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Individual Competence Baseline

for Project Management

Version 4.0

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Foreword

The profession of project management is changing rapidly. Organisations have evolved their ability to define and implement new areas of work, with more integration across projects and more focus on the long-term benefits. Therefore, project management is established as the preeminent method for implementing change in the world and project, programme and portfolio managers are leading the way. The professionals of tomorrow will work in distributed environments with overlapping and often conflicting stakeholder interests. They will be shaped by real-time data and performance management tools, challenged with too much information and not enough communication and judged by their ability to deliver products or services that align with short and long-term strategies, to deliver benefits. It is into these increasingly demanding challenges that the IPMA Individual Competence Baseline, Version 4.0 (IPMA ICB®) is introduced.

The IPMA ICB is a global standard that defines the competences required by individuals working in the fields of project, programme and portfolio management. The IPMA ICB builds upon the prior editions and presents new insights and directions for a wider range of purposes. It serves a broad range of audiences, including educators, trainers, practitioners, human resource (HR) professionals and assessors. Within the IPMA 4-Level-Certification system, the IPMA ICB serves also as the baseline for assessments.

The IPMA ICB represents a major advancement for successful and modern project, programme and portfolio management. This version describes three domains of expertise extant in business today – project management, programme management and portfolio management. The IPMA ICB describes individuals who work in these domains, while avoiding role-specific terminology because although a role name may change, the underlying concept remains valid.

The IPMA ICB takes the IPMA Eye of Competence (chapter 3, page 25) into the next generation, with a redefinition of the competence elements (CEs) required by the modern project manager.

28 CEs are organised in three competence areas:

- **People.** People CEs define the personal and interpersonal competences required to succeed in projects, programmes and portfolios;
- **Practice.** Practice CEs define the technical aspects of managing projects, programmes and portfolios;
- **Perspective.** Perspective CEs define the contextual competences that must be navigated within and across the broader environment.

The profession of project management has become a global profession. Organisations frequently engage in projects, programmes and portfolios that cross organisational, regional, national and international borders.

The modern manager must work with a wide range of partners outside of their organisation and with a broad array of factors including industry, culture, language, socio-economic status and organisation types. Project management has to be applied taking these contextual facets into consideration and often these broader contexts are seen as the most critical success factor. The IPMA ICB emphasises these challenges.

It took three years to produce this revised version, from defining the business needs, through architectural design, developing the content in a multi-dimensional manner to editing and layout. Four face-to-face workshops a year and a lot of homework took us where we are today. With the IPMA ICB, a new standard is available. But this is far from the end of the journey; in fact it is just the start. The project management community is invited to work with it and provide regular feedback to IPMA so that it can continuously be improved.

We want to thank the project team (Peter Coesmans (The Netherlands), Marco Fuster (Switzerland), Jesper Garde Schreiner (Denmark), Margarida Gonçalves (Portugal), Sven Huynink (The Netherlands), Tim Jaques (United States of America), Vytautas Pugacevskis (Lithuania), Dr. David Thyssen (Germany), Alexander Tovb (Russia), Dr. Mladen Vukomanovic (Croatia), Michael Young (Australia)) and more than 150 experts around the globe – researchers, educators, trainers, HR professionals, certification bodies and many practitioners – who provided valuable feedback during the development, the sounding or the review rounds. To work together across huge distances and multiple time zones – and all on a voluntary basis in addition to individuals' professional and personal lives – is quite an achievement. We are indebted to the effort that all contributors have put into the project and into IPMA.

Thanks, too, for the deep friendship created through our deep debates.

The IPMA ICB will help us to achieve a world in which all projects succeed.

Reinhard Wagner
IPMA President

Martin Sedlmayer
IPMA ICB Project Manager

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1. Introduction

1. Introduction

The IPMA Individual Competence Baseline (IPMA ICB®) is the global standard for individual competence in project, programme and portfolio management.

The IPMA ICB supports the development of individual competence through the presentation of a complete inventory of competence elements across projects, programmes and portfolios.

IPMA's goals with IPMA ICB are simple – to enrich and improve the individual's competence in project, portfolio and programme management and to provide an inventory of competences that, if fully realised, represent complete mastery of these management domains. Projects, programmes and portfolios are at the forefront of change in the world today. Projects drive the development of new products and services, investments and expansion, capabilities, the implementation of new strategies and a new generation of infrastructure. We recognise that projects begin and end with people and that competent execution is at the heart of every successful project.

The burden has never been higher for project, programme and portfolio managers to produce measurable results on time, on budget, within scope and while meeting the quality criteria. The IPMA ICB competence standard is intended to support the growth of individuals and also of organisations as they grapple with increasingly competitive project environments. The IPMA ICB describes a comprehensive inventory of competences that an individual needs to have or to develop to successfully master the work package, the project, the programme or the portfolio that the individual is tasked to manage.

However, the IPMA ICB is not a 'how to' guide or a cookbook for managing projects, programmes or portfolios. Therefore, it does not describe the processes or steps involved in project, programme or portfolio management. While it offers more in competence development of individuals involved in project, programme and portfolio management, it can be used alongside other global process-oriented standards.

To everyone who uses the IPMA ICB, we wish you a successful journey!

2. Purposes and intended users

2. Purposes and intended users

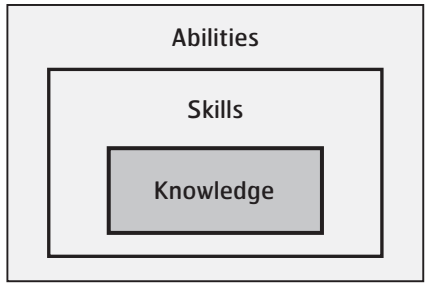
2.1. Definition of competence

There are many definitions of the term 'competence' around the world. The IPMA Individual Competence Baseline (IPMA ICB®) presents a plain English definition that is widely accepted by professionals and is intended to be recognisable and readily understood. This definition is not intended to minimise or supersede any other definition, but rather to provide guidance to the individual seeking improvement.

Individual competence is the application of knowledge, skills and abilities in order to achieve the desired results.

- **Knowledge** is the collection of information and experience that an individual possesses. For example, understanding the concept of a Gantt chart might be considered knowledge.
- **Skills** are specific technical capabilities that enable an individual to perform a task. For example, being able to build a Gantt chart might be considered a skill.
- **Ability** is the effective delivery of knowledge and skills in a given context. For example, being able to devise and successfully manage a project schedule might be considered ability.

These three terms are related in that having a skill presupposes some relevant knowledge. Having ability presupposes relevant skills and knowledge, but adds to that the use of these in practice, in the right manner and at the right time.



What about experience?

Experience plays a significant, though indirect, role in competence.

Without experience, competence can neither be demonstrated nor improved. Experience is a key success factor to the growth of the individual. To successfully perform assigned roles, individuals need to accumulate sufficient experience and thus complement the potential for their competences.

Therefore, state of the art certification and assessment systems do not assess knowledge alone, but focus on competence together with experience gained. The IPMA ICB addresses – as a standard for competence – those factors that are directly correlated with competence.

2.2. Audiences and uses

The IPMA ICB is intended to support a wide range of audiences across many uses. It was developed and written with these audiences in mind. The following table describes the audiences and possible uses of the IPMA ICB. This list (in alphabetical order) is by no means exhaustive.

Audience	Possible uses
Assessors, certification boards, IPMA member associations	• A baseline for assessment and certification • A new global standard to promote the member association and attract new members • New assessment and educational offerings with project, programme and portfolio domains
Coaches, consultants	• Accessible, individual standard to be applied to clients • Platform for the development of additional services and products
Corporations, governments, business, not-for-profit organisations	• One standard for running projects worldwide • Business does not have to reinvent a set of competence standards • International basis for staff development • A path to competent project managers and project success
Educators, trainers	• Updating the curriculum • Guidelines for teaching project, programme and portfolio management • Opportunity for better training, tailored to more specific roles
Practitioners	• Baseline for professional development • Basis on which to be assessed and certified • A common language for communities of practice • Competence development for a team • Easily readable baseline • Self-assessments
Researchers	• New standard for research development • Basis for papers and conferences • Platform for team-based research

2.3. Individual competence development

2.3.1. Overview

The development of competences is both an individual journey and a societal need. IPMA recognises competence today as a function of the individual, the team and the organisation.

- **Individual competences** address the knowledge, skills and abilities through experience;
- **Team competences** address the collective performance of individuals joined toward a purpose;
- **Organisational competences** address the strategic capabilities of a self-sustaining unit of people.

Motivation theory and current research results show that individuals strive to develop their competences in order to perform better in their current position, to get more and more interesting tasks and to enhance their career opportunities. Project, programme or portfolio related work is based on collaboration with team members from all kinds of disciplines, internal and external parties (such as clients and suppliers), and therefore competence development happens in such collective settings. Project experience adds to the competence of every individual and also to the teams and organisations as social systems.

The focus of the IPMA ICB is the individual. Therefore, this document elaborates on developing individual competences. But there is no single way of developing competences. In fact, there are many approaches which could interact with each other. The interactions between individual, collective and organisational competence development offer different approaches to the development of individual competences together with stakeholders, prerequisites and requirements.

The IPMA ICB is neither a cookbook nor a textbook in the field of project, programme and portfolio management. It is a standard, defining the competences needed by an individual acting in a certain domain and performing the desired result. The target readership and stakeholders shall better understand the competences needed and derive actions on how to acquire, assess and develop such competences.

2.3.2. Individual, team and organisational competence development

Competence development is intermingled with the activities in the project, programme and portfolio itself and, of course, its context. Teams are social systems, as are the embedding organisations, as can be seen in the IPMA Organisational Competence Baseline (IPMA OCB®), the IPMA Project Excellence Baseline (IPMA PEB®) etc.

Competence development happens when individuals perform activities according to their specific roles and thus acquire new knowledge, skills and abilities. They interact with others and could share knowledge, could exchange experiences and/or support each other in performing the activities in a project, programme or portfolio. A community of practice is one example of individuals interacting in a formal or an informal way and collectively developing their competences. The individual could use a community of practice to facilitate learning through discussing, experimenting and reflecting on all kinds of practical issues. It is also a means to feed information back to the embedding organisation that could make use of the lessons learned in other projects.

Organisations could also make use of communities of practice on a corporate level and facilitate the development of individual competences through regular events. For example, a best practice in many organisations is to offer a project managers' round table. Project managers come together on a regular basis, exchange experiences from finished or actual projects and collect lessons learned to be used in future projects. More information on organisational learning and competence development is provided in the IPMA OCB.

2.3.3. Approaches to the development of individual competences

There are various approaches to the development of individual competences. Typically, it depends on the preferences of the individual or the organisation, the situation and the availability of resources, which one fits best and is chosen.

- **Self-development**, (e.g. reading books, standards, case studies and articles) helps to gain knowledge, reflect on the application in practical situations and derive learnings from that. Other ways of self-development are studying, experimenting, trying things out or learning by doing. The latter helps to gain experience in a certain context or to develop certain skills.
- **Peer-development**, (e.g. reflecting with colleagues on how things are going, asking for feedback on their own performance and ways to improve it). Learning partners from different disciplines could help to see a situation from a different angle and apply the development to the benefit of both peers (e.g. one through the questions asked and the other through the insights provided).
- **Education and training**, (e.g. attending a seminar, lectures and training sessions, where the trainer delivers specific know-how). This could be done through a presentation, interactions between the participants and the trainer as well as using case studies, group exercises and simulation games. The development of individual competences may depend on the number of participants, the mix of methods used or the duration of the sessions.
- **Coaching and mentoring**, (e.g. getting feedback, advice and support by a coach, leader or mentor whilst performing certain activities or striving to develop specific competences). Typically, a coach, leader or mentor is an experienced person that does not deliver direct answers, but challenges the individual through questions that draw the attention to certain aspects and requires finding an adequate answer.
- **Simulation and gaming,** (e.g. developing competences through case-based simulation games (board or computer games), reflecting on interactions and behaviours of individuals shown in such a setting). Often simulation games and other forms of game-based learning are a mix of approaches e.g. enabling self-development combined with peer-development and coaching in a training environment. It could also be helpful to combine these approaches based on previous experiences, the stage of development an individual is at or the possibilities of the organisation.

2.3.4. Competence development stakeholders

There are many stakeholders to consider for the development of individual competences, including but not limited to the following:

- **Teachers, educators and trainers:** their role is primarily to start the development during school, vocational and professional training as well as during graduate and postgraduate studies.
- **Top management, senior executives and heads of functional departments in organisations:** their primary role is to set goals for the development, to provide necessary resources and to support the individuals during their development (e.g. showing a good example and giving guidance).
- **Human resource (HR) department:** the role of this department is to define standards, (e.g. a competence model and competence profiles for project-related roles). The HR department plans and controls all activities regarding the recruitment of individuals with an adequate profile. It organises the process of competence assessments and all development activities.
- **The project management department or the project management office:** it defines the strategy and the goals for all project management-related development activities, supports the development through coaching, mentoring or training and enables the collective and organisational competence development through joint activities of all individuals involved in projects and programmes. External experts such as consultants and coaches could be involved to make the most out of existing experiences.
- **Standard-setting bodies, accreditation centres and certification bodies:** they set standards for the individual competences, the way in which competences are assessed against the standards, how trainers, coaches and assessors shall operate and which competences they require in order to act in a professional manner.
- **Assessors:** they assess individuals based on a standard, identifying the strengths, the gaps to a defined threshold and ways to develop the individual competences within defined rules.

2.3.5. Prerequisites for effective competence development

Before starting with competence development, several prerequisites should be considered and if possible fulfilled. Firstly, the actual situation and the target state of the individual competences should be known and communicated to all stakeholders. Secondly, there should be access to expertise (e.g. know-how, experts) and sufficient resources (e.g. budget, time). It is important to create a culture in which the development of competences is perceived to have added value and moved an organisation forward. This added value could be proclaimed through a corporate culture, backed by the examples that leaders demonstrate and so contribute to the atmosphere in which the development activities take place.

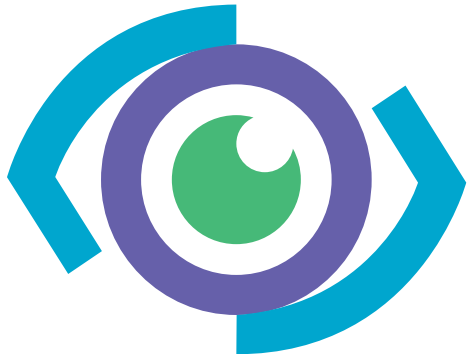
Top management, together with the HR and project management department or project management office should define their vision and goals for the development of individual competences by defining the standards, processes and structures for the development of individual competences. This may include, but is not limited to, the assessment of the competences, the analysis of potential gaps to defined roles or profiles and the ways in which development activities are defined, agreed on between the stakeholders, planned, conducted, documented, monitored and controlled. Evaluations of all development activities should ensure effectiveness, efficiency and a continuous improvement. Individuals developing their competences on their own or in a peer setting should follow a similar path to fulfil the above-mentioned requirements.

