

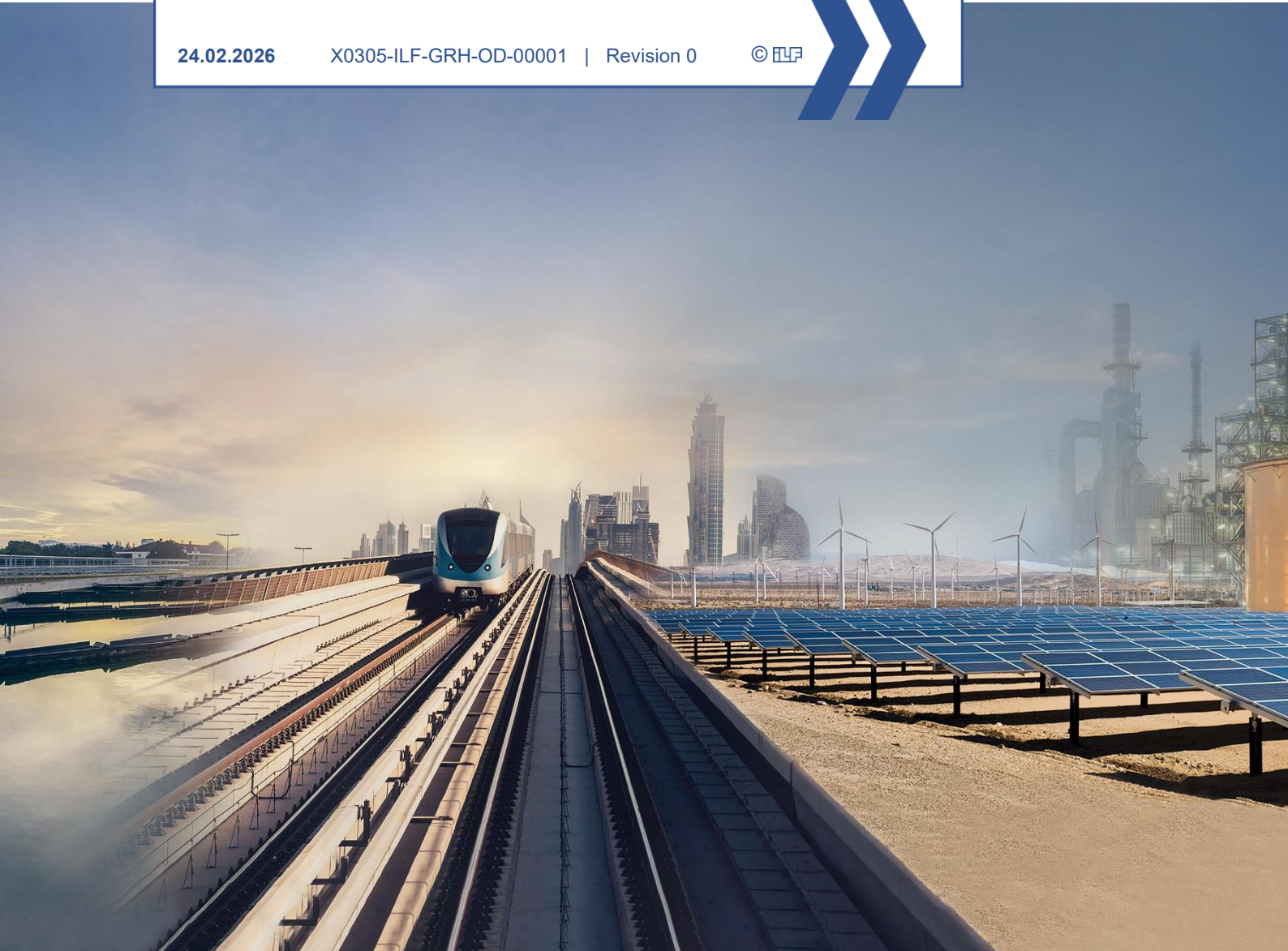
PROJECT MANAGEMENT SYSTEM **PMS OVERVIEW**

Project Management System PMS 2.0

24.02.2026

X0305-ILF-GRH-OD-00001 | Revision 0

© ILF



REVISIONS

0	24.Feb.2026	First issue	Adolf H. Feizlmayr	N. Ahmed U. Tretter	Werner Redtenbacher
REV.	DATE	ISSUE, MODIFICATION	PREPARED	CHECKED	APPROVED



