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IT Audit Methodology

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# Introduction

The National Institute for Further Education realised the "**Project Manager 250+"** project. The project focused on the education of managers in the education system, who hold the position of project manager and need professional and complex support. The project was based on the competence profile of a project manager in education. The competence profile can be used to create an individual personal competence profile and thus navigate personal development in the right direction.

**The Project audit methodology was prepared within this project in cooperation with the Centre for European Projecting.** The Project audit methodology was tested on the project target group.

The aim of this methodology is to provide project managers in education with an effective tool for the audit procedure focused on the material aspect of project management. The methodology can be used to perform both internal and external project audits. In case of an internal audit, the statutory body or the project managers must not be the leaders of the auditory team and, if possible, even members of the auditory team.

# Definition of the project audit

The project audit is the process of verification of the extent to which the project realisation complied with the rules and principles of project management for the concrete project.

The audit methodology is based on the following norms and standards governing the project management:

* Czech technical standard ČSN ISO 10006, ed. 2 - Quality management systems –
* Guidelines for quality management in projects, Czech Standards Institute, Prague 2004, p. 48.
* National standard for competences in project management, version 3.1, Brno:

Brno University of Technology in cooperation with SPŘ, o. s., 2010, p. 314, ISBN 978-80-214-4058-6.

# Objectives of the project audit

The aim of this methodological guide is to provide auditors with a material tool for performing an audit of the selected project, which will help them verify if and to what extent the project realisation complied with the rules and principles of project management The methodology of project management is written in the form of a practical manual for users (auditors), which will guide them step by step through the audit process and its principles, and it will provide tools for performing an audit, including a sample audit report. The project management audit verifies whether the basic rules of project management were adhered to and whether the project was managed correctly. The purpose of the methodological guide is to provide an overview of the main tools, basic terms and general principles, methods and procedures recommended based on the experience contained in internationally accepted standards. **The main goal of an audit is to inspect and evaluate the current state of project realisation, find out to what extent it complied with defined criteria for project success and identify opportunities for improving the project realisation and management. This inspection can be performed after the project completion or after the end of one project realisation stage, or it can be performed during the project realisation**.

Specific audit goals: 

* Assess the quality of project management 
* Assess the correspondence of reached project outputs with planned outputs and project goals 
* Assess the purposefulness and quality of project documentation 
* Assess the efficiency of used project management tools

The following is not the aim of this audit methodology: 

* Assess the compliance to legal regulations, including regulations of grant authorities 
* Project financial audit (correctness, economy and efficiency of invested resources) 
* Compare the quality of project management of individual projects audited in accordance with the same methodology

# Benefit of the audit for methodology users

* Verification of the correctness and extent of project management principles application
* Verification of the correctness of the realisation procedure for individual project phases
* Clear summary of the state of management of individual project phases
* Obtaining information about performed / non performed activities in individual project phases
* Obtaining information about the created project documentation o Identification of shortages in project management
* Proposed measures for improvement
* Verification of project goal fulfilment
* Overall assessment of whether the aim was met
* Verification of whether project results were accepted and whether the project was successful

# Audit approach

The procedural approach was used when creating the audit methodology. An audit will be performed for individual project phases, divided into the following stages:

* Project creation 
* Project proposal 
* Project planning 
* Project realisation 
* Project completion (delivery, evaluation, conclusion)

Finally, the overall project management is evaluated for completed projects. High-quality project management also presupposes the knowledge and application of behavioural skills, which are also evaluated within this methodology.

* Overall evaluation of the project management quality 
* Behavioural skills

The project division into individual phases is only a recommendation. Projects can be divided into more or less phases, upon the discretion of the project implementer. According to generally accepted principles of project management, a project should be divided into at least 4 phases: Initiation (creation), Definition (this methodology divides this phase into Project proposal and Project planning), Implementation (project realisation), and Completion (Project completion). At the end of each phase a decision is made whether to move the project into the next phase. Audit methodology provides the tool for performing an audit of individual project phases and of the overall project realisation.

# Users

1. **Users of the audit methodology** 

* Auditors – methodological guide for performing an audit of the selected project or its part; tool for overall evaluation of project management 
* Project managers – methodological guide for continuous verification of project management quality in individual phases (tools are used as guidance for ensuring all important steps in the realisation of individual/selected project stages and performing an immediate correction of any discovered shortage/error.

This methodology brings users an independent overview of the current project state and thus increases the efficiency of the whole project.