The IPMA Competence Baseline is a comprehensive inventory of competences an individual needs to have or to develop to successfully realise projects, programmes or portfolios. The generic model is applicable to all sectors and industries although the importance of the various competences differs between types of projects (e.g. IT, production, research and development) and industries (e.g. construction, business services and government). Nevertheless, in every project, all competences are relevant.

The IPMA Individual Competence Baseline can be a faithful companion on the journey of lifelong individual progression, from self- or external assessment of actual competence level, through the definition of desired development steps to the evaluation of achievements.

All the way – with you.

3. The individual competence baseline



The Eye of Competence represents the universe of competences for project, programme and portfolio management. Competences are divided into three areas: Perspective, People and Practice.
Areas provide focus for the aspects of competence and together create the whole, balanced individual.

Perspective

People

Practice

3. The IPMA Individual Competence Baseline

3.1. Framework of the IPMA ICB

The IPMA Individual Competence Baseline (IPMA ICB®) attempts to codify the many faces of competence. It was built around several key concepts, including:

- **Domains.** The IPMA ICB does not discuss competences in terms of specific roles (e.g. project manager), but rather in terms of domain (e.g. individuals working in project management). The rationale is that roles and role titles vary greatly by language, industry and focus. Therefore, the IPMA ICB presents competences important for project management, programme management, and portfolio management. Each of these domains may contain roles and titles that fit into the overall competence domain.
- **Competence areas.** The IPMA ICB contains three areas of competence that form the IPMA Eye of Competence. These areas apply equally to all three domains (project, programme and portfolio management).
- **The three competence areas are as follows:**
  - **People competences:** these consist of the personal and interpersonal competences required to successfully participate in or lead a project, programme or portfolio;
  - **Practice competences:** these are the specific methods, tools and techniques used in projects, programmes or portfolios to realise their success;
  - **Perspective competences:** under this heading come the methods, tools and techniques through which individuals interact with the environment, as well as the rationale that leads people, organisations and societies to start and support projects, programmes and portfolios.
- **KCIs and measures.** Within each competence area there are generic competence elements (CEs) that apply to all domains. CEs contain lists of the pieces of knowledge and skills required to master the CE. Key competence indicators (KCIs) provide the definitive indicators of successful project, programme and portfolio management for one, two or all three domains. Measures exist that describe highly detailed performance points within each KCI.

- **Project, programme, portfolio.**
  - **A project** is a unique, temporary, multi-disciplinary and organised endeavour to realise agreed deliverables within predefined requirements and constraints. Project management typically involves personnel from project management associates up to senior project managers.
  - **A programme** is set up to achieve a strategic goal. A programme is a temporary organisation of interrelated programme components managed in a coordinated way to enable the implementation of change and the realisation of benefits. Programme management typically involves senior project managers or project directors.
  - **A portfolio** is a set of projects and/or programmes, which are not necessarily related, brought together to provide optimum use of the organisation's resources and to achieve the organisation's strategic goals while minimising portfolio risk. Important issues on a portfolio level are reported to the senior management of the organisation by the portfolio manager, together with options to resolve the issues.

3.2. Structure of the IPMA ICB

Competence in the project domain is broken down into 28 competence elements with one to many key competence indicators each.

- **Perspective competences** (5 elements);
- **People competences** (10 elements);
- **Practice competences** (13 elements).

The CEs presented in ICB4 have been structured as follows:

Perspective competences

Every project is started, driven, supported and governed by external drivers. People, organisations and societies demand things, varying extraordinary. Somewhere along that line, realising what people want gets so complicated that a project is considered. It is rare that any project is executed in a vacuum – they are influenced by their organisational, societal and political context. The drivers for every project can be roughly divided into the formal and explicit goals and needs of the organisation and/or society, and more informal and implicit motives and interests.

A clear example of a set of formal, explicit and present drivers of projects is the strategy of an organisation. The **Strategy** (Perspective 1) generally has clear goals and objectives and, more often than not, projects contribute to these goals and objectives, while projects are prioritised according to these goals and objectives.

Organisational and external **Governance, structures and processes** (Perspective 2) create the formal context of a project. The amount and interdependency of the project interfaces with this context defines an important part of the complexity. It may mean that a project has to deal with legacy processes or structures that served clear goals when they were established but are cumbersome to use in the present situation.

Compliance, standards and regulations (Perspective 3) also contain relevant perspectives and drivers. They comprise the relevant laws, regulations, standards and tools that reflect priorities, best practices and demands of the organisation, industry, society and professional regulatory bodies.

The informal **Power and interest** (Perspective 4) of people within an organisation can have a huge influence on the success of any project. This is the informal and implicit counterpart of the organisation's strategy. People are not just driven by the formal rules and objectives of an organisation; they also have personal goals and objectives.

The **Culture and values** (Perspective 5) of an organisation (or society) are by definition for the most part informal and implicit. Of course, an organisation may try to influence the informal culture by formal and explicit mission statements and corporate values. Yet the majority of cultural values remain implicit and informal, although they influence all other perspective elements – admissible strategies, rules and regulations, etc. Understanding the mores, customs, conventions and practices of an organisation or society is therefore an essential requisite for the success of any project.

People competences

This competence area describes the personal and social competences an individual working in a project needs to possess to be able to realise success.

All personal competence starts with the ability to self-reflect. In the end, an individual's competence is proven by realising the agreed tasks successfully, that is, to the satisfaction of the stakeholders. Between these extremes eight other competence elements are defined.

Basic personal attributes are discussed in **Self-reflection and self-management** (People 1) and **Personal integrity and reliability** (People 2).

Communicating with others is described in **Personal communication** (People 3), and building relations in **Relations and engagement** (People 4).

Projects increasingly rely on **Leadership** (People 5). And two specific aspects of leadership are also presented: **Teamwork** (People 6) and how to handle **Conflict and crisis** (People 7).

Resourcefulness (People 8) describes ways of thinking (conceptual and holistic) and sets of techniques (analytic and creative), but above all focuses on the ability to create an open and creative team environment, where each can work and contribute optimally. **Negotiation** (People 9) describes how to reach results that are both in the interest of the project and acceptable to other parties; and **Results orientation** (People 10) describes the ways an individual can stimulate and steer his team to realise optimal results.

Practice competences

All contextual influences and demands come together when the organisation initiates a new project. The individual working in project management has to take into account all these influences and demands.

The individual prioritises and translates these into a **Project design** (Practice 1). The project design is a 'charcoal sketch' that defines the high-level choices for this project (e.g. make or buy, linear or iterative, possible funding or resourcing options, how to manage the project). In the other technical competence elements, each of these basic decisions will be specified, implemented and managed.

Requirements and objectives (Practice 2) include the various demands and expectations regarding the outcomes and the objectives, and how these are prioritised. **Scope** (Practice 3) describes the specific boundaries of the project.

Time (Practice 4) focuses on the order and planning of the delivery; **Organisation and information** (Practice 5) deals with the organisation of the project and its internal information and communication flows; and **Quality** (Practice 6) describes the demands and organisation of both process and product quality and its controls.

Of course, projects are dependent on the input of people, material and money. These input constraints include money, **Finance** (Practice 7) and (human and other) **Resources** (Practice 8). Often, acquiring resources requires **Procurement** (Practice 9).

Integration and control of all activities is described in the competence element **Plan and control** (Practice 10). Apart from that, the individual has to identify, prioritise and mitigate the main **Risk and opportunity** (Practice 11) and to assess, and engage with, **Stakeholders** (Practice 12).

Another output is **Change and transformation** (Practice 13) – changes in the organisation necessary for, or part of, realising the benefits.

3.3. Overview of the competence elements

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4. The inventory of competences for individuals working in project management

4. The inventory of competences

The IPMA Individual Competence Baseline (IPMA ICB®) is a comprehensive inventory of competences that an individual needs to have or to develop to successfully realise projects. The generic model is applicable in all sectors and industries. However, it does not recommend or include specific methodologies, methods or tools. Appropriate methods and tools may be defined by the organisation and the individual should choose from a wide range of available methodologies, methods and tools for a particular situation.

Of course, the weight of the various competences needed to successfully realise projects differs between types of projects (e.g. IT, production, research and development) and industries (e.g. construction, business services and government). Nevertheless, in every project, all competences are relevant.

4.1. Managing projects

Projects are a way to deliver value to an organisation. Although there may be other ways to deliver this value, projects often have certain advantages that make them appropriate for the specific task. These advantages include focus, control and specialisation.

- **Focus:** as projects are a temporary organisation established for just one set of objectives: to deliver this value.
- **Control:** as projects are subject to predefined constraints, including deadlines, budgets, quality standards.
- **Specialisation:** as project management has become a profession, including best practices, tools, methods and certification schemes.

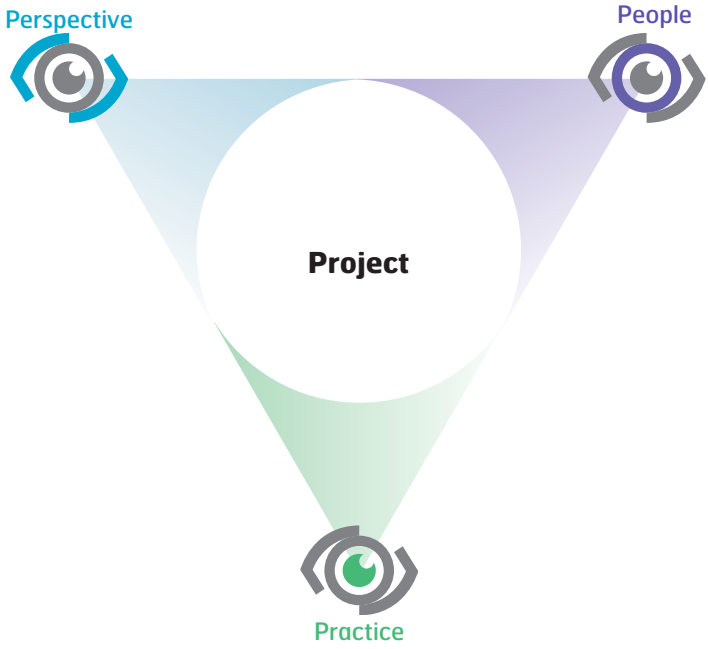
A project is defined as a unique, temporary, multi-disciplinary and organised endeavour to realise agreed deliverables within predefined requirements and constraints. Achievement of the project objective requires these deliverables to conform to specific requirements, including multiple constraints such as time, cost, resources and quality standards or requirements.

Project management is concerned with the application of methods, tools, techniques and competences to a project to achieve goals. It is performed through processes and includes the integration of the various phases of the project lifecycle.

Effective project management has a number of benefits for the organisation and stakeholders. It provides a greater likelihood of achieving the goals and ensures efficient use of resources, satisfying the differing needs of the project's stakeholders.

4.2. Competences overview

The IPMA Eye of Competence is applicable for the three management domains of project management, programme management and portfolio management. Based on the generic model every individual has to have a specific set of competences to act successfully in a project. The individual has to have perspective competences that address the context of projects, people competences that address personal and social topics and practice competences that address specific technical competences for managing projects.



4.3. Perspective

The competence area ‘perspective’ deals with the context of a project.

It defines five competence elements:

- **Strategy**
- **Governance, structure and processes**
- **Compliance, standards and regulations**
- **Power and interests**
- **Culture and values**

4.3.1. Strategy

Definition

The strategy competence describes how strategies are understood and transformed into manageable elements using projects. This competence is therefore defining a performance management system in which projects are seen and managed in light of their alignment with the strategy and the vision and ensuring it is highly correlated with the mission and the sustainability of the organisation.

Purpose

The purpose of this competence element is to understand the strategy and strategic processes, thus enabling a certain management domain (project, programme or portfolio) to manage their project within the contextual aspects.

Description

This competence element describes the formal justification of the project goals as well as the realisation of benefits for the organisation's long-term goals. This encompasses the discipline of strategic performance management in which an organisation breaks up its strategic goals into manageable elements in order to:

- Achieve beneficial changes in the organisational culture, business systems and processes;
- Establish and pursue agreed strategic targets;
- Allocate and rank resources;
- Inform management of the need to change strategic objectives;
- Stimulate continuous improvement.

Strategic plans encompass long-term visions and mid- or short-term strategies and should be aligned with the mission, quality policy and corporate values of organisations. The strategy competence also includes the process of understanding the organisational environment and developing the desired state of benefits. Strategy alignment should therefore convey the organisation's vision and strategy into project goals and benefits.

Throughout the strategic alignment processes, individuals may apply different models for disseminating and managing the strategic goals (e.g. the balanced scorecard, performance matrix, environmental analyses, etc). Thus the individual sets a performance management system, usually run by critical performance variables, i.e. critical success factors (CSFs) and key performance indicators (KPIs). Hence, each project is controlled through a set of CSFs and KPIs to assure the sustainability of an organisation.

Knowledge

- Benefits realisation management;
- Critical success factors;
- Key performance indicators;
- Organisational mission;
- Organisational vision;
- Difference between tactic and strategy;
- Diagnostic and interactive control management systems;
- Strategic performance management;
- Benchmarking;
- Management control systems;
- Strategic schools of thought.

Skills andw abilities

- Analysis and synthesis;
- Entrepreneurship;
- Reflection of the organisation's goals;
- Strategic thinking;
- Sustainable thinking;
- Contextual awareness;
- Result orientation.

Related competence elements

- All other perspective CEs;
- People 5: Leadership;
- People 9: Negotiation;
- People 10: Results orientation;
- Practice 1: Project design;
- Practice 2: Requirements and objectives;
- Practice 11: Risk and opportunity;
- Practice 12: Stakeholders.

Key competence indicators

4.3.1.1. Align with organisational mission and vision

Description

The individual knows, reflects and can translate the organisation's mission, vision and strategy into its project. The individual always needs to ensure that the project goals are in sync with the mission, quality policy and values of an organisation. If the relation between the project's benefits and organisational purpose is vague, the individual still needs to perform periodic checking of the benefits against the purpose written in formal strategic documents. The alignment is usually done by utilising diagnostic management control systems and formal tools (e.g. critical success factors, success criteria, key performance indicators, etc).

Measures

- Reflects the mission and vision of the organisation;
- Aligns the project goals with the mission, vision and strategy by using diagnostic control management systems (top-down approach and pre-set goals);
- Controls whether the project's objectives and benefits are in sync with the mission, vision and strategy;
- Develops and implements measures of strategic alignment (e.g. critical success factors, key performance indicators, etc);
- Checks whether the project is delivering benefits to the organisation.

4.3.1.2. Identify and exploit opportunities to influence organisational strategy

Description

The individual knows the strategy-making process, often done in a top-down fashion by the executive board/management board of an organisation. However, intended strategies are often not realised as the environment changes and, while pursuing a certain path, new opportunities and risks are emerging. Therefore, the individual needs to reflect not only the pre-set strategic goals, but also the tools and methods of questioning these goals and influencing the board to make the necessary improvements. These influences are managed through interactive control systems and by applying a bottom-up approach.

Measures

- Knows the strategy-making process;
- Identifies new risks and opportunities which could alter the strategy;
- Engages co-workers in questioning the organisational strategy by implementing interactive control management systems (bottom-up approach and stretch goals);
- Identifies strategic improvements;
- Influences the strategy-making process by suggesting changes to strategy.