TABLE OF CONTENTS

PREAMBLE	4
1 INTRODUCTION.....	5
2 PMS CONCEPT	5
3 USER GROUPS.....	6
4 ADDED VALUE OF THE PMS.....	6
5 PMS KNOWLEDGE BASES.....	7
5.1 Project management basic structure	7
5.2 Structure extension by ILF.....	9
5.3 Best industrial practice	10
5.4 ILF's Knowledge Base.....	11
6 PMS DOCUMENTATION.....	11
6.1 Generic documentation	11
6.1.1 PMS Overview	11
6.1.2 PMS Glossary	11
6.1.3 Guidelines	12
6.1.4 Standard Procedures	12
6.2 Project specific documentation.....	12
6.2.1 Project Glossary.....	12
6.2.2 Management Plans	12
6.2.3 Other project specific documentation	12
7 APPLICATION.....	13
7.1 Project acquisition phase	13
7.1.1 Identify the project status	13
7.1.2 Define ILF's scope of work	13
7.1.3 Create the staffing plan	14
7.1.4 Create the list of content for the Project Execution Plan	14
7.2 Project execution phase	14
7.2.1 Initial planning phase.....	14
7.2.2 Service execution.....	14
7.2.3 Performance assessment.....	14
7.2.4 Service close-out.....	14



FIGURES

Figure 1: PMS Knowledge Areas.....	9
Figure 2: Project Life Cycle.....	11
Figure 3: Structure of the PMS documentation	13

APPENDICES

Appendix 1: Glossary, Terms and Definitions used in the PMS Overview document.....	15
Appendix 2: List of Sample Documents	17



PREAMBLE

The present overview document provides an introduction to ILF's Project Management System (PMS).

The main application of ILF's PMS is for Project Management Consultancy (PMC) services. With reference to ILF's Integrated Management System (IMS) PG 2309 these are Project Control Services provided for a customer to manage a project on his behalf as Owner's Engineer or Consultant.

The ILF's PMS is applicable whenever ILF provides PMC or similar services in full or partly in all its Business Areas.

It can also be applied if ILF participates in an Integrated Management Team or if an Owner entrusts ILF as Project Manager with full power of attorney.

This document is not confidential and can serve for both internal and external use.

The complete ILF PMS documentation consists of:

- this Overview document
(X0305-ILF-GRH-OD-00001),
- the PMS Standard Procedures,
(X0305-ILF-GRH-OD-00002),
- * the PMS System Description
(X0305-ILF-GRH-OD-00003),
- * the Project Life Cycle Workflow
(X0305-ILF-GRH-OD-00004),
- * the documents listed in the List of PMS Documents
(X0305-ILF-GRH-OD-00005),
- * the PMS Glossary,
(X0305-ILF-GRH-OD-00006) and
- Sample Documents for Project Execution Plans (PEPs)

* These documents will be adjusted to this Overview document and the Standard Procedures.

The PMS documentation forms part of the ILF Group Integrated Management System (IMS).

The PMS documentation is periodically reviewed and updated by the Process Officer responsible for the PG23XX processes within IMS 2.3 'Project Processing', ensuring continued alignment with best industry practices and ILF internal requirements.



1 INTRODUCTION

ILF Consulting Engineers operates on a worldwide basis and has provided engineering and management services since its foundation in 1967.

In its effort to strive for excellence, ILF has developed its own Project Management System (PMS) for providing Project Management Consultancy (PMC) Services. The PMS is a systematic approach to project management based on best industry practices.

The PMS can be fully tailored to the needs of our Customers and creates the basis for successful project execution.

This overview document gives a rough overview of the concept, the structure and the application of the PMS.

2 PMS CONCEPT

The PMS has been designed according to the following principal:

- Starting base is the management framework published by the Project Management Institute (PMI) in the form of the PMBOK® Guide, but, where useful, PMS refers to other best industry practices.
- Focus on large investment projects.
- Flexible to meet the requirements of various projects.
- Openness for later extension to other services and/or other industries.
- Provide support to the project manager and his team in setting up the project-specific PMS.

For this purpose, the Standard Procedures describe in a generic way how ILF intends to manage projects for its Customers. These generic procedures are then used to prepare the project specific Management Plans.

The Management Plans are the main content of the Project Execution Plan (PEP) describing how ILF intends to manage the individual project.

In this respect the application concept is similar to the General and Special Conditions of the Contract.

