QUALITY MANAGEMENT IN USER COORDINATION FOR SCIENTIFIC INFRASTRUCTURES

Elements, Principles and Working Tools for ISO-9001-Certification

INTRODUCTION

The department “User Coordination” (NP-ACO) at HZB is responsible for coordination of and service for the use of scientific infrastructures, namely the synchrotron light source BESSY II and the CoreLabs which together tally at more than 9000 user visits per year. The development of a quality management system (QMS) for the tasks NP-ACO performs started in 2014. Now ISO 9001:2015 is used for the QMS and it concerns all processes of the department. Established 30 years ago (1987), this is the most common standard for quality management. Worldwide more than one million organizations are ISO 9001-certified. Therefore it is an internationally accepted and reliable system. The main benefits of the application of ISO 9001 to the User Coordination are more transparent and efficient processes for the user, and having a working tool for continual improvement.

QUALITY MANAGEMENT SYSTEM

Elements of Quality Management in the User Coordination of the HZB

QUALITY MANAGEMENT SYSTEM

The QMS for the User Coordination has been developed in two steps. The initial system QMS 2016 was based on total quality management (TQM, left side). The current QMS 2017 follows the seven main requirements chapters (right side in blue) and the seven Principles (red) of the ISO 9001 2015 (NP).

MAIN WORKING TOOLS

Seven ISO 9001 Principles

1. Customer Focus
   - Traceability and feedback and community management
2. Systematic Leadership
   - Policies, tools, resources, and management
3. Engagement of People
   - Competence, team goals and management by objectives
4. Process Approach
   - Process maps and defined process procedures (SOPs)
5. Continual Improvement
   - Corrective work, Plan-Do-Check-Act cycles (PDCA, yellow)
6. Evidence-Based Decision Making
   - PPI criteria and transition
7. Relationship Management
   - Strategic relationship with providers (especially external)
8. and Special Attention for
   - Customer orientation, stakeholders and risk-based thinking
   - NP-ACO’s Key Performance Indicators

IMPROVEMENT BY PDCA CYCLES

PDCA-Cycle (Plan-Do-Check-Act) are the main tools for continual improvement. PDCA-cycles are within the structure of the ISO 9001 and in all processes of the User Coordination (e.g. by using KPI for Controlling).

REQUIREMENTS AND CONTEXT

The Simple Definition of Quality

Quality is an agreement of people and is defined case-by-case. Quality is the degree to which user service fulfills quality requirements.

The input for quality requirements is mostly influenced by stakeholders, especially by users and funding partners. The main influences from the context of User Coordination are the Internals. User satisfaction is the main requirement and now further on the 53 requirement sub-chapters of the ISO 9001.

STAKEHOLDERS

The stakeholders or interested parties of User Coordination (NP-ACO) of the HZB are very diverse. To understand the needs and expectations of interested parties, staff members of NP-ACO participate regularly in internal and external committees. Community management is a further information source.

PROCESS APPROACH AND MAP

ISO 9001:2015, quality is the degree to which a set of inherent characteristics of an object match requirements.

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KPI KEY PERFORMANCE INDICES

KPI (Key Performance Indices or Key Figures) are used for evidence-based decision making. The KPI have four overall goals (1, 2, 3, D). These will be used e.g. for management review. For NP-ACO the satisfaction with infrastructure (D) and the general user satisfaction (1) are most important.

CONCLUSIONS

The ISO 9001 quality management system offers added values for the User Coordination:
- Most current and international standard for user satisfaction (comparability)
- Systematic way for improvement, especially in quality & processes
- More transparent for users
- More planning security for all partners
- Innovative services for research (unique feature)
- Image enhancement to increase users’ interest
- Good communication with stakeholders and funding partners (reliability)
- Expandable to include more infrastructures easily (e.g. more Contals)
- Applicable to further units of the HZB
- Synergies with other management systems of HZB e.g. for compliance, process project, risk, security, safety and PM Program-Oriented Funding, GLP Good Laboratory Practice, GSP Good Scientific Practice

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