4.3.1.3. Develop and ensure the ongoing validity of the business / organisational justification

Description

The individual is able to provide a formal document which states the official reasons for a project, including the business or organisational benefits that the project has to deliver. This justification should also explain integration aspects with new elements in the project and should be the basis for the success criteria and benefits the project should deliver (the scope). The individual can create or facilitate, interpret, update and sometimes realise (parts of) the business justification which should not be a static document, but should be periodically updated throughout the realisation and re-assessed for validity. Furthermore, the individual should constantly monitor or control the configuration and check if the project has redundant or strategically obsolete elements and perform the proper alignment, even if this means terminating the project.

Measures

- Reflects and defines the business and/or organisational justification;
- Identifies objectives needed in a project to generate the planned benefits;
- Validates and sells the business and/or organisation justification to the sponsors and/or owners of the projects;
- Re-assesses and validates the justification within the higher context;
- Defines and manages the project configuration (the integral completeness and functionality of the project organisation);
- Applies benefits realisation management to check whether the project configuration is generating the desired results;
- Scans to determine whether there is a need to terminate the project because of redundancy or obsolete strategic importance and change the configuration.

4.3.1.4. Determine, assess and review critical success factors

Description

The individual is able to discern, define, interpret and prioritise critical success factors (CSFs) which directly relate to the project. CSFs are directly connected with the organisational objectives and business objectives of the project. Therefore by achieving the project's benefits, the organisation fulfils strategic goals, tactical and operational objectives and ultimately organisational success. The individual can grasp both the formal and informal context of the factors and identify their influence on the final outcome of the project. The relative importance of the success factors may change, due to both contextual factors and the dynamics of the project itself. Personnel changes, both project-internal and project-external, may have influence, too. Therefore the individual should periodically be checking and assessing the actuality and relative importance of the CSFs and – when necessary – making changes in order to sustain success, even if this means the premature end of the project.

Measures

- Derives and/or develops a set of critical success factors (CSFs) for the strategic objectives;
- Uses formal CSFs for strategic alignment, but also identifies their informal context;
- Involves subordinates to question the organisation strategy while developing CSFs (interactive management control – stretch goals);
- Uses the CSFs for strategic alignment of or within a project;
- Uses the CSFs for managing stakeholders;
- Uses the CSFs for developing incentives/rewards and a motivated culture;
- Re-assesses CSF realisation within the higher strategic context.

4.3.1.5. Determine, assess and review key performance indicators

Description

The individual is able to manage related key performance indicators (KPIs) for each CSF. KPIs are the core of many strategic performance management systems and are used for measuring or indicating the fulfilment of the CSF and achieving success. Usually KPIs are either pre-set by the organisation or developed by the individual using best practices or models (e.g. the balanced scorecard). KPIs can be used as leading measures (preceding a strategic event or milestone), lagging measures (following a strategic event or milestone) or real-time dashboards. Throughout the project, KPIs may change, due to both

contextual factors and the dynamics of the project itself. Personnel changes, both internal and external to the project, may also influence KPIs. Therefore the individual should periodically be checking and assessing the actuality and relative importance of the KPIs and – when necessary – make the required changes in order to sustain success. KPIs should also involve soft aspects, such as motivation, communication within the team, personal development of team members, etc, which reflect the strategic objective, i.e. the benefit one wants to achieve. Moreover, KPIs should cover a broad range of other aspects, varying from adhering to certain governance and support processes (for instance on decision-making, reporting, acquiring resources and administrative processes), meeting standards and regulations, to complying with cultural norms and values, both of the organisation and of the wider society.

Measures

- Derives and/or develops a KPI (or set of KPIs) for each critical success factor;
- Decides on the use of leading, lagging and real-time measures when developing KPIs;
- Uses KPIs for managing strategic performance;
- Uses KPIs to influence stakeholders;
- Uses KPIs for developing personal development plans;
- Uses KPIs for developing an incentive/reward system;
- Re-assesses project configuration by employing KPIs and performing benefits realisation management.

4.3.2. Governance, structures and processes

Definition

The governance, structures and processes competence element defines the understanding of and the alignment with the established structures, systems and processes of the organisation that provide support for projects and influence the way they are organised, implemented and managed. The governance, structures and processes of an organisation may comprise both temporary systems (such as projects) and permanent systems (such as programme and portfolio management systems, financial/administrative systems, supporting systems, reporting systems, and decisionmaking and auditing systems).

Sometimes these systems can even form the strategic reason for a project, for example, when a project is initiated for the purpose of improving business processes or establishing new systems.

Purpose

The purpose of this competence element is to enable the individual to effectively participate in and manage the impact of governance, structures and processes on projects.

Description

Structures and processes are an essential part of the governance system of any organisation. To align with structures and processes means the ability to utilise value systems, roles and responsibilities, processes and policies established in an organisation to ensure that projects achieve their objectives and strategic corporate goals. To manage projects in line with the established organisational structures and processes requires a basic understanding of the various types of initiatives and how a project-oriented organisation works, as well as the benefits associated with management by projects. It includes the alignment with permanent processes related to the management of the project. Most project-oriented organisations have various types of supporting structures and processes for projects. In the domain of project management, the individual may be called upon to provide data and business intelligence to the governance process and to work within existing structures and processes. Some projects may result in changes to structures and processes.

Examples of supporting structures and processes are line functions such as human resources (HR), finance and control and information technology (IT). Mature project organisations may also provide more dedicated support to project management through a project management office (PMO).

To be competent in structures and processes also means the ability to review and apply feedback and lessons learned from previous projects. A key challenge

is to balance the use of compulsory and optional structures and processes for optimal effect and benefit to the project.

Knowledge

- Basic principles and characteristics of management by projects;
- Basics of portfolio management;
- Basics of programme management;
- Basics of organisational design and development;
- Formal organisation and informal interrelationships of project, programme and portfolio management (staff, line, etc) in the organisation;
- Governance;
- Organisation and business theories.

Skills and abilities

- Leadership;
- Reporting, monitoring and control;
- Communication planning and executing;
- Design thinking.

Related competence elements

- All other perspective CEs;
- Practice 1: Project design;
- Practice 5: Organisation and information;
- Practice 7: Finance;
- Practice 8: Resources;
- Practice 9: Procurement;
- Practice 10: Plan and control;
- Practice 13: Change and transformation.

Key competence indicators

4.3.2.1. Know the principles of project management and the way in which they are implemented

Description

The individual reflects the concepts of a project and management by projects and can explain the difference between different types of organisation settings (e.g. functional, matrix and project-oriented organisation), and knows how to optimally align performance with the current organisational setting. The individual can explain the characteristics and principles on which management by

projects is based and is able to set up a project-oriented environment. Furthermore, the individual is aware of the maturity concept of the project-oriented organisations covering organisational competences, project and programme competences, and individual competences.

Measures

- Recognises a project in practice and has a knowledge of project management principles;
- Explains characteristics of a functional, project and matrix oriented organisation and recognises one in practice;
- Explains and practises the concept of management by projects;
- Perceives and sets up management by projects concepts within the organisation;
- Explains and identifies the current maturity level of an organisation.

4.3.2.2. Know the principles of programme management and the way in which they are implemented

Description

If the project is part of a programme, the individual has to align the project with the programme and has to know how the principles of programme management are implemented in the specific organisation. The dependencies between the project and the programme as well as between the different projects within the programme have to be analysed in terms of input, goals, outcomes, etc. Dealing with those dependencies means setting up and maintaining interfaces between the project and the programme.

Measures

- Explains characteristics of a programme (goals, inputs, outputs, outcomes, benefits);
- Explains the concept of programme management.

4.3.2.3. Know the principles of portfolio management and the way in which they are implemented

Description

The individual knows the way in which portfolio management is implemented in the specific permanent organisation. Therefore the individual knows the portfolio criteria and required inputs and outputs and identifies the impact of the project

on the portfolio. The individual is able to discover different constraints within the portfolio and can take these constraints into account to harmonise resource utilisation of his or her project. The individual is able to filter and/or funnel the communication channels with the respective portfolio in order to positively influence the project performance. The individual knows the vertical (e.g. with the programme or portfolio manager) and horizontal (e.g. with other individuals in the same programme other project teams) lines of communication as part of the overall coordination process with a programme or portfolio.

Measures

- Explains characteristics of a portfolio – critical success factors (CSFs) and key performance indicators (KPIs);
- Knows the concept of managing a portfolio (organisational structures and processes);
- Successfully communicates within a respective portfolio in order to successfully manage a project.

4.3.2.4. Align the project with supporting functions

Description

Project supporting functions (a project office, a project management office or similar) provide multifaceted support to the project and/or the individual managing the project in relation to organisation, planning, reporting, meeting management, documentation, etc. To ensure the necessary support from the project supporting function, the individual has to know relevant contact people within the project supporting function and how to establish and maintain good relationships with them.

Measures

- Knows people, processes and services of supporting functions;
- Uses the project supporting function of the parent organisation for efficient support of the project;
- Establishes and maintains relationships with the project supporting function;
- Applies the reporting standards of the parent organisation to the project, using specific tools and methods.

4.3.2.5. Align the project with the organisation's decision-making and reporting structures and quality requirements

Description

The success of a project is very much dependent on the right decisions made at the right level of the organisation at the right time. Every decision should be prepared, presented, accepted, recorded, communicated and finally implemented. Formal and informal routines and special rules for decision-making beyond the individual's authority and responsibility exist in each organisation. Therefore, the individual requires knowledge of the decision-making structure and processes and the ability to structure and manage the project accordingly. Periodic reporting of the actual status is essential for trust by its stakeholders and to assure traceability of the progress. Different project stakeholders have different reporting needs (information requirements, method of delivery, reporting frequency) which the individual has to take into account. The parent organisation will have different forms of quality assurance which relate to projects (e.g. system assurance, project assurance, finance assurance, technical assurance, security assurance, etc). For the individual it is important to take these into account in devising a quality assurance plan for his or her project, to decide which project areas could become quality assurance objects and to know which members of the project team should be involved in project assurance activities.

Measures

- Identifies the organisation's routine and special rules for decision-making in cases beyond his or her authority and responsibility;
- Aligns the communication in projects with the needs of the permanent organisation;
- Applies the reporting standards of the parent organisation to the project, using specific tools and methods;
- Applies the organisation's way of quality assurance when setting up a reporting system within the permanent organisation.

4.3.2.6. Align the project with human resource processes and functions

Description

The human resource function provides multi-faceted support to the project in relation to team member contracts, temporary employment, training, salaries, incentives, stress, wellbeing, ethics and team entries and withdrawals.

A well-established relationship with the human resource processes and functions may increase the influence on resource availability and quality in terms of adequate authorities. To ensure the necessary support from the human resource function, the individual has to establish and maintain relationships with relevant contact people within it.

Measures

- Uses the human resource function for acquiring staff with the required authorities;
- Deals with the boundaries between the temporary organisation and the human resource function;
- Establishes and maintains relationships with the human resource function;
- Uses human resource processes to provide training and individual development.

4.3.2.7. Align the project with finance and control processes and functions

Description

The finance and control function of an organisation is often established as a line function providing mandatory rules, procedures and guidelines. Knowing these rules and how to utilise them effectively and efficiently are crucial for the individual for successful funding, monitoring and/or reporting on financial topics. The finance and control function of an organisation often serves as a support function, offering a variety of utility functions for the individual such as how to apply for, justify, manage and report on financial resources and how to administer, distribute, monitor and manage finances. The individual needs to know various financial models for funding (e.g. public, private, public-private partnerships, subsidies, commercial, etc) endorsed by the permanent organisation. To ensure the necessary support from the finance and control function, the individual can benefit from establishing and maintaining relationships with the relevant contact people within the finance and control function.

Measures

- Knows the processes of the finance and control function;
- Distinguishes between the compulsory and optional utilities of the finance and control function;
- Monitors and controls whether rules, guidelines and other financial utilities are effectively and efficiently used in projects to the benefit of the project;
- Communicates and reports the status and trends of financial tasks clearly and objectively.

4.3.3. Compliance, standards and regulations

Definition

The compliance, standards and regulations competence element describes how the individual interprets and balances the external and internal restrictions in a given area such as country, company or industry. Compliance is the process of ensuring adequate adherence to a given set of norms. Compliance requirements operate on a spectrum from voluntary and informal to mandatory and formal. Standards and regulations influence and define the way projects should be organised and managed to be feasible and successful. Standards and regulations address compliance with requirements that include legislation and regulations, contracts and agreements, intellectual property and patents, health, safety, security and environmental protection and professional standards.

Purpose

The purpose of this competence element is to enable the individual to influence and manage the alignment of the relevant standards and regulations within the permanent organisation; the relevant sources of legislation and the standards and norms of both the organisation and the wider society and to improve the organisation's approach to these areas.

Description

Projects face different restrictions and requirements for developing a product or service alongside the effect of the production and project management processes. These restrictions correspond to the geographical, social and professional specifics of the project and its external environment in the form of laws, standards and regulations. Before starting a project, the individual needs to analyse the scope and configuration of the project and seek out the relevant standards and regulations that will have a direct or indirect influence on it. The relevant standards and regulations should be considered as potential risks and opportunities that need management attention. Compliance with relevant standards and regulations may affect the organisational structures, processes and culture. In the domain of project management, the individual may be called upon to understand and integrate relevant standards and regulations within their project.

This competence element includes benchmarking and improving the organisational project management competences. Developing project management competence is a constant process, a part of an organisation's continuous improvement strategy and the duty of every individual. It involves learning and improving strategies for influencing the project management culture in organisations. The individual should use this competence to demonstrate how all

parts and layers of the management system might be improved. By increasing the project, programme or portfolio management competence, the organisation increases its ability to choose and perform successful projects, programmes and portfolios and thus achieve the sustainability of the organisation.

Knowledge

- Law regulation systems involved;
- Autonomous professional regulation;
- Professional standards and norms, e.g. IPMA standards;
- ISO standards (e.g. ISO21500 guidance on project management or other standards of ISO/TC258);
- Sustainability principles;
- Benchmarking theory;
- Benchmarking tools and methods;
- Knowledge management;
- Codes of ethics;
- Codes of business conduct;
- Law theories and the differences.

Skills and abilities

- Critical thinking;
- Benchmarking;
- Adapting standards to specific organisations;
- Communicating standards and regulations;
- Leading by example.

Related competence elements

- All other perspective CEs;
- People 5: Leadership;
- People 9: Negotiation;
- Practice 1: Project design;
- Practice 2: Requirements and objectives;
- Practice 5: Organisation and information;
- Practice 6: Quality;
- Practice 11: Risk and opportunity.

Key competence indicators

4.3.3.1. Identify and ensure that the project complies with all relevant legislation

Description

The individual knows the legal policies of an organisation and is able to implement them in a project. Furthermore the individual knows which parts of law regulations (e.g. civil, criminal, labour, intellectual property, etc) and common good practices are relevant to the project. The individual has to ensure that the project operates within the law and should be able to recognise or find out which activities have special legal requirements and what law principles apply to it. The individual is able to recognise the unknown legal issues that need to be considered and therefore knows the formal procedures for obtaining specialist advice and how to identify and provide the relevant project information. The individual also knows which requirements of the regulatory agencies concerned with the project scope are relevant to the project, how these requirements can be satisfied and which inspection procedures should be applied.

