PECB

When Recognition Matters

WHITEPAPER

ISO 21500

GUIDANCE ON PROJECT MANAGEMENT

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INTRODUCTION

Project management provides a framework to help accomplish business goals. Even though it is often underestimated, project management can be seen as a driving force behind any task.

It is considered as a discipline with the purpose to achieve specific goals and objectives by planning, organizing, motivating and controlling resources. Project management is recognized as an efficient tool to handle complex activities.

According to some recent surveys, the demand of employees in major economies to participate in projects will be 32.6 million. One fifth of the world's GDP is spent on projects. A proportion of 90% of senior executives think that project management is critical for the delivery of successful projects and for remaining competitive in the job market.

ISO 21500 is an international standard issued in 2012 by ISO (International Organization for Standardization) and is intended to serve as guidance on the concepts and processes of project management.

It is the first standard in a planned family of project management standards.

It is designed to align with related International Standards, such as:

- ISO 10006:2003, Quality Management Systems Guidelines for quality management in projects,
- ISO 10007:2003, Quality Management Systems Guidelines for configuration management,
- ISO 31000:2009, Risk Management – Principles and guidelines,
- and some sector-specific standards in industries such as aerospace and IT.

ISO 21500 is designed to be applied globally, across a wide range of industries and types of projects.

An overview of ISO 21500:2012

ISO 21500 provides guidance and high-level descriptions of concepts and processes that are considered important in project management and that are important for, and have impact on, the performance of projects.

The guidance provided by this International Standard can be used by any type of organization, including public, private or community organizations, and for any type of project, irrespective complexity, size or duration.

Even though the projects are placed in the context of programmes and project portfolios, this International Standard does not provide detailed guidance on the management of programmes and project portfolios.

What is a Project?

A project consists of a unique set of processes consisting of coordinated and controlled activities, with start and end dates, performed to achieve project activities.

It provides a better understanding of the principles and practice of project management.

The target readership of ISO 21500 is the following:

- Senior managers and project sponsors
- Project managers, project management teams and project team members
- Developers of national or organizational standards

What is Project Management?

Project management is the application of methods, tools, techniques and competencies to a project. It includes the integration of the various phases of the project life cycle, which spans the period from the start of the project to its end.

Key Clauses of ISO 21500:2013

ISO 21500 is organized into the following main clauses:

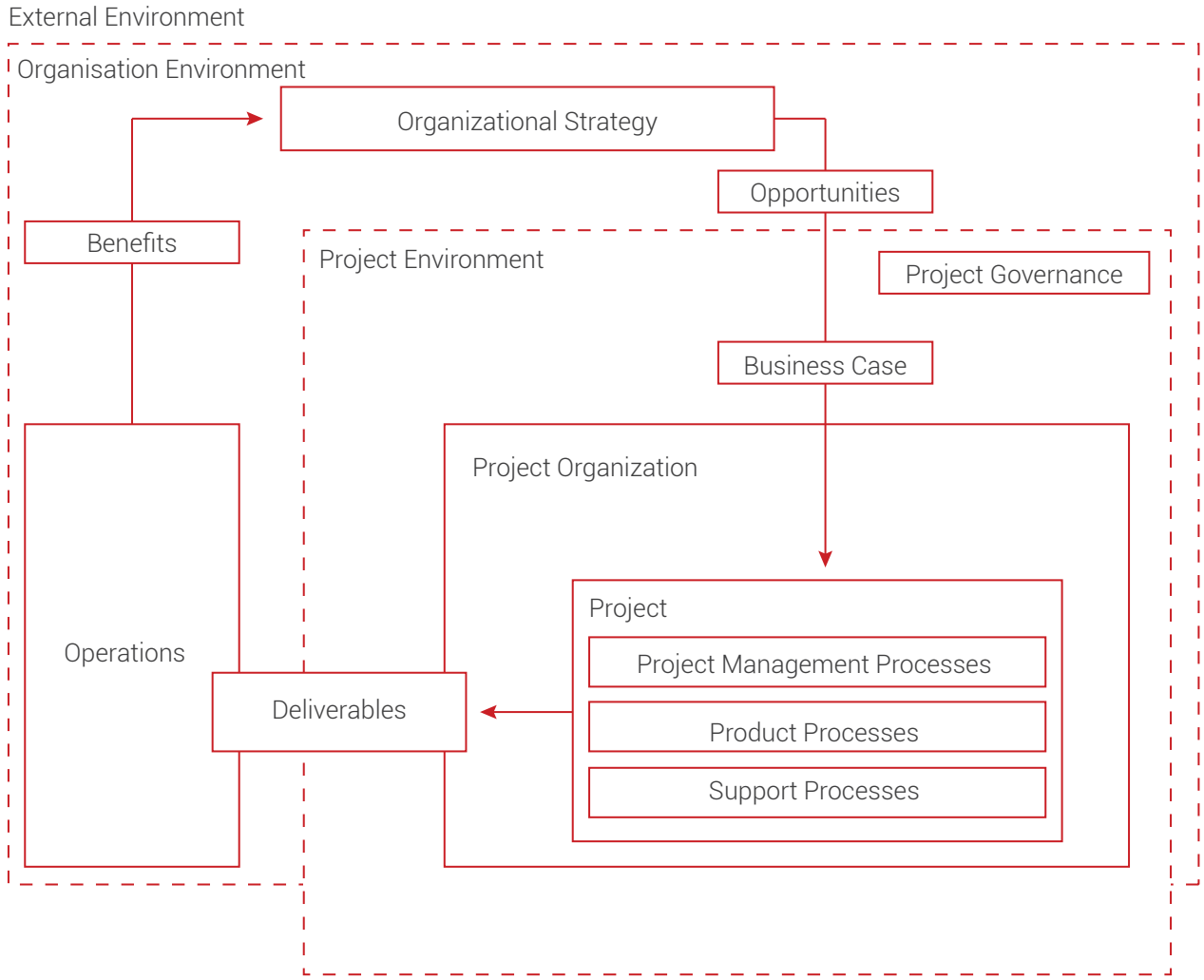
Clause 3: Project Management Concepts
Clause 4: Project Management Processes

