI). A method of self-assessment is a list of the requirements for the level of EI process organization, which is formulated in the form of criteria and the sub-criteria of a model. The scale and degree of self-assessment must be planned based on the objectives and priorities of development at a particular EI.

There are several methods of conducting self-assessment such as: express self-assessment method, competition modelling method, set form method, matrix diagram method, working meeting method, survey method, equal participation method.

For generalized results of the actual state of the management system and operation of the whole institute, it is possible to use express self-assessment methodology for a higher education establishment using the criteria of an improvement model. Express self-assessment is conducted through a survey of the tutors, employees, and the senior management of the institute.

Respondents are asked to evaluate the actual state of the operation of the institute with the help of 9 criteria with a maximum rating of "13", which describes a perfect state of the university by all the nine criteria, and a minimum of "1" describes the initial state of the department's operation.

Express self-assessment is developed on the basis of the model and criteria of efficiency of the university system of quality management and includes the following criteria: 1) Role of the management. Leadership, 2) Policy, and Strategy, 3) Personnel Management; 4) The use of resources (financial, informational, material, labour); 5) Process Management; 6) Consumer satisfaction; 7) Personnel satisfaction 8) The influence of the organization on society 9) Results of the organization's operation.

At the stage of planning the process of self-assessment in order to define its characteristics, inputs, outputs, and performance indicators, it is convenient to build a process map, which is presented in Table 2.

Table 2: the process map of self-assessment at the Institute of Natural Resources

Objective		Name	
Assessment of the maturity level of the quality management system		Analysis on the part of the management	
Owner	Manager	Performers	
Vice-rector, director of the INR	Deputy director – quality manager	Task force members	
Inputs		Outputs	
<ul style="list-style-type: none">Opinions of managers of all levels on the principles and methods employed in the unit;QMS documentation, etc.;The information about the results of unit operation based on evidence (decision of the vice-rector/ director, the results of staff and consumer survey, reports on audits and the implementation of work, and other evidence of improvements and productivity of processes).		The report on unit self-assessment containing objective staff opinions on unit operation and performance data.	
Suppliers		Consumers	
Unit managers of all levels		Vice-rector, director of the INR	
Management			
Internal		External	
<ul style="list-style-type: none">The goal-oriented program "Quality" for 2015-2016;The order of the of the vice-rector/ director for conducting the self-assessment of a unit.		The assessment model of a unit Quality Management System	

<p style="text-align: center;">Resources</p>
<ul style="list-style-type: none"> • Human (task force, personnel of the units being audited); • Material (means of communication, consumables, office equipment, premises); • Temporal, administrative and informational.
<p style="text-align: center;">Performance criteria and indicators</p>
<ul style="list-style-type: none"> • Completeness of unit coverage; • the degree of personal involvement of the senior management, middle level managers, staff in the survey; • the number of self-assessment meetings; • compliance of the content of the self-assessment methodology training program with the requirements of the assessment model; • efficiency of channels of informing personnel of self-assessment; • self-assessment completion period.

The process of self-assessment at the INR must represent a sequence of actions starting with decision-making on the part of the vice-rector/ director regarding conducting self-assessment and ending with their acceptance of the report.

The time reserved for conducting self-assessment depends on the size of a unit, its organizational structure, communication channels within the department, data availability, and the level of personnel qualifications. It is assumed it cannot exceed two months.

In order to conduct self-assessment at the INR TPU the core team should be formed, the head of which must be a representative of the senior management. To ensure the effectiveness of assessment, the central team must be formed with a number of representatives from different departments (managers and specialists) at all levels of decision-making and implementation, i.e. according to the diagonal principle.

The economic result of conducting self-assessment will be the overall benefit from improving the processes (it will help avoid overlaps of management functions).

During the interview and form processing, the main business processes of the institution are established; the involvement of employees in the processes implemented in departments increases; the awareness of all employees improves; the analysis of operation as a chain of interconnected processes is conducted; convergence points of processes and the most critical places in the business processes of the institution are determined. Used documents are arranged, and unified requirements for the record-keeping process defining the quality of work and its results are created. The results of self-assessment can serve as a basis for a certain adjustment of a strategy, policy, purposes, and the objectives of the institution in the field of quality and highlighting the most problematic aspects.

The qualimetric scale of excellence levels for the process "Internal audits"

Assessment of the excellence level according to all the criteria and sub-criteria can be carried out approximately evenly. The basis of the excellence level assessment of various sub-criteria of activities is the following six "dimensions", corresponding to the basic principles of universal quality control. This is the degree of:

1. focus on consumers and other parties concerned;
2. systematicity of the applied approach;
3. the prevalence of the approach at different management levels, various departments and processes in the institute;
4. the involvement of the personnel of the institute in the corresponding processes;
5. documentation sufficiency for process procedures;
6. focus on the prevention of inconsistencies and continuous improvement rather than solving problems.

In order to assess all the sub-criteria, qualimetric scales are developed, which verbally describe the five ordered "excellence levels" or stages of development of the sub-criteria and components. This allows of moving from

Innovation Management and Education Excellence Vision 2020: Regional Development to Global Economic Growth the qualitative assessment of the relevant sub-criteria of operation to quantitative, corresponding to the desired "level of excellence" from 1 to 5.

Conclusions

It is necessary to remember that internal audits are effective and allow of increasing the efficiency of a quality management system as well as significantly improving the operation of the institute's units only when there is support from the main manager and sufficient qualifications and experience of auditors. In order to maintain the QMS and improve the efficiency of its operation, it is necessary to enhance and improve all its processes. In order to reveal the

weak points and priority areas, it is necessary to use internal audits and self-assessment effectively, which also demands continuous improvement.

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