Measures

- Acknowledges the legal context and its applications;
- Filters out and uses the relevant law regulation;
- Identifies risks in the regulations in relation to the project and consults the experts;
- Acknowledges and manages the regulatory agencies as stakeholders;
- Aligns procurement routes with the regulations.

4.3.3.2. Identify and ensure that the project complies with all relevant health, safety, security and environmental regulations (HSSE)

Description

The individual knows which of the health, safety, security and environmental (HSSE) regulations are relevant to the project. Further, the individual is able to recognise any potential HSSE issue that needs special attention. The individual is able to determine how project activities or project products can affect the project team members and those who will use the product and the environment and then applies HSSE protective measures when necessary. The individual balances economic, social and environmental aspects of the project to meet the requirements for sustainable development and to make the project results sustainable.

Measures

- Identifies the relevant HSSE regulations for the project;
- Defines the HSSE context for the project;
- Identifies risks arising from implementing HSSE measures to the project;
- Provides a safe, secure and healthy environment for the project team members;
- Applies HSSE for project sustainability.

4.3.3.3. Identify and ensure that the project complies with all relevant codes of conduct and professional regulation

Description

The individual should be able to identify relevant professional regulations for the context in which the project operates. Each context usually has specific codes of conduct (ethical norms written down in formal documents) and trading customs which sometimes are prescribed by law. Moreover they are often directly tied with procurement procedures and, if not understood, could be a high risk for a project.

Measures

- Knows the appropriate codes of business conduct;
- Knows the appropriate professional regulation for the particular industry sector (public administration, civil engineering, information technology, telecommunication, etc);
- Identifies ethics principles;
- Identifies and uses the tacit trading laws not set by the code;
- Aligns procurement practices with the codes of business conduct;
- Works to prevent violation of the code by the project team members.

4.3.3.4. Identify and ensure that the project complies with relevant sustainability principles and objectives

Description

The individual is able to assess the impact of the project on the environment and society. Realising his or her responsibility, the individual researches, recommends and applies measures to limit or compensate negative consequences. The individual follows (or even exceeds) guidelines and rules on sustainable development coming from within the organisation and from the wider society and is able to realise a workable balance between the demands of society, impacts to the eco-environment and the economy. The individual understands that sustainability aspects, measures and attitudes often vary in different countries and cultures.

Measures

- Identifies the social and environmental consequences of the project;
- Defines and communicates the sustainability targets for the project and its outcomes;
- Aligns objectives with organisational strategy for sustainability;
- Balances the demands of society, the environment and the economy (people, planet, profit) with project processes and products;
- Encourages the development and diffusion of environmentally friendly technologies.

4.3.3.5. Assess, use and develop professional standards and tools for the project

Description

The individual is able to comply with and utilise top professional standards. Those good practices in project management come from a combination of the world leading standards and personally developed tools and methods. The individual takes them into account while selecting appropriate tools, methods and concepts (e.g. project lifecycle, stakeholder management, risk management, etc). Therefore an individual always tries to find the best recipe for managing the project by utilising top professional standards (one or several) and adding and developing further improvements.

Measures

- Identifies and uses the relevant professional standards;
- Identifies the specifics of a standard and manages the risks arising from applying a standard to a project;
- Identifies and uses the best practice for managing a project;
- Develops and implements custom made standards for managing project team members.

4.3.3.6. Assess, benchmark and improve the organisational project management competence

Description

The benchmarking project management competence is a process of continuous improvement by comparing the organisation's project management processes with those which are identified as good practice. The individual strives to develop project management competence. The good practices can often be identified as

those that apply in world-class organisations. Usually these organisations are promoted as top project management performers and have won internationally recognised project management awards (e.g. IPMA Global Project Excellence Award). The purpose of the benchmarking process is to gain superiority in project management by acquiring the know-how of a superior organisation. Organisational benchmarks often follow a staged maturity or competence model of organisations defining what structures, processes, methods and individual skills an organisation has to fulfil in order to reach a certain maturity level or class of competence. Benchmarking can be conducted on an internal basis (against different projects within an organisation), a competitive basis (against an organisation which is a direct competitor – often hard to tackle) and a functional or generic basis (against an organisation not competing in the same market or within the same industry). The Individual always tries to improve their project management in a way that contributes to the organisation's strategic goals. Furthermore, the individual is able to identify the governing processes and structures (e.g. a project management office) relevant to the project management process and is able and willing to do or suggest improvements on an organisational level. Finally, improvements made are disseminated throughout the organisation.

Measures

- Identifies and assesses the relevant deficient areas of organisational competence in project management;
- Identifies and sets relevant benchmarks for the deficient areas;
- Identifies the benchmarking baseline and best practice;
- Benchmarks current performance against the best practice;
- Identifies measures for the needed improvements;
- Implements the identified measures and assesses the benefits gained;
- Disseminates the acquired know-how throughout the project organisation.

4.3.4. Power and interest

Definition

The power and interest competence element describes how the individual recognises and understands informal personal and group interests and the resulting politics and use of power. This competence element defines how individuals participating in projects should recognise how informal influences (resulting from personal and group ambitions and interests and modified by personal and group relationships) relate with the project context. These informal influences differ from formal interests (as, for instance, formalised in a business justification) that derive from the organisation's strategy or from standards, regulations, etc.

Purpose

The purpose of this competence element is to enable the individual to use power and interest techniques to achieve stakeholder satisfaction and deliver the agreed outcomes within the constraints of time and budget.

Description

Power is the ability to influence the behaviour of others. A substantial part of influence comes from informal power — that part of power which is not 'solidified' into formal roles, structures or processes. This informal aspect of power is often motivated by personal ambitions and interests. Stakeholders usually also have personal ambitions and interests and they will often try to use their influence to suit the processes and/or outcomes of the project to their interests. These actions may help or thwart the project. Understanding and being able to influence and use these informal personal interests and the resulting politics is essential to ensure project success.

Apart from cultural aspects and values, each person has his or her own style and personality. Individual approach will influence the way power is exercised. In the domain of project management, the individual may be called upon to exert sufficient influence in order to realise the successful completion of the project. The individual may also need to recognise and prioritise the interests of key project stakeholders.

Interest is an attraction to a specific topic or desired outcome, for instance a certain desire toward or away from an object, situation, position, outcome or opinion. People often try to realise their interests by exercising their influence. Interest is often pursued through formal and informal relationships, which can result in group influence. Groups may consist of informal groups of colleagues or friends, or formal structures such as departments, councils and boards. In formal

groups, care should be taken to distinguish the formal role or power from the informal influence, which may come from other power sources. Examples of informal power include referent or expert power.

Knowledge

- Formal organisation (staff, line, etc) versus informal structures;
- Informal decision-making processes;
- Formal and informal power and influence;
- Difference between power and authority;
- Reach of influence;
- Sources of interests;
- Conformity;
- Bases of power;
- Project psychology;
- Organisational culture and decision-making;
- Power theories.

Skills and abilities

- Observing and analysing psychological processes;
- Recognising and using influence;
- Using power when appropriate;
- Discovering values;
- Revealing stakeholders' interests.

Related competence elements

- All other perspective CEs;
- People 2: Personal integrity and reliability;
- People 3: Personal communication;
- People 4: Relationships and engagement;
- People 5: Leadership;
- People 9: Negotiation;
- Practice 1: Project design;
- Practice 12: Stakeholders.

Key competence indicators

4.3.4.1. Assess the personal ambitions and interests of others and the potential impact of these on the project

Description

People have goals and ambitions, for example career goals, or a desire to improve society or improve themselves. They also have interests that are related to these ambitions and influence the interests they have in the project and its success. Part of their ambitions and interests will often be congruent with their present formal position, that is, performing the tasks that they are formally required to do may help realise their ambitions and interests. Then again, their ambitions and interests may go beyond (or even be partly at odds with) the formal interests of their formal position. Being able to identify the ambitions and personal interests of people (stakeholders, team members or colleagues) is often necessary in order to work with them in an efficient and effective way.

Measures

- Acknowledges and assesses the personal ambitions and interests of relevant people or groups;
- Acknowledges and assesses the differences between personal and organisational interests and goals.

4.3.4.2. Assess the informal influence of individuals and groups and its potential impact on the project

Description

Informal influence has to be distinguished from the formal influences as laid down in organisational documents and processes. People may have influence for many reasons and through many different means. Apart from the formally agreed on legitimate power (e.g. of department heads, executives, judges and school teachers) there are many other bases of power, for instance coercive, reward, referent and expert power. Relationships are a strong base of power, too. Influencing decisions through use of personal relationships is a common and often effective way. There is often a marked difference in the ability of people or groups to influence certain kinds of decisions, or decisions taken in a specific knowledge area or part of the organisation ('reach' of influence). Every person and group influence has its own reach and it is important to know this reach.

Measures

- Acknowledges and can estimate the influence, power and reach of certain individuals in various settings;
- Is able to discern group affiliations and relationships in relation to the project.

4.3.4.3. Assess the personalities and working styles of others and employ them to the benefit of the project

Description

Everybody is unique and will act and operate in his or her specific way. Style is also influenced by cultural factors, as discussed in 'Culture and values'. Different people may have the same ambitions and/or interests, yet may use a different style in using their influence. Other people may display the same behaviour or style, yet differ in ambitions and/or interests. The individual has to acknowledge the differences while working with individuals and groups in an efficient and effective way.

Measures

- Identifies and acknowledges the differences between behavioural style and personality;
- Identifies and acknowledges the differences between cultural aspects and personality.

4.3.5. Culture and values

Definition

The culture and values competence element describes the individual's approach to influence on the organisation's culture and values and the wider society in which the project is situated. It also includes the acknowledgement by the individual participating in or leading a project of the consequences of these cultural influences for the project and how to incorporate this knowledge in the management of the project. Culture may be defined as a set of related behaviours within a community and the importance that individuals within the community attach to it. Values may be defined as a set of concepts on which the individuals in the community base their actions. Explicit definitions of values might include codes of ethics. Many organisations also describe corporate values explicitly in their strategy.

Purpose

The purpose of this competence element is to enable the individual to recognise and integrate the influence of internal and external cultural aspects on the project approach, objectives, processes, sustainability of the outcomes and agreed outcomes.

Description

Organisations are social systems, where personal behaviour is embedded in a social context of shared values, visions, norms, symbols, beliefs, habits, goals, etc — in short, a culture. This culture has formal, explicit origins and aspects (such as the organisation's explicit mission and corporate values) as well as informal, more implicit aspects (such as beliefs, common practices, etc). Moreover, every organisation operates in a society, which also has a specific culture (and possibly subcultures) including values, norms, symbols, beliefs, habits, etc. All these cultural aspects affect the way the people within that society, organisation and project interact with each other and all other internal and external stakeholders. Projects are often integral parts of the parent organisation(s) and at the same time projects are temporary organisations, which need their internal culture to be aligned with external cultures (external adaptation and internal integration). In the domain of project management, the individual may be called upon to align the project with the organisational culture and values. In a multi-cultural project, the individual may need to navigate multiple cultural and value norms.

Culture and value alignment is even more crucial for projects that extend across different societies, organisations or groups, thereby forming a multi-cultural environment. Before starting a project, and periodically after that, the individual needs to acknowledge the relevant culture(s) within the internal and

external context of the project and the organisation. The individual has to align (and periodically re-align) the project's culture to these in order to reach the goals and objectives in the most effective and efficient way. If available, results of researches, internal or external standards, regulations or guidelines (e.g. governance principles, codes of conduct) for aligning the cultures may be used. Projects are sometimes explicitly set up to change organisational culture and value sets. Lessons learned at the end of a project could be used to improve the culture alignment in future projects.

Knowledge

- Relevant cultural traits, values, norms and admissible behaviour;
- Organisational mission and vision;
- Mission statements;
- Corporate values and policies;
- Quality policies;
- Ethics;
- Corporate social responsibility (CSR);
- Green project management;
- Theories about culture.

Skills and abilities

- Values awareness;
- Cultural awareness;
- Respect for other cultures and values;
- Aligning to and working within different cultural environments;
- Dealing with issues related to cultural aspects;
- Bridging different cultures and values to achieve the project objectives.

Related competence elements

- All other perspective CEs;
- People 2: Personal integrity and reliability;
- People 3: Personal communication;
- People 4: Relationships and engagement;
- Practice 1: Project design;
- Practice 6: Quality.

Key competence indicators

4.3.5.1. Assess the culture and values of the society and their implications for the project

Description

All projects are embedded in a society (sometimes even in more than one). The society's values and unwritten rules can deeply influence the way in which communication is executed and decisions are made. It can also influence how transgressions from the common norm are judged and dealt with; it can define or influence working hours and how, when, where and with whom information, office space and meals can be shared, etc. The individual needs a working knowledge of the cultural basis, values and norms of the society or societies in which the project takes place. The individual should be able to discern the relevant implications of these cultural aspects for the project, take these into account in the approach and periodically review them.

Measures

- Knows and acknowledges the cultural values, norms and demands of a society;
- Knows, acknowledges and understands the implications of cultural values, norms and demands for the project;
- Works according to societal cultural demands and values without compromising personal values.

4.3.5.2. Align the project with the formal culture and corporate values of the organisation

Description

All projects need to be aligned with the values of the organisation and have to follow the formal cultural rules and demands of related functional departments or support units and the culture of superordinate projects and strategic decision-making bodies. Sometimes the espoused values are written down in one or more documents (for instance mission statement, quality policy, or corporate values). The individual should be able to discern the relevant implications of these cultural aspects for the project and take these into account in the approach. Moreover, the individual needs to be sure that the project supports the sustainable development of the organisation, which also includes corporate social responsibility (CSR).

CSR is a lever of control in complying with legal and non-governmental regulations, professional standards and other ethical and international norms. Through CSR an organisation encourages a positive impact on its activities on the environment, consumers, employees, communities, stakeholders and all other members of the society.

Measures

- Acknowledges and respects the organisation's formal norms and demands;
- Knows and applies the organisation's corporate values and mission;
- Knows and applies the quality policy of an organisation;
- Acknowledges the implications of formal norms, demands, corporate values and mission and quality policy for the project;
- Acts sustainably by practising corporate social responsibility.

4.3.5.3. Assess the informal culture and values of the organisation and their implications for the project

Description

All projects are linked to an organisation (or more than one) with its own informal culture. While the formal aspects of the organisational culture can have a significant influence, many more aspects also influence an organisation's culture or subcultures. These include its architecture, furniture, dress codes, office jokes, etc. Assumptions are deeply embedded, usually unconscious behaviours, such as the way people address and treat each other (including subordinates and managers), how problems and challenges are dealt with and the tolerance for mistakes or irregular behaviour, all resulting from the history and cultural background of the organisation, its employees and its management. The individual should analyse the cultural basis of the organisation(s) for and in which the project takes place. The individual should be able to discern the relevant implications of these cultural aspects for the project and take these into account in his or her approach.

Measures

- Acknowledges, analyses and respects the informal culture and values of the organisation(s);
- Identifies the implications of the organisation's informal culture and values for the project, in conformity with the organisation's informal values and norms.