Clause 3: Project Management Concepts

This clause describes key concepts applicable to most projects and environments in which they are performed.

The key concepts in project management according to ISO 21500 are:

- Project
- Project management
- Organizational strategy and projects
- Project environment
- Project governance
- Projects and operations
- Stakeholders and project organization
- Competencies of project personnel
- Project life cycle
- Project constraints
- Relationship between project management concepts and processes



Clause 4: Project Management Processes

This clause identifies the recommended project management processes to be used during a project as a whole, for individual phases or both.

The project management processes can be viewed from two different perspectives, as:

1. ***Process groups for the management of the project;***

- Each process group consists of processes that are applicable to any project phase or project. These processes, defined in terms of purpose, description and primary inputs and outputs, are interdependent .The process groups are independent of application area or industry focus

2. ***Subject groups for collecting the processes by subject***

- Each subject group consists of processes applicable to any project phase or project. These processes are defined in terms of purpose, description and primary inputs and outputs, and are interdependent. Subject groups are independent of application area or industry focus.

Subject groups	Process groups				
	Initiating	Planning	Implementing	Controlling	Closing
Integration	4.3.2 Develop project charter	4.3.3 Develop project plans	4.3.4 Direct project work	4.3.5 Control project work 4.3.6 control changes	4.3.7 Close project phase or project 4.3.8 Collect lessons learned
Stakeholders	4.3.9 Identify stakeholders		4.3.10 Manage stakeholders		
Scope		4.3.11 Define scope 4.3.12 Create work break-down structure 4.3.13 Define activities		4.3.14 Control scope	
Resource	4.3.15 Establish project team	4.3.16 Estimate resources 4.3.17 Define project organization	4.3.18 Develop project team	4.3.19 Control resources 4.3.20 Manage project team	
Time		4.3.21 Sequence activities 4.3.22 Estimate activity durations 4.3.23 Develop schedule		4.3.24 Control schedule	
Cost		4.3.25 Estimate costs 4.3.26 Develop budget		4.3.27 Control costs	
Risk		4.3.28 Identify risks 4.3.29 Assess risks	4.3.30 Treat risks	4.3.31 Control risks	
Quality		4.3.32 Plan quality	4.3.33 Perform quality assurance	4.3.34 Perform quality control	
Procurement		4.3.35 Plan procurements	4.3.36 Select suppliers	4.3.37 Admin-ister procure-ments	
Communica-tion		4.3.38 Plan communica-tions	4.4.39 Distrib-ute informa-tion	4.3.40 Manage communica-tions	

Link between ISO 21500 and other project management standards and methodologies

- ***Link with PRINCE2®***

PRINCE2 (PRojects IN Controlled Environments) is a widely used project management method developed by the UK government. It provides a process-based approach for the management of all types of projects.

- ***Link with PMBOK***

PMBOK (Project Management Body of Knowledge) presents a set of standard terminology and guidelines in project management. The latest version of this guide, the fifth edition, was published in 2013 by PMI (Project Management Institute).

Similarities between ISO 21500 and PMBOK

Both standards (ISO 21500 and PMBOK, 5th Guide) are structured into project management stages and topics.