The Standard Procedures and Management Plans shall complement each other.

- Serve as an interactive software-tool utilizing hyperlinks between documents thus not being a set of purely static documentation.



3 USER GROUPS

- The user groups of the PMS include Acquisition managers. The PMS and especially this overview document shall support the pre-qualification and bidding process and demonstrate ILF's project management capabilities. The PMS is also used to define the scope of the PMC services.
- The PMS shall support the project manager and his team to prepare the PEP as described above. The PEP will also be used for an efficient induction of new staff.
- Project auditors: The PMS provides the auditors a clear and transparent basis for their assessment.

4 ADDED VALUE OF THE PMS

ILF's PMS has been prepared in order to:

- Demonstrate to its Customers ILF's capability in managing large investment projects.

More and more Customers demand qualified documents & tools for professional project management, following international best practices.

- Support a quick project start-up

The project start-up is always crucial. Very often the project managers start collecting documents from various sources or creating project documentation "from scratch". This is both time consuming and inefficient.

The Standard Procedures can be used to prepare the project-specific Management Plans in a very efficient manner. This will facilitate the quick preparation of the PEP, which is essential for a successful start.

- Guide the project management along the whole project life cycle.

The PMC task is extremely complex because scope, time, cost, quality, risk, financing, communication and other processes must be managed simultaneously. The PMS enables an integrated management approach through project-specific Management Plans supported by standardized procedures and templates that serves as sources and references.

- Facilitate performance assessments

It is crucial for an auditor to gain a quick understanding of where the project stands in terms of target achievement. A structured approach and transparent project planning tools are needed to facilitate the assessment.

- Become the basis for continuous improvement

The quality of the Standard Procedures and their templates is essential for the PMS. They should be periodically revised based on experience and lessons learned from PMC contracts. This ensures continuous improvement of the PMS.

- Improve the common understanding
A Glossary is part of the PMS and will help to create a common understanding and avoid speaking in different languages and meanings.
- Provide a basis for staff training
Training and education of junior staff is important and needs professional training materials. PMS provides such materials.

5 PMS KNOWLEDGE BASES

5.1 Project management basic structure

Over many years, the Project Management Institute (PMI) has created a project management framework described in the PMBOK® Guide, including best practices and guidelines, for project management.

PMBOK® Guide describes five Process Groups carried out during the project:

- Initiating
- Planning
- Execution
- Monitoring and Controlling
- Closing

To carry out these steps, a certain knowledge is required for which the PMBOK® Guide describes following Knowledge Areas:

1. Scope Management

Scope Management covers all activities to ensure that the scope of work is defined according to Owner's requirements and broken down into reasonable work levels and their elements (Work Breakdown Structure). It also includes the management of technical deviations.

2. Time Management

This Knowledge Area covers activities like estimating of project duration, sequencing the line of actions, critical path identification and milestone definition required to produce schedules. It also includes schedule control and schedule change and alteration management.

3. Cost Management

This Knowledge Area covers issues like cost estimation, budget determination and cost control.

4. Quality Management

Quality Management comprises all processes related to quality assurance and quality control.



5. Human Resource Management

Human Resource (HR) Management includes all processes related to staffing, organizing, managing and leading the project team, e.g. staff induction, development of qualification profiles, mobilization/demobilization and team building.

6. Communication Management

Communication Management includes the organization of internal and external communication. Reporting is also part of Communication Management.

7. Risk Management

Risk Management includes the identification and analysis of risks, risk monitoring and control as well as the definition of actions for risk treatment.

8. Procurement, Contract and Claim Management

This Knowledge Area covers issues like procurement strategy, prequalification, tendering, including bid evaluation, preparation of contracts, contract administration, administration of invoices and payments as well as claim management.

9. Stakeholder Management

This is a new Knowledge Area, which was originally part of Communication Management.

It covers all activities to prepare the Stakeholder Register, to define their roles and the lines of communication.



Project Management System (PMS)



Figure 1: PMS Knowledge Areas

5.2 Structure extension by ILF

Additional Knowledge Areas, as shown in Figure 1, have been defined by ILF to cover specific business requirements. These areas can be adapted to meet the special needs of a particular PMC mandate.

10. Health, Safety, Security (HSS) Management

This Knowledge Area covers occupational health and safety, security issues.

11. Sustainability Management

This Knowledge Area covers all activities related to managing the sustainability aspects including environmental and social impact assessment and the impact on the climate by greenhouse gas emissions.