4.4. People

The competence area 'people' deals with the personal and social competences of the individual.

It defines ten competence elements:

- **Self-reflection and self-management**
- **Personal integrity and reliability**
- **Personal communication**
- **Relationships and engagement**
- **Leadership**
- **Teamwork**
- **Conflict and crisis**
- **Resourcefulness**
- **Negotiation**
- **Results orientation**

4.4.1. Self-reflection and self-management

Definition

Self-reflection is the ability to acknowledge, reflect on and understand one's own emotions, behaviours, preferences and values and to understand their impact.

Self-management is the ability to set personal goals, to check and adjust progress and to cope with daily work in a systematic way. It includes managing changing conditions and dealing successfully with stressful situations.

Purpose

The purpose of this competence element is to enable the individual to control and direct his or her behaviour by acknowledging the influence of his or her personal set of emotions, preferences and values. This enables effective and efficient use of the individual's resources and leads to positive work energy and a balance between inside and outside work.

Description

An intrinsic set of emotions, preferences and values guides all our decisions and actions. Being aware of and reflecting on this set and its impacts on behaviour offers you the opportunity to lead yourself. Reflecting on personal values and behaviour, seeking feedback and being aware of the individual natural primary reactions opens up the possibility of changing and improving behaviour. Being able to control primary reactions supports consistent behaviour, decisionmaking, communication and the leading of others. Adopting a systematic and disciplined approach to coping with daily work means managing how to spend time in order to accomplish prioritised objectives. Increasing the work efficiency does not mean working harder, but enables the individual to achieve results to a higher level of satisfaction and motivation. The individual works autonomously and independently from external influences, using opportunities to apply lessons learned.

Knowledge

- Reflection and selfanalysis techniques;
- Stress management of self and others;
- Relaxation techniques and methods;
- Pace of work;
- Feedback rules and techniques;
- Prioritisation techniques;
- Personal time management;
- Checks of progress;
- Formulation of objectives (e.g. SMART method);
- Effectiveness theories.

Skills and abilities

- Awareness of own work styles and preferences;
- Awareness of instances that lead to personal distractions;
- Self-reflection and self-analysis;
- Controlling emotions and focusing on tasks, even when provoked;
- Self-motivation;
- Delegating tasks;
- Setting meaningful and authentic individual goals;
- Carrying out regular checks of progress and results;
- Dealing with mistakes and failures.

Related competence elements

- All other people CEs;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values.

Key competence indicators

4.4.1.1. Identify and reflect on the ways in which own values and experiences affect the work

Description

To identify and reflect personal values and passions the individual has to acknowledge and reflect on his/her intrinsic set of opinions, standpoints, ideals and ethical values. This is the basis for consistent decisions and actions.

Personal experience has a strong influence on how the individual makes sense of situations and people. His or her personal experience of how the world works and how people behave influences the way the individual thinks and acts. By understanding the personal sense-making processes, the individual can identify why his or her interpretation might differ from someone else's and so reduce the effect of bias. The opposite is to neglect the influence of experience and expect that everyone sees the 'reality' in the same way as the individual.

Measures

- Reflects on own values;
- Uses own values and ideals to shape decisions;
- Communicates own principles and personal demands;
- Expresses and discusses own experience;
- Puts own experience in perspective;
- Uses own experience to build hypotheses about people and situations.

4.4.1.2. Build self-confidence on the basis of personal strengths and weaknesses

Description

Being self-aware includes reflection on personal strengths and weaknesses. The individual is aware of what he or she is good at and passionate about and which tasks should be delegated or left to others. Knowing his or her personal talents and accepting limitations creates a feeling of personal worth. The individual demonstrates self-confidence by relying on personal capacities and capabilities. The opposite is to remain troubled about yourself or your personality, continuing to doubt your talents and potential and overreacting if others impose on your personal weaknesses.

Measures

- Identifies own strengths, talents, limits and weaknesses;
- Leverages strengths, talents and passions;
- Identifies solutions to overcoming personal weaknesses and limitations;
- Maintains eye contact even in stressful situations;
- Accepts setbacks without losing confidence.

4.4.1.3. Identify and reflect on personal motivations to set personal goals and keep focus

Description

Knowing one's personal motivations enables the individual to set personal goals that give direction and release energy. The individual knows what drives him or her and can transform this into personal goals. The individual has control over his or her emotions, even when provoked. The opposite is to 'go with the flow', live life as it comes and refrain from giving a direction. Once the goals are set, the individual has a diligent approach to staying focused on the tasks. The individual is able to focus on tasks despite interruptions and is aware of the instances that lead to distraction. The individual avoids procrastination and postponement, which causes stress to the individual as well as to teams. This also includes the application of prioritisation techniques. Keeping focus includes the ability to cope with daily work as well as communications and relationships.

Measures

- Demonstrates knowledge of own motivations;
- Sets personal and professional goals and priorities;
- Selects actions that contribute to the personal goals;
- Names personal distractors;

- Regularly reflects in order to maintain focus on the goals;
- Delivers personal commitments on time;
- Focuses on tasks despite numerous distractions or interruptions;
- Provides own direction or seeks clarification in uncertain situations.

4.4.1.4. Organise personal work depending on the situation and own resources

Description

No two situations are the same. What works or worked in one situation may not work in another. The individual therefore strives to 'read' situations and people and adapts behaviour to the specific circumstances in order to realise the intended results and reach his or her goals. By choosing a personal organisation and managing his or her own resources, the individual shows the ability to prioritise and balance the various tasks in an effective and efficient way. Time-, money- and energy-wasting is avoided by prioritising responsibilities and performing value-adding tasks. The individual arranges his or her workload to avoid too much stress and includes relaxation when possible and necessary.

Measures

- Keeps record of own time planning;
- Prioritises competing demands;
- Says no when appropriate;
- Engages resources to maximise delivery;
- Adapts language;
- Develops tactics appropriate to the situation.

4.4.1.5. Take responsibility for personal learning and development

Description

The individual is focused on continuous learning and always strives to improve the quality of his or her work, actions and decisions. Accepting feedback and seeking consultation enables personal development and learning. If the individual understands and utilises the perceptions and views of others, including critical observations or remarks, personal positions and behaviour can be questioned and improved. The opposite is to remain unchanging, seeing all feedback as criticism, never accepting criticism and refusing to alter his or her ways. The individual strives to develop by leveraging all criticism and feedback as opportunities for growth.

Measures

- Uses mistakes or bad results as an impulse for learning activities;
- Uses feedback as a chance for personal development;
- Seeks consultation;
- Measures own performance;
- Focuses on continuous improvement of own work and capacities.

4.4.2. Personal integrity and reliability

Definition

The delivery of projects benefits involves making many individual commitments to get things done. Individuals must demonstrate personal integrity and reliability because a lack of these qualities may lead to a failure of the intended results. Personal integrity means that the individual is acting in accordance with his or her own moral and ethical values and principles. Reliability is acting dependably, according to expectations and/or agreed behaviour.

Purpose

The purpose of this competence is to enable the individual to make consistent decisions, take consistent actions and behave consistently in projects. Maintaining personal integrity supports an environment built on trust that makes others feel secure and confident. It enables the individual to support others.

Description

Integrity and reliability are built on consistency of values, emotions, actions and outcomes by saying what you do and doing what you say. By using ethical standards and moral principles as a basis for actions and decisions and by taking responsibility for individual actions and decisions, confidence is enabled and promoted. The individual is a person to rely on.

Knowledge

- Codes of ethics/codes of practice;
- Social equity and sustainability principles;
- Personal values and moral standards;
- Ethics;
- Universal rights;
- Sustainability.

Skills and abilities

- Development of confidence and building of relationships;
- Following own standards under pressure and against resistance;
- Correcting and adjusting personal behaviour.

Related competence elements

- All other people CEs;
- Perspective 3: Compliance, standards and regulations;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values.

Key competence indicators

4.4.2.1. Acknowledge and apply ethical values to all decisions and actions

Description

The individual should acknowledge his or her own values, as these values are the foundation for consistent decisions and actions. Understanding values includes being able to express opinions and positions on a variety of topics. The individual communicates his or her principles, thereby demonstrating what they stand for. The individual makes others feel secure by being predictable in decisions and actions. The individual is able to identify inconsistencies and to articulate reasons for discord between statements and actions.

Measures

- Knows and reflects own values;
- Uses own values and ideals to shape decisions;
- Communicates own principles.

4.4.2.2. Promote the sustainability of outputs and outcomes

Description

Promoting sustainability means focusing on the endurance of solutions even when engaged in time-limited tasks. Sustainability is not only about social equity, environment protection or economic results. It is the consideration of the long-term outcomes and effects of behaviour. The individual has the ability to keep the bigger picture in mind and act accordingly.

Measures

- Proactively addresses sustainability issues in solutions;
- Considers and incorporates long-term outcomes into the solution.

4.4.2.3. Take responsibility for own decisions and actions

Description

To take responsibility means the individual takes decisions and acts while keeping in mind that the individual is fully liable for the consequences – in both a positive and negative way. The individual sticks by decisions and agreements established with others. The individual feels responsible for the team success on behalf of all the interested parties.

Measures

- Assumes full responsibility for own decisions and actions;
- Demonstrates ownership of both positive and negative results;
- Takes decisions and sticks to agreements established with others;
- Addresses personal and professional shortcomings that get in the way of professional success.

4.4.2.4. Act, take decisions and communicate in a consistent way

Description

Consistency means that the individual makes sure that words, behaviour and actions match. By applying the same guiding principles throughout your actions, decisions and communication your behaviour is predictable and repeatable in a positive sense.

Being consistent does not exclude flexibility in revising plans if the need for changes is indicated or to adapt to special situations.

Measures

- Demonstrates alignment between words and actions;
- Uses similar approaches to solve similar problems;
- Adjusts personal behaviour to the context of the situation.

4.4.2.5. Complete tasks thoroughly in order to build confidence with others

Description

The individual completes tasks in a thorough and careful way. This inspires others to be confident and make promises and agreements. The individual is recognised as someone on whom others rely. Work results would be characterised by others as consistently good quality.

Measures

- Completes work assignments thoroughly and carefully;
- Earns confidence through the delivery of complete and accurate work.

4.4.3. Personal communication

Definition
Personal communication includes the exchange of proper information, delivered accurately and consistently to all relevant parties.

Purpose
The purpose of this competence element is to enable the individual to communicate efficiently and effectively in a variety of situations, to different audiences and across different cultures.

Description
Personal communication describes the essential aspects of effective communication. Both the content and the means of communication (tone of voice, channel and amount of information) have to be clear and appropriate for the target audience. The individual has to verify the understanding of messages by actively listening to the target audience and seeking feedback. The individual promotes open and sincere communication and is able to use various means for communication (e.g. presentations, meetings, written forms, etc) and acknowledge their value and limitations.

Knowledge
- Differences between information and message;
- Different methods of communicating;
- Different questioning techniques;
- Feedback rules;
- Facilitation;
- Presentation techniques;
- Communication channels and styles;
- Rhetoric;
- Characteristics of body language;
- Communication technologies.

Skills and abilities
- Use different ways of communicating and different styles for effective communication;
- Active listening;
- Questioning techniques;
- Empathy;
- Presentation and moderation techniques;
- Effective use of body language.

Related competence elements

- All other people CEs;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values;
- Practice 5: Organisation and information;
- Practice 12: Stakeholders.

Key competence indicators

4.4.3.1. Provide clear and structured information to others and verify their understanding

Description

To give clear information means to structure and translate information in such a way that the receiver can understand and use it. The individual must utilise a logical and structured way of communicating in order to verify understanding. The individual must obtain confirmation that the receiver of information has understood the message as intended. That means focusing on the receiver, not on the information itself, and asking for validation when needed.

Measures

- Structures information logically depending on the audience and the situation;
- Considers using story-telling when appropriate;
- Uses language that is easy to understand;
- Leverages public speaking and presentations;
- Coaches and gives training;
- Leads and facilitates meetings;
- Uses visualisation, body language and intonation to support and emphasise messages.

4.4.3.2. Facilitate and promote open communication

Description

To facilitate and promote open communication means actively inviting others to give their input and opinions on relevant topics. This requires an atmosphere of confidence, so that people can express their ideas and opinions without being rebuffed, punished or ridiculed. It should be made clear when and how others are free and/or invited to propose ideas, emotions and/or opinions, and when the time is less appropriate. In the latter situations, people and their input should still be treated with respect.

To listen and give feedback is to seize opportunities for the exploration and exchange of opinions. The individual has a genuine interest in others' views and creates open and informal frameworks for feedback. The individual makes people feel that they and their opinions are valued.

Measures

- Creates an open and respectful atmosphere;
- Listens actively and patiently by confirming what has been heard, re-stating or paraphrasing the speaker's own words and confirming understanding;
- Does not interrupt or start talking while others are talking;
- Is open and shows true interest in new ideas;
- Confirms message/information is understood or, when needed, asks for clarification, examples and/or details;
- Makes clear when, where and how ideas, emotions and opinions are welcome;
- Makes clear how ideas and opinions will be treated.

4.4.3.3. Choose communication styles and channels to meet the needs of the audience, situation and management level

Description

The individual chooses the appropriate way of communicating for the target audience. The individual is able to communicate on different levels and through different channels. Formal or informal, neutral or emotional communication should all be considered, as well as whether written, oral or visual communication is most appropriate.

Measures

- Selects appropriate communication channels and style depending on the target audience;
- Communicates via selected channels according to the selected style;
- Monitors and controls communication;
- Changes the communication channels and style depending on the situation.

4.4.3.4. Communicate effectively with virtual teams

Description

A virtual team consists of individuals who work across time zones, space and/or organisational boundaries. Communication within virtual teams is a challenge, as not all are located in the same environment and/or organisation and they may be distributed over several organisations, cities, countries or continents.

Communication between virtual team members is often asynchronous and not face-to-face, and has to use modern communication technology. The communication procedures have to consider aspects such as language, channel, content and time zones.

Measures

- Uses modern communication technology, (e.g. webinars, tele-conferences, chat, cloud computing);
- Defines and maintains clear communication processes and procedures;
- Promotes cohesion and team building.

4.4.3.5. Employ humour and sense of perspective when appropriate

Description

Work in projects can often be stressful. Being capable of viewing situations, problems and even your own work from different viewpoints is an important asset. Humour enables individuals to acquire a sense of perspective – a way of judging how good, bad or important something is compared with other things. The release of tension through humour often facilitates cooperation and decision-making. Humour is a powerful tool to decrease tension in situations where conflicts threaten to arise. Provided it is used in the right way, at the right time and with respect, humour can also facilitate communication.

Measures

- Changes communication perspectives;
- Decreases tension by use of humour.

4.4.4. Relationships and engagement

Definition

Personal relationships build the foundation for the productive collaboration, personal engagement and commitment of others. This includes one-to-one relationships as well as setting up a whole network of relations. Time and attention have to be invested in establishing durable and robust relations with individuals. The ability to form strong relationships is primarily driven by social competences such as empathy, trust, confidence and communication skills. Sharing visions and goals with individuals and the team drives others to engage in tasks and to commit to the common goals.