We recommend the following implementations:

* the auditor uses the methodology for evaluation, i.e. as an evaluation tool;
* the project manager uses it for project quality management, i.e. as a management tool.
1. **Audit output users **
* Project managers – feedback 
* School management and education institutions management 
* school founders 
* Project sponsors (providing financial resources for project realisation)

Based on a school management decision, the audit outputs can be used for further development of the organisation (school), or to process conceptual and evaluation materials. **The school/organisation management always decides on providing the project audit outputs to other subjects.**

# 6. Principles of the project audit

The audit is performed in accordance with the created methodology using tools created within the methodology (check-list, questionnaires). All activities of the project management will be evaluated in accordance with these basic principles:

a) Principle of efficiency – using processes in order to reach the predefined and approved extent, quality and planned outputs.

b) Principle of purposefulness – using processes ensuring the optimum extent of goal achievement.

c) Principle of effect – measuring the extent to which the goal and project outputs were achieved; relationship between factual and planned state.

d) Principle of openness – open approach towards concrete cases, discussing them, providing information about the success of a solution.

e) Principle of cooperation – if necessary, involve competent institutions into the solution; offer cooperation and share experience with others.

f) Principle of professionalism – be a competent person, increase the level of competence.

g) Principle of complexity – ensure the correspondence and relationship between the project and other school activities.

h) Principle of objectivity – the project manager must not assume that shortages in the project management are their fault and that they are therefore a bad project manager. Project management must be viewed within the wider environment.

i) Principle of practical experience – it is important to not only know the project management theory, but also to be able to practically apply the theoretical knowledge in the project management.

 j) Principle of ethics and safety – all information, results and other facts revealed during the audit are to be considered confidential. Third parties may have access to this information in the extent approved by the project manager. It is necessary to proceed sensitively and emphatically during the audit.

k) Principle of reproducibility – the audit must be performed in such a way as to be able to ensure a full comparative compatibility of audit results if realised repeatedly with regards to the content and form.

# 7. Subject of the project audit

The audit subject consists of the selected project which is, or has been, managed in the given organisation. The audit subject can include the whole project or just one completed phase (initiation, proposal, planning, realisation, completion). The audit will also evaluate the compliance with project management principles in individual project phases according to audited areas stated in Chapter 11. Individual criteria of inspected areas are described in detail in Chapter 11 Basic audit structure.

The audit can be both internal and external, i.e. performed by a person outside the organisation.

# 8. Process of the project audit

The project audit process can be structured and modified in accordance with individual project phases. The audit can be realised during the realisation of each individual phase, during the completion of each individual phase or after the completion of the whole project, upon the discretion of the methodology user.

1. **Preparatory phase **
* Introducing the project audit methodology to the auditor
* Understanding the audited object and learning about the audited project 
* Determining the audit goals – in accordance with recommendations in this methodology guide 
* Determining the audit subject (audited phase) 
* Creating the audit team – the audit team must always have at least two members to meet the objectivity criteria. Due to the fact that the project manager is the main source of information during the questionnaire inspection, it is not recommended to include the PM in the audit team. 
* Creating the audit time schedule 
* Providing the required body of evidence, choosing the appropriate audit techniques
* Obtaining data – list of required documentation
1. **Performance phase **
* The audit is realised in accordance with the determined goal and extent or audit subject 
* Using individual tools: documentation analysis, completing questionnaires, conducting interview, recording into check-lists
* Obtaining other additional data, materials, if required
1. **Evaluation/analytical phase **
* Analysis of results 
* Obtaining and analysing other additional data, materials
1. **Conclusion phase **
* Identification and description of findings within the audit, including the seriousness of the results 
* Making a draft of the audit report for the project, interpretation of results, including recommendations of the audit team for individual results 
* Introducing the draft report to the audit team and determining a deadline for its statement on the findings included in the report.
* Creating a final report including recommendations based on the audit team statement 
* Delivering the final report version to the audit team and submitting a request for accepting measures with regards to recommendations included in the report 
* Processing measures (what are the measures, when will they be implemented) for recommendations stated in the audit team report 
* Delivering the audit report, including suggested measures, to the school management

# 9. Used methods

The following methods are recommended for the project audit:

* Analysis of audit documentation 
* Checklist – checking performed tasks, created documents through created checklists. 
* Interview – additional questions to the checklist 
* Self-assessment questionnaire

# 10. Audit report content

The audit report proposal forms an Annexe of this methodology (Annexe No. 8). The auditor can modify the report content as required. The audit report should include at least the following:

**1. Introduction**Identification of audit, audit client, audit subject, target, information about the auditor, audited subject and project, audit extent.

**2. Information about the audit progress**Realisation process, date, verified documents and resources, audit method, description of audit works.

**3. Found shortcomings**List of discovered shortcomings according to individual areas stated in the audit subject.

**4. Recommended measures to improve the discovered shortcomings**Recommended measures to be implemented into processes and internal documents of the audited organisation.