12. Engineering Management

This Knowledge Area covers all processes that ensure the engineering design follows international best practices and meets Owner's expectations.

13. Management of Permitting and Approval Process

The Management of Permitting and Approval Process covers the processes necessary to obtain all approvals for construction and operation from the relevant authorities, as well as the methods to monitor and control these processes.

14. Management of Land Acquisition

This Knowledge Area covers processes to acquire rights of way, purchase land, and how to control these processes.

15. Construction Management

Construction Management covers all activities to ensure that the project facilities are constructed in full compliance with the contracts. It is closely related to Contract Management and includes construction supervision.

16. Commissioning Management

This Knowledge Area covers all activities to ensure that the project facilities are commissioned in full compliance with contractual requirements. It includes vetting of the commissioning programs and supervision of the commissioning including corresponding tests.

Commissioning Management is closely linked with Construction Management.

17. Management of Initial Operation

The Management of Initial Operation covers all activities to ensure that all measures for initial operation are properly planned and executed. These measures also include preparing operation manuals, developing operation plans and conducting operator training.

This Knowledge Area is closely interlinked with Commissioning Management.

5.3 **Best industrial practice**

The Project Life Cycle shown in below Figure 2 has become a quasi-standard in the industry for managing large investment projects.

The Project Life Cycle consists typically of five phases:

1. Appraise

Opportunities identification; feasibility confirmation; project framing and set-up

2. Select

Business planning, financing, develop conceptual design package; prepare project execution strategies, environmental and social impact assessment

3. Define

Permit engineering; preparation of FEED package; tendering; project execution planning

4. Execute

Procurement & contracting; preparation of detail, construction & vendor design; construction; commissioning & trial operation; project execution management

5. Operate

Business control; operation; optimization; maintenance; and later on the abandonment

The project starts at the end of the **Appraise** phase with the project framing or project start-up and ends with the contract close-out. Basically, the project is considered complete once the operating asset is in service and all contracts have been successfully executed.

During the **Appraise**, **Select** and **Define** phases, costs for design changes are relatively low compared to the **Execute** phase.

Usually, the phases are separated by Gates-well defined milestones where the project undergoes a formal Gate Review before moving to the next phase, including funding approval.

Usually, funding will be provided after successfully passing the Gate at the end of the **Define** phase and before entering the **Execute** phase. The passing of this gate is normally characterized by the **Final Investment Decision (FID)**.

Such Stage Gate Process is common practice in the industries for many years.

5.4 ILF's Knowledge Base

Over many years, ILF has created its own knowledge database of know-how consisting of ILF Recommended Practices (RP), Standard Specifications, Samples and other related documents. The Recommended Practices (RPs) and Standard Specifications are more related to engineering design and technical solutions.

Thus the PMS complements ILF's know-how in terms of Project Management Consultancy (PMC), but does not replace or supersede RPs. Where useful, references to RPs are given in the PMS documentation.



Figure 2: Project Life Cycle

6 PMS DOCUMENTATION

The structure of the PMS documentation is shown in Figure 3 below.

6.1 Generic documentation

6.1.1 PMS Overview

This PMS Overview document shall provide an introduction to the ILF PMS. It shall be used internally and externally.

6.1.2 PMS Glossary

The Glossary includes terms and definitions which shall be binding for all generic PMS documentation.

6.1.3 Guidelines

For each Knowledge Area the Guideline describes how to use the Standard Procedure to prepare the Management Plan as part of the Project Execution Plan (PEP).

It provides the area specific links to other Knowledge Areas within the PMS, ILF's Knowledge Base including the Integrated Management System (IMS).

In addition the Guideline includes a dedicated chapter that offers a high-level description of the objectives and main activities for each Knowledge Area during an entire project lifecycle.

6.1.4 Standard Procedures

ILF's PMS Standard Procedures are generic documents and cover all Knowledge Areas mentioned in chapter 5.

A Standard Procedure describes how a certain Knowledge Area (like scope, time cost etc.) shall be managed mainly by specifying the typical contents of the Management Plan and its usual attachments. Templates for such attachments are part of the Standard Procedures.

The Standard Procedures are ILF documents like the PMS Overview document- this document- and it is not foreseen to adjust them to project specific requirements.

6.2 Project specific documentation

6.2.1 Project Glossary

The Project Glossary is based on the content of the PMS Glossary. After project specific adaption it is binding for all other project-specific documentation.