Purpose

The purpose of this competence element is to enable the individual to build and maintain personal relationships and to understand that the ability to engage with others is a precondition for collaboration, commitment and, ultimately, performance.

Description

Personal relationships are initiated by genuine interest in people. Building up relationships is twofold. It is about establishing one-to-one relationships, as well as creating and supporting social networks. In both situations, the individual has to be able to interact openly with others. Once established, the relationships have to be maintained and improved by establishing and showing confidence, respectful interaction and open communication. Cultural differences can enhance interest and attractiveness as well as chances for misunderstandings that might endanger the quality of relationships. When personal relationships are established it is much easier to engage others when your own visions, goals and tasks are communicated in an enthusiastic way. Another way to engage others and get their commitment is to actively involve them in discussions, decisions and actions. In general, people tend to commit to goals and tasks more easily when asked in advance.

Knowledge

- Intrinsic motivation;
- Motivation theories;
- Handling resistance;
- Values, traditions, individual requirements of different cultures;
- Network theory.

Skills and abilities

- Use of humour as icebreaker;
- Appropriate ways of communicating;
- Respectful communication;
- Respecting others and being aware of ethnical and cultural diversity;
- Trusting own intuition.

Related competence elements

- All other people CEs;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values;
- Practice 5: Organisation and information;
- Practice 12: Stakeholders.

Key competence indicators

4.4.4.1. Initiate and develop personal and professional relationships

Description

To initiate and develop personal relationships is to seek and make use of chances to establish contact with other people. The individual demonstrates interest in people and is ready to engage with them. The individual utilises possibilities and situations to create and maintain personal and professional contacts. The individual is present, available, open for dialogue and actively staying in contact. The individual is visible and accessible for team members, clients, customers or other stakeholders. The individual acts attentively, acknowledges others and keeps them informed.

Measures

- Actively seeks possibilities and situations to make new contacts;
- Demonstrates interest in meeting new people;
- Uses humour as an icebreaker;
- Is present, available and open for dialogue;
- Stays actively in contact, establishes a routine for bilateral meetings;
- Keeps others informed.

4.4.4.2. Build, facilitate and contribute to social networks

Description

Building, facilitating and contributing to social networks has various levels. On the lowest level, the individual joins and contributes to networks with interesting and/or useful others. By doing so, new relationships are established. On the second level, the individual creates new networks and circles of his or her own and so opens up new communication flows between others. The individual thus acts as a facilitator or communication hub. The next level of social networking is to make one's own relationships available for others. This means enabling, enforcing and establishing relationships between others that are sustained even without the individual being engaged.

Measures

- Joins and contributes to social networks;
- Creates and facilitates social networks;
- Organises events for networking;
- Facilitates support for networking.

4.4.4.3. Demonstrate empathy through listening, understanding and support

Description

To demonstrate empathy means to show real interest and involvement with others and their wellbeing. The individual listens attentively to others and ensures understanding by asking questions for clarification or detail. The individual recognises emotions expressed or possibly just experienced by others. The individual relates and reacts to these emotions in a sympathetic or compassionate way. The individual offers support, even when it is not asked for.

Measures

- Listens actively;
- Makes others feel heard;
- Asks questions for clarification;
- Relates to the problems of others and offers help;
- Familiarises with the values and standards of others;
- Responds to communication within a reasonable time.

4.4.4.4. Show confidence and respect by encouraging others to share their opinions or concerns

Description

Having confidence in someone means having belief in their future actions or decisions and being convinced of their positive intentions. The individual does not have a hidden agenda but shares information with others. The individual also accepts that showing confidence is an investment with an insecure outcome. The individual takes others, their talents and opinions seriously, and that success also depends on their actions and commitment. To get optimal team performance it is crucial to understand the motivation of the team members. To get there, the individual has to spend time with people in order to understand who they are and what makes them tick. The individual should keep in mind that the values, experiences and goals of others might be very different from his or her own. Acting respectfully means treating others in a respectful way, as you would like to be treated yourself. The individual takes others seriously by cherishing their opinions, their work and their personality, regardless of gender, race, social status or background. Cultural diversity is respected. The individual considers codes of conduct as guidelines for decisions and behaviour.

Measures

- Relies on a given word;
- Assigns tasks to team members based on confidence;
- Expects others to act according to common values and agreements;
- Delegates work without monitoring and controlling every single step;
- Asks others for their ideas, wishes and concerns;
- Notices and respects differences between people;
- Embraces the importance of professional and personal variety.

4.4.4.5. Share own vision and goals in order to gain the engagement and commitment of others

Description

To share a vision and goals implies acknowledging and demonstrating a positive and enthusiastic attitude towards a certain task, process or goal while showing a realistic optimism. To inspire others requires an ambitious yet clear vision, realistic objectives and the ability to achieve commitment from the people concerned. To be self-committed is an important requirement for that.

Inspiration is often achieved through a shared vision – a view of the future that people can believe in and want to be part of. This vision can either be explicit (even written down) or implicit. The vision serves as a motivator for change.

To engage people and get their commitment means making them feel personally responsible for a good outcome. This can be done by various means – by asking their advice, by making them responsible for a task or by involving them in decisions.

The individual should make optimal use of the skills and experience of his or her co-workers. This means that people should be involved in decisions on the basis of what they can add to the existing knowledge. The same goes for sharing information, as this can enhance commitment. However, the individual must also be aware of the dangers of information overload. As every team member has their own tasks, in some cases it is better to share information on a 'need to know' basis.

Measures

- Acts positively;
- Clearly communicates vision, goals and outcomes;
- Invites debate and critique of the vision, goals and outcomes;
- Involves people in planning and decision-making;
- Asks for commitment on specific tasks;
- Takes individual contributions seriously;
- Emphasises the commitment of all to realise success.

4.4.5. Leadership

Definition

Leadership means providing direction and guidance to individuals and groups. It involves the ability to choose and apply appropriate styles of management in different situations. Besides displaying leadership with his or her team, the individual needs to be seen as a leader in representing the project to senior management and other interested parties.

Purpose

The purpose of this competence element is to enable the individual to lead, provide direction and motivate others in order to enhance individual and team performance.

Description

A leader has to be aware of different leadership styles and decide which is appropriate for his or her nature, for the project, for the team being managed and for other interested parties, in all types of situations. The leadership style adopted includes patterns of behaviour, communication methods, attitudes towards conflicts, ways of controlling team members' behaviours, decisionmaking processes and the amount and type of delegation. Leadership is important throughout the full lifecycle of the project, and becomes especially important when change is required or when there is uncertainty about a course of action.

Knowledge

- Leadership models;
- Individual learning;
- Communication techniques;
- Coaching;
- Sense-making and sense-giving;
- Bases of power;
- Decision taking (consensus, democratic/majority, compromise, authority, etc).

Skills and abilities

- Personal self-awareness;
- Listening skills;
- Emotional strength;
- Capacity to express a set of values;
- Dealing with mistakes and failure;
- Sharing values;

- Creating team spirit;
- Methods and techniques for communication and leadership;
- Management of virtual teams.

Related competence elements

- All other people CEs;
- All practice CEs;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values.

Key competence indicators

4.4.5.1. Initiate actions and proactively offer help and advice

Description

To take the initiative means having the tendency and ability to start an unrequested action, including coming up with a proposal or advice, taking the lead and/or giving or helping without first being invited to do so. Taking the initiative requires the ability to think ahead, both of possible situations and possible solutions.

Taking the initiative adds to one's influence and heightens one's visibility. On the other hand, if the initiative is not welcomed or turns out badly, there is a risk of losing influence or status. So every initiative should always be guided by a careful weighing of pros and cons.

Measures

- Proposes or exerts actions;
- Offers unrequested help or advice;
- Thinks and acts with a future orientation (i.e. one step ahead);
- Balances initiative and risk.

4.4.5.2. Take ownership and show commitment

Description

To take ownership means demonstrating personal buy-in. This commitment to the objectives of the project makes people believe in its value. The individual acts as an entrepreneur by taking full responsibility for the process and by spotting opportunities for improvement. The individual constantly monitors processes and results to spot the right occasions for intervention and improvement and opens up possibilities for learning.

Measures

- Demonstrates ownership and commitment in behaviour, speech and attitudes;
- Talks about the project in positive terms;
- Rallies and generates enthusiasm for the project;
- Sets up measures and performance indicators;
- Looks for ways to improve the project processes;
- Drives learning.

4.4.5.3. Provide direction, coaching and mentoring to guide and improve the work of individuals and teams

Description

To give direction, coaching and mentoring means to give guidance and support to people and teams and establish conditions that engage people with their assignments. Coaching and mentoring is focused on improving the abilities and self-reliance of team members. Direction is guiding them in their activities. The individual creates and communicates personal and common objectives and acts from these. The individual creates and shares a vision that leads the project. To give direction, coaching and mentoring requires the ability to keep a cool head in demanding and unclear situations. It also requires that the individual knows when and in what direction coaching or mentoring are needed and what form they should take. Sometimes it may be better to withhold a proposal or decision for a while to promote the self-reliance or creativity of teams or individuals.

Measures

- Provides direction for people and teams;
- Coaches and mentors team members to improve their capabilities;
- Establishes a vision and values and leads according to these principles;
- Aligns individual objectives with common objectives and describes the way to achieve them.

4.4.5.4. Exert appropriate power and influence over others to achieve the goals

Description

To exert power and influence means being visible as a leader and opening up the possibility for others to follow. Therefore one needs to understand the demands of colleagues, subordinates, clients and other interested parties, to respond to them and influence their expectations and opinions. To exert influence also means directing other people's actions, whether or not one is in command. A leader actively shapes views and creates the perception of situations, results and relationships through words and actions. Sometimes the use of power is necessary to realise results or resolve deadlock; in other situations, a simple, wellplaced word may be even more effective. The open use of power may create resentment or invite counterpower, so a leader should know when to use what means of power and in what way. The use and effectiveness of power and influence is always tightly linked to communication. A leader should know the possibilities and limits of each communication means and channel.

Measures

- Uses various means of exerting influence and power;
- Demonstrates timely use of influence and/or power;
- Perceived by stakeholders as the leader of the project or team.

4.4.5.5. Make, enforce and review decisions

Description

Making decisions means being able to select a course of action based on several possible alternative paths. Often decisions are made with incomplete or even contradictory information and with uncertain consequences. Making decisions entails consciously selecting from alternatives and choosing the one that is most consistent and aligned with the objectives. Decisions should be taken based upon analysis of the facts and incorporating the views and opinions of others.

Sometimes the information quality is so poor that decisions are based on intuition. Reviewing and being prepared to change prior decisions based on new information is an essential part of the ability to take decisions. Decisions often have to be taken by others (for instance by line managers, steering committees, etc). The leader exerts his or her influence to have these others take the right decisions at the right time.

Measures

- Deals with uncertainty;
- Invites opinion and discussion prior to decision-making in a timely and appropriate fashion;
- Explains the rationale for decisions;
- Influences decisions of stakeholders by offering analyses and interpretations;
- Communicates the decision and intent clearly;
- Reviews decisions and changes decisions according to new facts;
- Reflects on past situations to improve decision processes.

4.4.6. Teamwork

Definition

Teamwork is about bringing people together to realise a common objective.

Teams are groups of people working together to realise specific objectives. Project teams are commonly multi-disciplinary; specialists in different disciplines work together to realise complex outcomes. Teamwork is about building a productive team by forming, supporting and leading the team. Team communication and team relationships are among the most important aspects of successful teamwork.

Purpose

The purpose of this competence element is to enable the individual to select the right team members, promote a team orientation and effectively manage a team.

Description

Teamwork covers the complete lifecycle of teams. It starts with the initial phase of selecting the right team members. After that, the team has to be built, supported and steered. During the various phases of the project, as the team members and the team as a whole acquire more maturity in their respective tasks, they can perform these tasks more independently and consequently are given more responsibility.

Team building is often done by the use of meetings, workshops and seminars that may include the individual leading the project, team members and sometimes other interested parties. Team spirit (i.e. getting people to work well together) can be achieved through individual motivation, team goal setting, social events, supporting strategies and other methods.

Problems may arise due to technical or economic difficulties or other kinds of stressful situations. Issues may also arise due to cultural and educational differences, different interests and/or ways of working, or members being located great distances apart. The individual leading the team needs to continually develop the team and its members throughout the lifecycle of the project. During their time working for the project, the performance of team members should be regularly reviewed by the individual leading the team in consultation with the line manager, to assess and respond to development, coaching and training needs. Where the performance of a team member is below the required standard, remedial action may be necessary.

Throughout the life of a team, personal involvement should be encouraged, networking stimulated, a productive work environment facilitated and communication and relationships supported.

Knowledge
- Project organisation;
- Team role models;
- Team lifecycle models.

Skills and abilities
- Recruiting and personnel selection skills;
- Interview techniques;
- Building and maintaining relationships;
- Facilitation skills.

Related competence elements
- All other people CEs;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values;
- Practice 5: Organisation and information;
- Practice 8: Resources;
- Practice 10: Plan and control.

Key competence indicators

4.4.6.1. Select and build the team

Description
To ensure successful teamwork, the right resources for the team have to be selected. Apart from ensuring that they have the necessary knowledge and skills, the individual leading the team also has to take care that the selected team members have the right 'chemistry' to be able to work together as a team. Before the chosen team can start performing, the individuals have to generate an understanding of themselves as a team. The role of the individual leading the team is to translate individual motivation into team performance. The members have to be enabled to learn about each other and the tasks they are facing. Team building is a continuous task, but as the team matures the necessary activities for the individual leading the team change accordingly.

Measures
- Considers individual competences, strengths, weaknesses and motivation when deciding on team inclusion, roles and tasks;
- Clarifies objectives and creates a common vision;
- Sets the team objectives, agenda and completion criteria;

- Negotiates common team norms and rules;
- Motivates individuals and builds team awareness.

4.4.6.2. Promote cooperation and networking between team members

Description

Stimulating cooperation means actively influencing team participants to work together and contribute with their experience, knowledge, opinions, ideas and concerns, for the sake of the agreed objectives. Discussions and disagreements are an unavoidable consequence of this, but as long as the individual leading the team makes sure that a productive and respectful atmosphere is maintained, team members can expect that conflict will lead to better performance. Whenever individual team members set out to disrupt cooperation by playing a divisive or counter-productive role, the individual leading the team needs to address this by correcting and, in extreme cases, replacing the team member. The team leader can stimulate networking through physical and virtual activities where team members share their knowledge and motivate and inspire each other.

Measures

- Creates opportunities for team member discussions;
- Asks for opinions, suggestions and concerns from team members in order to improve performance;
- Shares successes with the team(s);
- Promotes cooperation with people both within and outside the team;
- Takes appropriate action when team cooperation is threatened;
- Uses tools for collaboration.

4.4.6.3. Support, facilitate and review the development of the team and its members

Description

Team development involves continuously developing the team, encouraging members to gain new knowledge and skills. The role of the individual leading the team is to support, enable and review these learning efforts as well as creating opportunities to share knowledge between team members, other teams and the organisation outside the project.