**5. Annexes of the audit report**

# 11. Basic Audit Structure

| Project initiation  | Project initiation  | Project initiation  | Project initiation  | Project initiation  |
| --- | --- | --- | --- | --- |
| **Project Initiation**  | Why and how this project was initiated  | Why and how this project was initiated  | Why and how this project was initiated  | Why and how this project was initiated  |
| **Project Proposal** |

|  |
| --- |
| Project boundaries, basic parameters  |
| Organisational structure of the project |
| Change management procedures |
| Risk analysis |

 |

|  |
| --- |
| Determining factual borders of the project Determining project metric Project change management |
| Determining organisational project boundaries Determining limits for decision making |
| Determining change management procedures Determining change boundaries |
| Preconditions for realisation Project risks |

 | Analysis of audit documentation Check-list Interview – additional questions to the check-list  | Analysis of audit documentation Check-list Interview – additional questions to the check-list  |
| **Project Planning** |

|  |
| --- |
| Plans made before the realisation of project activities |
| Documents update |

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|  |
| --- |
| Planning outputs "WHAT?" Planning procedures "HOW?" Planning own and external realisation resources "WITH WHOM?" Planning schedule "WHEN?" Planning budget "HOW MUCH?" Purchase planning |
| Risk register update Communication plan update |

 | Analysis of audit documentation Check-list Interview – additional questions to the check-list | WBS, list of work packages Network graph, Gantt chart Communication plan, Analysis of interest groups, purchase plan Gantt chart, project schedule, Critical path method Project budget, calculation Baseline project plan Risk analysis, risk register, measures to eliminate risks Purchase plan, quality plan |
| **Project Realisation** |

|  |
| --- |
| Project realisation management process |
| Result and project output management and measurement |
| Change and risk management process |

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|  |
| --- |
| Project management process set-up Project documentation management system |
| Result and project output management process set-up |
| Change and risk management process set-up |

 | Analysis of audit documentation Check-list Interview – additional questions to the check-list | Project plan update (all tools from the project planning phase) Purchase / Project order management EVM (earned value management) Updating the baseline project plan Risk assessment |
| **Project Completion** |

|  |
| --- |
| Handover of project results |
| Project evaluation |
| Project completion |

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|  |
| --- |
| Performing the results handover process Performing the results acceptance process |
| Performing the evaluation of project management and realisation |
| Formal project completion Suggestions for improvement |

 | Analysis of audit documentation Check-list Interview – additional questions to the check-lis | Delivery protocols, acceptance protocols, service termination protocols Project final report |

| **Further Audit Areas** |
| --- |
| **Overall evaluation of the project management quality** | Summary evaluation of the project management proces | Analysis of audit documentation Check-list Interview – additional questions to the check-list |
| **Behavioural skills** | Application of behavioural skills during project realisation by the project manager | Self-assessment questionnaire for the project manager |

Individual audit project phases and audit areas are described in more detail in the following chapters of this methodology, including tools for performing the audit.

# 12. Audit methodology according to individual phases and area

## 12.1 "Project initiation" phase

**1. What is the aim of this phase?**

The aim of this phase is to initiate a project. At the end of this phase a decision will be made on the initiation of the project and continuation of this project into the next phase.

**2. What activities are performed in this phase?**

In this phase problems are identified, and a decision is made as to whether it will be solved as a project; the project is created and a project manager is nominated.

We carry out: 

* We analyse the current state of the organisation and identify the problems 
* Decision about the problem to be solved 
* We define the project aims (WHAT?, WHEN? HOW MUCH?) 
* We decide on the project initiation 
* Nomination of a project manager
* Available tools of project management: 

**3. Audit tools**

* Analysis of audit documentation 
* Check-list 
* Interview – additional questions to the check-list

## 12.2 The "Project proposal" phase

**1. What is the aim of this phase?**

The aim of this phase is to set project boundaries, create an organisational project structure, analyse risks and create a communication plan. At the end of this phase a decision will be made on the basic project boundaries and continuation of this project into the next phase.

**2. What activities are performed in this phase?**

* Determining factual borders of the project
* Project goal definition
* Financial cost boundaries
* Deadlines o Product quality requirements
* Requirements on resources o Identification of basic conditions for project realisation 
* Determining the project organisational structure 
* Project team members, individual roles in the team, competences and responsibilities of team members 
* Members of the steering committee 
* Determining project metrics 
* Determining limits for decision making 
* Project risk analysis

**We carry out: **

* We define the SMART goal 
* We process the logical framework matrix 
* Stakeholder analysis 
* Risk analysis

**Available tools of project management: **

* Logical framework matrix 
* Risk register 
* Stakeholder analysis 
* Communication plan 
* Organisational structure of the project

**3. Audit tools**

* Analysis of audit documentation 
* Check-list 
* Interview – additional questions to the check-list

## 12.3 The "Project planning" phase

**1. What is the aim of this phase?**

The planning phase follows the project proposal phase. The aim of the phase is to specify the project extent. This phase outputs consist of approved project plans WHAT? HOW? WITH WHOM? WHEN? HOW MUCH? At the end of this phase a decision will be made on the continuation of this project into the next phase.