	ISO 21500	PMBOK 5th Guide
Stages	5 process groups	5 process groups
Topics	10 subject groups	10 knowledge areas
Processes	39 processes	47 processes

Project Management Process Groups

ISO 21500 divides project process groups into five processes. The comparison with the PMBoK Guide is illustrated below:

ISO 21500	PMBoK ® Guide
1.Initiating	1.Initiating
2.Planning	2.Planning
3.Implementing	3.Executing
4.Controlling	4.Monitoring and Controlling
5.Closing	5.Closing

Subject Groups

ISO 21500 divides the subjects into 10 groups. The comparison with the PMBoK Guide is illustrated below:

ISO 21500 Subjects	PMBoK ® Guide Knowledge Areas
1.Integration	1.Integration
2.Stakeholder	2.Stakeholder
3.Scope	3.Scope
4.Resource	4.Human Resources
5.Time	5.Time
6.Cost	6.Cost
7.Risk	7.Risk
8.Quality	8.Quality
9.Procurement	9.Procurement
10.Communication	10.Communication

It is clearly seen from the comparisons that ISO 21500 is strictly based on the PMBoK® Guide. The Human Resources knowledge area from the PMBoK® Guide has been renamed to Resource subject in order to cover both types: human and other project resources.

Link with ISO 10006

Until the release of ISO 21500:2012, the only ISO standard dealing with projects was ISO 10006, Quality Management Systems – Guidelines for quality management in projects. This international standard provides guidance on the application of quality management in projects. It does not serve as a guide in project management itself.

Project Management – The Business Benefits

As with all major undertakings within an organization, it is essential to gain the backing and sponsorship of executive management. By far the best way to achieve this, rather than through highlighting the negative aspects of not having project management is to illustrate the positive gains of having an effective project management process in place.

The business benefits that project management conveys are:

- Enhanced efficiency in delivering services;
- Enhanced effectiveness in delivering services;
- Increased customer satisfaction;
- Improved growth and development within the team;
- Better standing and competitive edge;
- Increased opportunities to expand services;
- Better flexibility;
- Increased risk assessment; and
- Increase in quality and quantity of product/service.

Training and Certification of Professionals

PECB has created a training roadmap and personnel certification schemes which is strongly recommended for implementers and auditors of an organization that wish to get certified against ISO 21500. Whereas certification of organizations with the ISO 21500 standard is vital, as it provides evidence that organizations have developed standardized processes based on best practices. Certifications of individuals serve as documented evidence of professional competencies and experience for/of those individuals that have attended one of the related courses and exams.

It serves to demonstrate that a certified professional holds defined competencies based on best practices. It also allows organizations to make intelligent choices of employee selection or services based on the competencies that are represented by the certification designation. Finally, it provides incentives to the professional to constantly improve his/her skills and knowledge and serves as a tool for employers to ensure that training and awareness have been effective.
PECB training courses are offered globally through a network of authorized training providers. They are available in several languages and include introduction, foundation, implementer and auditor courses.

The table below gives a short description relating PECB's official training courses for Project Management based on ISO 21500.

ISO 21500	Short description	Who should attend
ISO 21500 Introduction	• One day training • Introduction to concepts and processes of project management • Do not lead to certification	• Project managers • Operations managers • Senior managers • Members of a project management team • Auditors
ISO 21500 Foundation	• Two days training • Become familiar with best practices for implementation of GPM • One hour exam	• Project managers • Operations managers • Members of a project management team • Professionals on Project Management • Auditors
ISO 21500 Lead Implementer	• Five days training • Manage the implementation of GPM • Three hours exam	• Project managers and/or consultants • Operations managers • Senior managers • Members of a project management team
ISO 21500 Lead Auditor	• Five days training • Manage the audit of GMP • Three hours exam	• Internal auditors • Auditors • Project managers and/or consultants • Members of a project management team

Choosing the Right Certifications

The ISO 21500 Foundation certification is a professional certification for professionals needing to have an overall understanding of the ISO 21500 standard.

The ISO 21500 Implementer certifications are professional certifications for professionals needing to implement a GPM and, in case of the ISO 21500 Lead Implementer Certification, needing to manage an implementation project.

The ISO 21500 Auditor certifications are credentials for professionals needing to audit a GPM and, in case of the ISO 21500 Lead Auditor Certification, needing to manage a team of auditors.
The ISO 21500 Master certification is a professional certification for professionals needing to implement a GPM and to master the audit techniques and manage (or be part of) audit teams and audit program.
Based on your overall professional experience and your acquired qualifications, you will be granted on or more of these certifications based on project or audit activities you have performed in the past or you are currently working on.

Certification	Exam	Professional experience	Audit experience	Project experience
Foundation	Foundation Exam	None	None	None
Provisional Implementer	Lead Implementer Exam	None	None	None
Implementer	Lead Implementer Exam	Two years One year of project management related work experience	None	Project management activities totaling 200 hours
Lead Implementer	Lead Implementer Exam	Five years Two years of project management related work experience	None	Project management activities totaling 300 hours
Provisional Auditor	Lead Auditor Exam	None	None	None
Auditor	Lead Auditor Exam	Two years One year of project management related work experience	Audit activities totaling 200 hours	None
Lead Auditor	Lead Auditor Exam	Five years Two years of project management related work experience	Audit activities totaling 300 hours	None
Master	Lead Auditor Exam Lead Implementer Exam	Ten years Six years of project management related work experience	Audit activities totaling 500 hours	Project management activities totaling 500 hours

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