Measures

- Promotes continuous learning and knowledge sharing;
- Uses techniques to engage in development e.g. on-the-job training;
- Provides opportunities for seminars and workshops (on- and off-the-job);
- Plans and promotes 'lessons learned' sessions;
- Provides time and opportunity for self-development of team members.

4.4.6.4. Empower teams by delegating tasks and responsibilities

Description

Responsibility creates involvement. The individual leading the team increases involvement – and individual and collective empowerment – by delegating tasks and problems to teams or team members. Dependent on their team maturity, delegated tasks can be big, challenging and important. The output of delegated tasks to individuals and teams should be measured, with feedback cycles for the team to ensure learning occurs.

Measures

- Delegates tasks when and where appropriate;
- Empowers people and teams by delegating responsibility;
- Clarifies performance criteria and expectations;
- Provides reporting structures at team level;
- Provides individual and team feedback sessions.

4.4.6.5. Recognise errors to facilitate learning from mistakes

Description

The individual leading the team makes sure that the effect of errors and mistakes on the outcomes, processes and success of the project are kept to a minimum. The individual is aware that mistakes can always happen and understands and accepts that people make errors. The individual analyses mistakes and facilitates learning from mistakes. Errors and mistakes are used as a platform for change and improvement so that there is less chance of future errors.

In some cases, the individual leading the team can even promote behaviour that increases the chance of errors, if the project needs innovative ways to overcome problems and difficulties. Even then, the individual leading the team ensures that the final outcomes, processes and project success are not affected negatively. The individual seeks root causes for mistakes and takes effective action to ensure that the same mistakes do not occur again.

Measures

- As far as possible, avoids negative effects of errors on project success;
- Realises that mistakes happen and accept that people make errors;
- Shows tolerance for mistakes;
- Analyses and discusses mistakes to determine improvements in processes;
- Helps team members to learn from their mistakes.

4.4.7. Conflict and crisis

Definition

Conflict and crisis includes moderating or solving conflicts and crises by being observant of the environment and noticing and delivering a remedy for disagreements. Conflicts and crises may include events and situations, character conflicts, stress levels and other potential dangers. The individual must handle these scenarios appropriately and stimulate a learning process for future conflicts and crises.

Purpose

The purpose of this competence element is to enable the individual to take effective action when a crisis or clash of opposing interests/incompatible personalities occurs.

Description

Conflicts may occur between two or more people and/or parties. Very often, a conflict erodes a good working environment and may result in a negative effect for the parties involved. A crisis may be the outgrowth of a conflict, or it may be the result of a sudden, abrupt or decisive change in a situation that threatens to thwart the realisation of the goals of the project, either directly or indirectly. At such times, a rapid response is required and skilled judgment needs to be applied to assess the crisis, define scenarios to solve the crisis and secure the project and to decide whether to escalate the issue and how high this needs to go in the organisation.

The ability to identify potential conflicts and crises and to react accordingly needs an understanding of the fundamental mechanisms. The individual can use a variety of means for reacting to potential or actual conflict and crisis, for example collaboration, compromise, prevention, persuasion, escalation or the use of power. Each depends on achieving a balance between interests. Transparency and integrity shown by the individual, acting as an intermediary between parties in conflict, will help in finding acceptable solutions. However, sometimes conflicts cannot be solved from within the team or the project but only by calling in independent mediating or deciding parties.

Knowledge

- De-escalation techniques;
- Creativity techniques;
- Moderation techniques;
- Scenario techniques;
- Conflict stage models;

- Value of conflicts in team building;
- Crisis plan;
- Worst case scenarios.

Skills and abilities

- Diplomatic skills;
- Negotiation skills, finding a compromise;
- Moderation skills;
- Persuasiveness;
- Rhetorical skills;
- Analytical skills;
- Stress resistance.

Related competence elements

- All other people CEs;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values;
- Practice 8: Resources;
- Practice 10: Plan and control;
- Practice 11: Risk and opportunity.

Key competence indicators

4.4.7.1. Anticipate and possibly prevent conflicts and crises

Description

To be aware of potential conflicts and crises means being alert and observant of situations that might lead to disagreements. Possible conflicts are ideally identified and prevented or tackled at an early stage before they expand. Prevention includes pre-empting conflict topics, keeping team members with conflicting characters or interests in separate teams and/or delegating conflict-sensitive items to specific people. Stress is a very likely factor in potential conflicts or crises, as people tend to get irritable under pressure. The individual should therefore be able to recognise, assess and reduce individual stress levels.

Measures

- Analyses potentially stressful situations;
- Keeps conflicting characters or interests in separate tasks/teams;
- Delegates conflict-sensitive items to specific people;

- Implements preventive measures;
- Takes stress-reducing measures;
- Reflects on stressful situations in a team.

4.4.7.2. Analyse the causes and consequences of conflicts and crises and select appropriate response(s)

Description

Conflicts pass through various stages.

These stages can be summarised in three broad categories:

- **Latent** (potential, slumbering, but not yet visible or acknowledged). This exists whenever individuals or groups have differences that bother one or the other, but the differences are not great enough to cause one side to act to alter the situation.
- **Emergent** (visible but still rational). This may happen when a 'triggering event' happens, for instance an open disagreement on a topic. This topic is either the real cause of the conflict, or a pretext for another conflict of interest or character. When the conflict is emergent, the involved parties are still on speaking terms and can discuss rational solutions.
- **Escalated** (open conflict). In this phase the parties are openly and emotionally at odds with each other and are not able or willing any more to discuss solutions calmly and rationally. Other people are tending to take sides, or they are or urged to do so. In some situations legal steps may be taken or considered.

Crises, by contrast, jump immediately to the third level without acknowledged intermediary steps. However, they are often not the result of conflict situations but may arise because of a sudden or suddenly discovered issue – a major risk occurring, an outside event with great impact, etc. The art of conflict and crisis management is to assess causes and consequences and obtain additional information for use in the decision-making process to define possible solutions.

Conflicts and crises can have very different causes, varying from factual disagreements to character conflicts, and they may have origins that are external to the project or even the organisation. Depending on the causes, different solutions may be possible.

Crises can also be differentiated by their potential impacts. Depending on the specific stage, different approaches to soothe, solve or escalate the conflict or crisis can be chosen.

Measures

- Assesses conflict stage;
- Analyses causes of a conflict or crisis;
- Analyses potential impact of a conflict or crisis;
- Has different conflict or crisis approaches available to choose from.

4.4.7.3. Mediate and resolve conflicts and crises and/or their impact

Description

Often conflict or crisis management has to be performed against a background of individuals and/or groups who are angry or in panic mode. In a minimum amount of time, the individual has to pull the information together, weigh the options, aim for a positive and preferably synergistic solution and, most importantly, stay calm and in control. In these circumstances, relaxation and balanced judgment are important qualities. In situations of crisis the ability to act decisively is most important.

The potential means of resolving conflicts involve collaboration, compromise, prevention or use of power. Each depends on achieving a balance between one's own and others' interests. Cooperative conflict management requires a willingness to compromise among all parties.

In the early stages of conflicts the individual can act as a moderator/mediator – at least when the individual is not directly involved. The individual brings the conflicting parties together and enables communication without being too judgmental. In later stages the options may include use of power, escalation to higher management, professional mediation and/or legal measures.

Measures

- Addresses issues openly;
- Creates an atmosphere of constructive debate;
- Selects and uses the right method to solve the conflict or crisis;
- Takes disciplinary or legal measures when appropriate.

4.4.7.4. Identify and share learning from conflicts and crises in order to improve future practice

Description

Once a conflict has been resolved, it is important to restore a sense of harmony and equilibrium to the environment. Stimulating learning from conflicts and crises

means the individual can question the origins and causes of a conflict on a meta-level. Furthermore the individual can differentiate between environmental coincidences and true causes of a conflict or crisis, learn from them and encourage the team to do the same, so that they cope better with similar situations in the future.

Measures

- Restores the team environment;
- Motivates the team to acknowledge and learn from their own part in the conflict;
- Uses conflicts in a positive way to progress;
- Strengthens the team cohesion and solidity with regard to potential future conflicts and crises.

4.4.8. Resourcefulness

Definition

Resourcefulness is the ability to apply various techniques and ways of thinking to defining, analysing, prioritising, finding alternatives for and dealing with or solving challenges and problems. It often requires thinking and acting in original and imaginative ways and stimulating the creativity of individuals and the collective creativity of the team. Resourcefulness is useful when risks, opportunities, problems and difficult situations arise.

Purpose

The purpose of this competence element is to enable the individual to effectively handle uncertainty, problems, changes, limitations and stressful situations by systematically and continuously searching for new, better and more effective approaches and/or solutions.

Description

Resourcefulness is about making optimal use of what to work with. It is not just about creating something new; it also applies to making existing things work better, faster or cheaper. The individual acquires capable resources and foster an attitude of resourcefulness within the team to stimulate, evaluate and act upon ideas that can benefit the process, results or goals. Ideas must often be 'sold' to the team before they are accepted. A team atmosphere that is open to creativity and innovation is a prerequisite for acceptance. Others in the team will then often champion the idea and refine it so that it gains greater acceptance.

Resourcefulness is one of the prime competences for project success. Resourcefulness helps to overcome problems and motivates the team to work together in developing the idea into a workable solution. Creativity must be used with care in the project team, so that the focus on realising the agreed results of the project is not lost. Conceptual and analytic techniques are also of utmost importance to deal with the information overflow that many projects and organisations face. Being able to extract, present or report the right information in a timely manner is crucial for success.

Knowledge

- Techniques to solicit views of others;
- Conceptual thinking;
- Abstraction techniques;
- Strategic thinking methods;
- Analytic techniques;

- Convergent and divergent thinking;
- Creativity methods;
- Innovation processes and techniques;
- Coping methods;
- Lateral thinking;
- Systems thinking;
- Synergy and holistic thinking;
- Scenario analysis;
- SWOT technique;
- PESTLE analysis;
- Creativity theories;
- Brainstorming techniques e.g. lateral thinking;
- Converging techniques (comparative analysis, interview techniques).

Skills and abilities

- Analytical skills;
- Facilitating discussions and group working sessions;
- Choosing appropriate methods and techniques to communicate information;
- Thinking 'outside the box' – new ways of doing things;
- Imagining an unknown future state;
- Being resilient;
- Dealing with mistakes and failure;
- Identifying and seeing different perspectives.

Related competence elements

- All other people CEs;
- Practice 1: Project design;
- Practice 2: Requirements and objectives;
- Practice 10: Plan and control;
- Practice 11: Risk and opportunity.

Key competence indicators

4.4.8.1. Stimulate and support an open and creative environment

Description

The individual creates a work environment that encourages people to share their knowledge and contribute their ideas and opinions. To stimulate and support creativity and innovation, the individual needs to be open to original and imaginative ways to overcome obstacles. These ways may include new

products, processes or procedures or could involve revising specific tasks or roles and responsibilities. The individual can make others feel they are welcome to express themselves, so that the project can benefit from their input, suggestions, ideas and concerns. This is necessary as a means of benefiting from others' knowledge and experience. Openness is important as in every project professionals with various backgrounds and abilities have to work together. Most of the team members have an area of expertise where they are more knowledgeable than the individual. The relationships in the team are built on mutual respect, trust and reliability. So the individual should regularly ask people for their input and show willingness to understand and possibly adopt their ideas. Of course there is a time and place for everything, so the individual should also make clear when there is time for creative input and when not.

Measures

- Encourages people to share their knowledge and contribute their opinions;
- Stimulates and supports creativity when appropriate;
- Uses and stimulates original and imaginative ways to overcome obstacles;
- Seeks input from others and shows willingness to consider and/or adopt their ideas;
- Considers the perspectives of others.

4.4.8.2. Apply conceptual thinking to define situations and strategies

Description

Every project is a unique effort to create something new. Except in the most simple projects, this requires the abilities of abstraction and conceptualisation, that is, of breaking down or reducing the subject in question (be it an outcome, plan, requirement, risk, situation or problem) into smaller parts and integrating these into new and useable ideas. The individual must apply conceptual thinking and also leverage able team members. Conceptual thinking also means bearing in mind that problems regularly have multiple causes that relate to each other within a general context, and that different ways of solving problems have different effects on other parts, both in and outside the project.

Measures

- Uses or promotes conceptual thinking when appropriate;
- Knows that problems often have multiple causes and that solutions often have multiple effects;
- Applies systemic thinking.

4.4.8.3. Apply analytic techniques to analysing situations, financial and organisational data and trends

Description

The individual is able to analyse (or delegate the analysis of) complex situations or problems and find solutions and alternatives. The individual can also analyse and derive useful information and trends from complex sets of data and present or report the findings clearly. Analytical dexterity means having different methods available for detecting a problem's actual causes and implementing or proposing the correct measures to solve it.

Measures

- Applies various analytic techniques;
- Analyses problems to detect causes and possible solutions;
- Analyses complex sets of data and extracts relevant information;
- Clearly reports and presents data conclusions, summaries and trends.

4.4.8.4. Promote and apply creative techniques to find alternatives and solutions

Description

Creative techniques should be used to identify solutions. These techniques can be divided into 'diverging' techniques and 'converging' techniques. When problems arise, the individual needs to judge whether a creative approach is appropriate or not. Where a creative approach is appropriate, the individual needs to decide which methods to use.

After the problem or issue is defined (possibly by using conceptual thinking and/or analytic techniques) there follows a diverging creative stage, to gather possible solutions. A brainstorming session may be appropriate, where members of the team and others in the organisation who might be able to contribute meet to have their ideas captured. Other much-used techniques include mind mapping, storyboarding, visualising, etc. Whatever method is used in finding a creative solution, it involves looking at the issue from different perspectives, combining tools, knowledge, common sense, intuition and experience and applying them.

In the following, more analytic, converging stage, possible solutions and their effect on the problem or issue in question are analysed. Converging techniques include weighted selection, force-field analysis, etc. The most promising ideas are then further refined and finally the best concepts/solutions are chosen.

Measures

- Uses creative techniques when appropriate;
- Applies diverging techniques;
- Applies converging techniques;
- Engages multiple views and skills;
- Identifies interdependencies.

4.4.8.5. Promote a holistic view of the project and its context to improve decision-making

Description

To promote holistic views means considering a current situation in relation to the full context of the project, such as the enterprise strategies, concurrent activities and/or projects. The individual uses multiple perspectives to judge and deal with situations. The individual recognises the significance of details and can separate the details from the bigger picture. The individual understands the connection between the situation and its context and can make or promote decisions based on understanding of a wide array of influences, interests and possibilities. The individual is also able to explain these holistic views to others, both inside and outside the project.

Measures

- Demonstrates holistic thinking and an can explain the bigger picture;
- Uses multiple perspectives to analyse and deal with the current situation;
- Makes connections between the project and the larger context and takes appropriate action.

4.4.9. Negotiation

Definition

Negotiation is the process between two or more parties that aims to balance different interests, needs and expectations in order to reach a common agreement and commitment while maintaining a positive working relationship. Negotiation includes both formal and informal processes such as buying, hiring or selling or regarding requirements, budget and resources in projects.

Purpose

The purpose of this competence element is to enable the individual to reach satisfactory agreements with others by using negotiation techniques.