**2. What activities are performed in this phase?**

In this phase more detailed project plans are created; these plans need to be approved by the submitter and discussed with stakeholders.

We create: 

* Project extent plan – WHAT? (including clearly defined quality requirements) 
* Project schedule – HOW? WHEN? WITH WHOM? 
* Project budget – HOW MUCH? 
* Purchase plan and quality plan

Available tools of project management: 

* Project WBS 
* Network graph, chart 
* Line chart 
* Gantt chart 
* Project budget 
* Resource bar chart 
* Critical path of the project 
* Critical chain 
* Estimate methods 
* Baseline project plan 
* Risk register 
* Communication plan 
* Purchase plan 
* Quality plan

**3. Audit tools**

* Analysis of audit documentation 
* Check-list 
* Interview – additional questions to the check-list

## 12.4 The "Project realisation" phase

**1. What is the aim of this phase?**

The realisation phase follows the project planning phase. The aim of this phase is to reach project goals using defined resources in the required quality, extent and time frame. The output consists of deliverables, which form the project goal. At the end of this phase a decision will be made on the continuation of this project into the next phase.

**2. What activities are performed in this phase?**

In this phase the defined project outputs are created or ensured in accordance with detailed project plans and through defined activities. Continuous management includes the realisation progress (time schedule, budget, changes, activities, resources and resource utilisation), project results (outputs, indicators) and project risks through updated and specified plans or change processes, which must be approved by the submitter and based on the importance also discussed with stakeholders.

We perform, update and specify: 

* Project extent plan – WHAT? (including clearly defined quality requirements) 
* Project schedule – HOW? WHEN? WITH WHOM? 
* Project budget – HOW MUCH? 
* Risk register

We create: 

* Project documentation 
* Detailed plans (when appropriate – e.g. work schedule)

Available tools of project management: 

* Project WBS 
* Network graph, chart 
* Line chart  Gantt chart 
* Project budget 
* Resource bar chart 
* Critical path of the project 
* Critical chain 
* Estimate methods 
* Baseline project plan 
* Risk register 
* Communication plan 
* Progress monitoring (EVM, SSD, etc.) 
* Selection of suppliers and conclusion of contracts

**3. Audit tools**

* Analysis of audit documentation 
* Check-list 
* Interview – additional questions to the check-list

## 12.5 The "Project completion" phase

**1. What is the aim of this phase?**

The aim of the completion phase is to deliver products and outputs to the project submitter in acceptable quality, take measures for improvement in the organisation and formally complete and archive the project. The result of this phase is the completed project.

**2. What activities are performed in this phase? **

* Delivering products (outputs, services) to the submitter 
* Product acceptance by the submitter 
* Product acceptance by the submitter, including quality 
* Declaration on project completion 
* Final meeting of the steering committee 
* Evaluation of realised procedures, created products (templates, forms, etc.), organisation of work 
* Project completion – making a statement on project completion, dismissing the project organisational structure, archiving documents and procedures 
* Marketing of the completed project and its outputs

**3. Audit tools**

* Analysis of audit documentation 
* Check-list 
* Interview – additional questions to the check-list

## 12.6 Behavioural competence

**1. Aim of the evaluation**

The aim is to evaluate the application level of behavioural skills1 during project management.

**2. Evaluation approach**

Project management presupposes technical and also behavioural skills for successful project realisation. For the purposes of an audit performed by the project manager of the audited project the overall evaluation includes a self-assessment questionnaire for project managers used to gain a complex insight about the project management of the audited project.

Behavioural[[1]](#footnote-1) skills can be evaluated during any phase of the project.

**3. Audit tools**

* Self-assessment questionnaire for behavioural competences

## 12.7 Overall evaluation

**1. Aim of the evaluation**

The aim of the evaluation is to obtain a cross-section evaluation of the managed project.

**2. Evaluation approach**

This part of the audit is used for providing feedback for the whole project management process, cross-section evaluation of selected procedures, logical project structure, and consistency of the managed project in individual phases.

The overall evaluation can only be performed if the project realisation is completed.

**3. Audit tools**

* Analysis of audit documentation 
* Check-list 
* Interview – additional questions to the check-list

# 13. Glossary3

Before starting the audit we recommend the auditors study the basic terminology of project management, e.g. from the National standard for competences in project management, version 3.1, available in electronic form at <http://www.ipma.cz/web/files/IPMA-CzNCB-slovnik-pojmu-v3.1.pdf>

1. Behavioural competences defined in the National standard for competences in project management, version 3.1, Brno: Brno University of Technology in cooperation with SPŘ, o. s., 2010, p. 314, ISBN 978-80-214-4058-6. [↑](#footnote-ref-1)