6.2.2 Management Plans

A Management Plan integrates and consolidates all subsidiary plans and working procedures necessary for the successful execution, monitoring, control and close-out of a project. Based on the content recommended in the Standard Procedure, it describes how a specific Knowledge Area (like scope, time, cost etc.) should be managed.

For the attachments to the Management Plan, the templates of the Standard Procedure shall be used as appropriate.

6.2.3 Other project specific documentation

In addition to the usual attachments covered by templates project specific documentation may be attached to Management Plan to facilitate its execution.



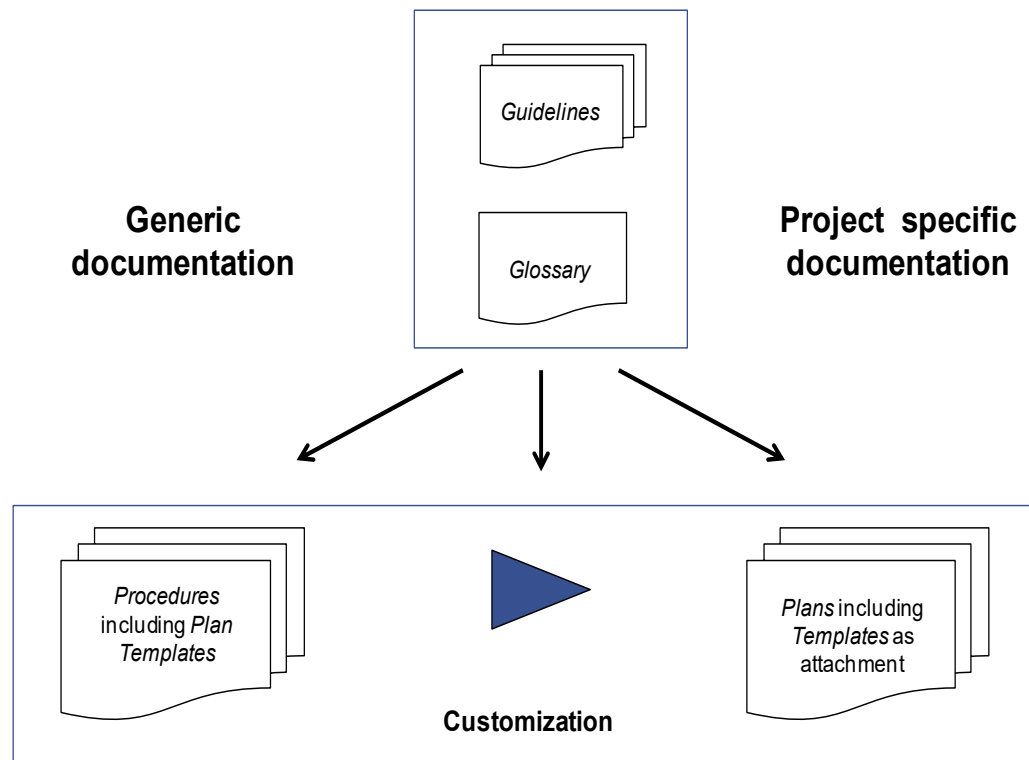


Figure 3: Structure of the PMS documentation

7 APPLICATION

Generally, the work with the PMS can be divided into two phases: the acquisition phase and the project execution phase.

7.1 Project acquisition phase

The proposal manager, supported by project management experts, will prepare PMC services offer in four steps.

7.1.1 Identify the project status

Identify the project status in the Project Life Cycle Workflow (X0305-ILF-GRH-OD-00004). If deemed helpful, this workflow may also be used during clarification meetings with the Owner.

7.1.2 Define ILF's scope of work

As the PMS covers the whole scope of any project depicted in the Project Life Cycle Workflow, proper customization is extremely important to avoid "over-scope" the project management service. The guiding question should always be: **"What is really necessary to successfully manage the project?"**.

Activities, which are related to ILF's internal project management, such as reporting, budget control and auditing – must also be performed in compliance with the IMS.

7.1.3 Create the staffing plan

For all activities, necessary competences shall be identified by using the pre-defined competence profiles included the Human Resource Standard Procedure of the PMS. Based on this, a tentative staffing plan should be created.

7.1.4 Create the list of content for the Project Execution Plan

The list shall be prepared using this overview document for guidance together with first thoughts on project execution.

7.2 Project execution phase

PMC services – like all services – should follow the general principal:

"Plan the work and work the plan"

This principal is implemented in the following four steps

7.2.1 Initial planning phase

After contract award, the project-specific PMS documents shall be prepared, based on a List of Deliverables (LOD). This list shall be provided in the form of a matrix indicating the authors and the document delivery dates.

The first set of documents should include:

- Project Charter
- Stakeholder Register
- Project Glossary
- first issue of the Project Execution Plan (PEP)

7.2.2 Service execution

The project will be managed according to the Project Execution Plan (PEP) prepared in due time and updated during the execution as required.

7.2.3 Performance assessment

The performance of the PMC services shall be monitored through project audits. These audits shall be planned in advance and incorporated in the project specific Plans.

Audits will be performed based on the PMS documentation and where applicable the IMS -PG1503-.

7.2.4 Service close-out

After the PMC services have been completed, the experience gained during their execution shall be compiled, together with the performance assessments, and forwarded to the custodian of the PMS documentation to support the continuous improvement of the PMS.

APPENDIX 1: GLOSSARY, TERMS AND DEFINITIONS USED IN THE PMS OVERVIEW DOCUMENT

GLOSSARY, TERM, DEFINITION	DESCRIPTION
Customer	Owner of an Operating Asset who employs an Engineer or Consultant to perform certain services like PMC. Synonym for Client.
Flowchart	A logical presentation of activities and their sequence.
Front End Engineering Design (FEED)	Engineering design - which serves usually for tendering the implementation and construction of a project. Term is more commonly used in process design focused industries like in the Oil & Gas sector, and not applicable to the infrastructure sector.
Gate	Pre-defined milestone in the Project Life Cycle where a formal decision must be made to proceed to the next phase of the project.
Glossary	A Glossary includes terms and definitions.
ILF	ILF Consulting Engineers formerly Ingenieurgemeinschaft Lässer-Feizlmayr
IMS	ILF's Integrated Management System
Management Plan	As defined in Chapter 6.2.2.
Standard Procedure	As defined in Chapter 6.1.4.
Operating Assets	Assets a company uses to support its business operations and generate revenue.
Operating Asset Life Cycle Flowchart	Whole life cycle of the Operating Asset starting with the Appraise phase and ending with the dismantling ("Greenfield to Greenfield").
Owner	Company that owns the Operating Asset. Typical Customer or Client (Synonym) for PMC services.
PMS	Project Management System.
Project Charter	A document summarizing the scope of the project, the project description and the key requirements of the Stakeholders. The Project Charter shall be signed by the Owner.



GLOSSARY, TERM, DEFINITION	DESCRIPTION
Project Execution Plan (PEP)	The Project Execution Plan basically consists of two Parts: Part 1 shall cover the project description and the concepts for its implementation. The Project Charter shall be included if available. Major subjects will in additionally be the Stakeholder Register, the project organisation, the roles of the parties involved, the overall project schedule and the procurement strategy. Part 2 shall describe how the project shall be managed. It consists of several chapters each one containing the Management Plan for a certain Knowledge Area relevant for the project. These chapters reference the applicable Standard Procedures and include supporting attachments."
Project Management Consultancy (PMC)	Project Control Services carried out by a Consultant acting on behalf of the Owner.
Project Management Institute (PMI)	PMI is a not-for-profit membership association for the project management profession. Please see also www.pmi.org
Project Management Plan	Project Management Plan is a term sometimes used for Part 2 of the PEP.
Recommended Practice (RP)	ILF document being part of ILF's Knowledge Base
Stakeholder Register	Register of all persons or organizations actively involved in the project.
Standard Specification	ILF documents being part of ILF's Knowledge Base
Template	Templates for attachments to the Management Plans like checklists, tables, working instructions are part of the Standard Procedures.
Work Breakdown Structure	Comprehensive list of work items or packages to be carried out during the project execution presented in a structured way as part of the Scope Management Plan.



APPENDIX 2: LIST OF SAMPLE DOCUMENTS

For the first issue of the revised PMS 2.0 the only sample document on the list is the Project Execution Plan (PEP) for the PMC Contract related to the Common Sea Water Supply Project in Iraq (ILF Project 17849). Further PEP samples will be added from projects where the PMS 2.0 is applied in an exemplary way.

It is the main purpose of these PEP samples to show how the PMS of ILF and especially the Standard Procedures shall be applied for projects of the various business areas.