Description

Agreements are based on positions that will satisfy the interests, needs and expectations of all parties. Negotiations can be political or commercial and can often entail reaching compromises that do not leave all parties very satisfied. Interests, needs and expectations often involve emotions and feelings as well as facts and the full picture may not be easy to identify. The negotiating process is often influenced by the relative power of the parties and by situational factors that may be called 'leverage'.

Negotiators need to research these issues and, when full information is not available, make assumptions about them. Successful negotiation is facilitated by developing a number of options, each of which has the potential to satisfy different interests, needs and expectations. Negotiation may involve the use of different techniques, tactics and strategies.

Knowledge

- Negotiation theories;
- Negotiation techniques;
- Negotiation tactics;
- Phases in negotiations;
- BATNA (best alternative to a negotiated agreement);
- Contract templates and types;
- Legal and regulatory provisions associated with contracts and agreements;
- Analysis of cultural aspects and tactics.

Skills and abilities

- Identification of the desired outcomes;
- Assertiveness and drive to reach desired outcomes;
- Empathy;

- Patience;
- Persuasion;
- Establishing and maintaining trust and positive working relationships.

Related competence elements

- All other people CEs;
- Practice 1: Project design;
- Practice 2: Requirements and objectives;
- Practice 9: Procurement;
- Practice 10: Plan and control.

Key competence indicators

4.4.9.1. Identify and analyse the interests of all parties involved in the negotiation

Description

Understanding the priorities of the parties to the negotiation is a prerequisite to generating a successful outcome. The individual leading or participating in the negotiations should begin by gathering hard and soft information about interests, needs and expectations of all parties by whatever means are available. Analysis of this information should reveal both priorities and gaps for further research. Priorities of other parties may often have to be assumed.

Measures

- Knows and reflects own interests, needs and constraints;
- Gathers and documents relevant hard and soft information about interests, needs and expectations of all parties involved;
- Analyses and documents available information to identify own priorities and likely priorities for other parties.

4.4.9.2. Develop and evaluate options and alternatives with the potential to meet the needs of all parties

Description

The individual identifies trade-offs, options and alternative negotiation solutions. They are developed during the preparation for negotiation and may be modified during the negotiations as opportunities emerge and the situation changes. The trade-offs, options and alternatives should be tuned to

the interests of the negotiating parties, to be useable during the negotiation process. A best alternative to a negotiated agreement (BATNA) should also be identified.

Measures

- Identifies trade-offs, options and alternative solutions based on the analysis of interests, needs and priorities of all parties;
- Proposes the right option at the right time in the right way.

4.4.9.3. Define a negotiation strategy in line with own objectives that is acceptable to all parties involved

Description

The negotiation strategy focuses on what the individual thinks is essential for a successful outcome. Before starting the negotiation, the individual must select the strategy, techniques and tactics that will enable him or her to reach an optimal outcome for the project. The strategy may depend upon factors such as the power balance between the parties, the stakes involved, budgetary conditions, politics, cultural aspects and the capability of the negotiators. The selected strategy should be appropriate to the interests of the project and not detrimental to relationships with the stakeholders involved. The individual should also consider secondary strategies that cover 'what if' scenarios.

The strategy also includes who the negotiators will be and what will be their mandate (negotiation scope, freedom, roles and responsibilities). In some cases a choice is also possible about the other party and/or negotiation scope (with whom to negotiate over what). This option should be carefully considered, as this choice might have negative or positive repercussions later on.

Measures

- Identifies possible negotiation strategies in order to achieve the desired outcome;
- Identifies secondary strategies and alternative options to address 'what if' scenarios;
- Selects a negotiation strategy and can explain why it has been chosen;
- Analyses and selects negotiation techniques and tactics to support the desired negotiation strategy;
- Identifies key parties to participate in the negotiation and clearly articulates their mandate.

4.4.9.4. Reach negotiated agreements with other parties that are in line with own objectives

Description

An agreement is reached through negotiation using the identified strategies, tools and tactics without alienating the other parties involved. Negotiation may occur over an extended timeframe and may proceed in phases. A satisfactory agreement is one in which all parties are reasonably satisfied with the result, will honour their commitments, think the other parties negotiated fairly and feel respected and will negotiate again. If an agreement is not achievable or the possible outcomes are not acceptable, the BATNA is implemented.

The best possible solution is often one that is sustainable and provides the best long-term results for all parties. There may be specific situations where this is not possible or preferable and a compromise may be required to meet one's desired outcome. In many situations, the agreed outcomes are documented for future reference.

Measures

- Negotiates using techniques and tactics appropriate to the circumstances to achieve the desired outcome;
- Negotiates to achieve a sustainable agreement;
- Demonstrates patience and drive to realise a sustainable agreement;
- Implements BATNA if a sustainable outcome is not possible;
- Documents the outcomes of the negotiation.

4.4.9.5. Detect and exploit additional selling and acquisition possibilities

Description

The individual is constantly striving to realise the processes and agreed outcomes faster, better and/or cheaper. This means that the individual has to have a keen eye for opportunities to realise this aim. Depending on the situation, this may for instance mean searching for new suppliers or renegotiating old agreements, looking for ways to offer services to new clients, negotiating better conditions with stakeholders or inviting teams or team members to realise tasks sooner, better and/or cheaper. Negotiating will occur after the new opportunities are identified.

The desired state should be seen in the light of the best interests of the project and the organisation. Is the organisation best served with the present situation or with efforts to improve it? In considering this, the individual is aware

that negotiations also take up time and effort and that present relationships with negotiation partners may be affected.

Measures

- Seeks ways to deliver the agreed outcomes sooner, better and/or cheaper;
- Weighs alternatives to the current situation and agreements;
- Considers the impact of alternatives on current relationships.

4.4.10. Results orientation

Definition

Results orientation is the critical focus maintained by the individual on the outcomes of the project. The individual prioritises the means and resources to overcome problems, challenges and obstacles in order to obtain the optimum outcome for all the parties involved. The results are continuously placed at the forefront of the discussion and the team drives toward these outcomes. One critical aspect of results orientation is productivity, which is measured as a combination of effectiveness and efficiency. The individual needs to plan and deploy resources efficiently to realise the agreed results and be effective.

Purpose

The purpose of this competence element is to enable the individual to focus on the agreed outcomes and drive towards making the project a success.

Description

Most of the work in the life of projects deals with the definition and management of tasks and the resolution of smaller or bigger problems. In this definition, choices have to be made repeatedly, about priorities, allocation, to-be-used techniques, etc. Results orientation eases these choices by defining a basic criterion: Will the present work realise the desired results or make the process faster, cheaper and/or better?

Results orientation means focusing the attention of the individual and the team on key objectives to obtain the optimum outcome for all the parties involved. The individual has to ensure that the agreed outcomes satisfy the relevant stakeholders. This also applies to any changes agreed during the life of the project. While focusing his or her attention on the outcomes, the individual still needs to maintain an awareness of and react to any ethical, legal or environmental issues that affect the project. Results orientation also includes focusing the team and relevant stakeholders on delivering the requested outcomes, including identifying problems, using techniques to locate their causes and to find and implement solutions.

To deliver the outcomes required by and agreed with the relevant stakeholders, the individual must find out what the different participants in the project would like to get out of it for themselves. The individual must manage the deployment and development of the team members taking their expectations into account.

Knowledge
- Organisation theories;
- Efficiency principles;
- Effectiveness principles;
- Productivity principles.

Skills and abilities
- Delegation;
- Efficiency, effectiveness and productivity;
- Entrepreneurship;
- Integration of social, technical and environmental aspects;
- Sensitivity to organisational do's and don'ts;
- Management of expectations;
- Identifying and assessing alternative options;
- Combining helicopter view and attention to essential details;
- Total benefit analysis.

Related competence elements
- All other people CEs;
- Perspective 1: Strategy;
- Practice 1: Project design;
- Practice 2: Requirements and objectives;
- Practice 6: Quality;
- Practice 10: Plan and control;
- Practice 11: Risk and opportunity;
- Practice 12: Stakeholders.

Key competence indicators

4.4.10.1. Evaluate all decisions and actions against their impact on project success and the objectives of the organisation

Description
In everything the individual does, he or she is guided by the goal of the project, which is to achieve success. This goal underpins all the individual's decisions and actions. Every choice may have negative or positive repercussions later on, so it needs to be carefully considered. The individual will judge new developments by the following criteria: Will this realise (or threaten) the objective or result, or make the process faster, cheaper and/or better and so more of a success?

Measures

- Considers the objectives and agreed outcomes of the project as leading all actions;
- Formulates own goals based on the objectives and outcomes;
- Derives the strategy of the project from the goals;
- Judges all decisions and actions by their impact on the success of the project.

4.4.10.2. Balance needs and means to optimise outcomes and success

Description

Every choice entails allocating or denying means (resources, money, time, attention) to certain actions (tasks, decisions, questions, problems, etc) based on perceived needs. In order to optimise means allocation the individual must have a clear picture of the priorities of the project. Based on that, the individual must prioritise the various needs and balance the allocation of means based on the priorities. This may mean giving no attention or means at this stage to perceived challenges or problems, as the individual judges other needs to have greater priority.

Measures

- Assesses and prioritises various needs;
- Explains why certain actions get more priority;
- Uses the results orientation as a means to say 'no' (and explain why).

4.4.10.3. Create and maintain a healthy, safe and productive working environment

Description

Ensuring a healthy, safe and productive working environment means providing the team with all of the required means and limiting distractions so that the team can focus on working efficiently. The individual acts as a filter and a buffer between the environment and the team members, absorbing uncertainties and ambiguities that could disturb progress and their results orientation. In addition, the individual facilitates the team with the necessary infrastructure and resources.

Measures

- Shields the team from outside interference;
- Creates healthy, safe and stable working conditions;

- Provides a clear set of work on which team members can operate;
- Provides the necessary resources and infrastructure.

4.4.10.4. Promote and 'sell' the project, its processes and outcomes

Description

The individual often has to act as an ambassador and advocate for the project, explaining the why, how and what (its objectives, approach, processes and agreed outcomes) to all concerned parties. The promotion reinforces the results orientation by making clear the outcomes and the need for the outcomes. This can be done by regular reporting and stakeholder engagement, but at least as often is achieved by formal and informal communication and marketing, varying from coffee-corner talks with team members to formal presentations. This marketing or 'selling' the project is part and parcel of every communication made by the individual. The individual preferably also invites team members, the project owner and others to join in the marketing effort.

Measures

- Defends and promotes the objectives, approach, processes and agreed outcomes;
- Seeks openings and venues to promote the project;
- Invites others to join in with marketing the project.

4.4.10.5. Deliver results and get acceptance

Description

The litmus test of every individual is whether they can deliver, or realise what was promised, to get results. This quality requires a clear resource plan, planned outcomes, a strong belief in personal capacity and that of the team to overcome obstacles and problems, plus the overarching desire to deliver.

The individual knows that being effective is not the same as being efficient. Effectiveness is realising the planned goals (e.g. realising the agreed outcomes within agreed deadlines, budget, quality, etc), while efficiency is doing so with the least necessary cost and time (measured, for instance, by comparing the planned number of people against actuals). Therefore, the individual needs to constantly search for means to realise the agreed results faster, cheaper or better. Finally, the individual needs to be able to rally people to the cause while keeping to the planned level of productivity, knows what the individual can and cannot do (and get away with) in a specific situation and organisation and what is politically appropriate.

Measures

- Differentiates the concepts of efficiency, effectiveness and productivity;
- Plans and sustains planned levels of efficiency, effectiveness and productivity;
- Demonstrates the ability to get things done;
- Focuses on and shows continuous improvement;
- Thinks in solutions, not in problems;
- Overcomes resistance;
- Recognises limitations to getting results and addresses these shortcomings.

4.5. Practice

The competence area 'practice' deals with the core project competences.

It defines thirteen competence elements:

- **Project design**
- **Requirements and objectives**
- **Scope**
- **Time**
- **Organisation and information**
- **Quality**
- **Finance**
- **Resources**
- **Procurement**
- **Plan and control**
- **Risk and opportunities**
- **Stakeholder**
- **Change and transformation**

4.5.1. Project design

Definition

Design describes how the demands, wishes and influences of the organisation(s) are interpreted and weighed by the individual and translated into a high-level design of the project to ensure the highest probability of success. Derived from this outer context, design drafts a 'charcol sketch' - a blueprint or overall architecture of how the project should be set up, laid out and managed. This considers resources, funds, stakeholders' objectives, benefits and organisational change, risks and opportunities, governance, delivery, priorities and urgency. Because all outer factors and success criteria (and/or the perceived relevance of these) often change over time, this design needs to be evaluated periodically and, if necessary, adjusted.

Purpose

The purpose of this competence element is to enable the individual to successfully integrate all contextual and social aspects and derive the most advantageous approach for a project to ensure buy-in and success.

Description

Design addresses the development, implementation and maintenance of an approach that best serves the organisational objectives and takes into account all formal and informal factors that help or hinder the corporate goals and the success or failure of the specific project. Design includes taking into account the intent, governance, structures and processes, relevant standards and regulations, cultural aspects, and personal and group interests in the organisation (or organisations) and the wider society. In selecting the choice for the approach, lessons learned from other projects within the organisation, the industry or from outside and the specifics of this project, also play an important role.

Design addresses a broad range of aspects, including decision-making, reporting and resources, as well as meeting standards and regulations and complying with cultural norms and values (within the organisation and the wider society). Aspects such as perceived benefits, motivation, team and stakeholder communication, etc have also to be taken into account. Defining these objectives, factors and criteria distinctly and clearly is a major requirement from the outset and during the execution of the project. This activity results in a thoroughly situational high-level sketch that will later be translated into specific actions that should lead to success for the project.

The chosen approach also includes the management and control philosophy. The architecture reflects rhythm, balance and commitment and provides guidance to the project tasks and their place in the project.

The selection of the approach and the design activities have to be performed before jumping into planning, organising and executing the project. Furthermore, during the project's lifecycle this chosen approach should be regularly 're-thought' and challenged as circumstances change both from within the project and from the larger context.

Knowledge

- Critical success factors;
- Success criteria;
- Lessons learned;
- Benchmarking;
- Complexity;
- Project, programme and portfolio success;
- Project, programme and portfolio management success;
- Project, programme and portfolio management tools;
- Leadership styles;
- Strategy;
- Triple constraint (iron triangle);
- Performance management;
- Organisation project design rules and methodologies;
- Specific methodologies related to line of business and context;
- Organisational models, e.g. contingency theory;
- Theory of change.

Skills and abilities

- Contextual awareness;
- Systems thinking;
- Result orientation;
- Improvements by/incorporation of lessons learned;
- Structure decomposition;
- Analysis and synthesis.

Related competence elements

- All other practice CEs;
- All perspective CEs;
- People 5: Leadership;
- People 8: Resourcefulness;
- People 9: Negotiation;
- People 10: Results orientation.

Key competence indicators

4.5.1.1. Acknowledge, prioritise and review success criteria

Description

Success criteria are measures that stakeholders use to rate and judge the success of the project. These criteria can be both formal and informal. Formal criteria address the stated objectives of the project. To achieve these goals and objectives within the agreed constraints (e.g. strategic goals, tactical and operational objectives) is one – but just one – part of project success. Informal criteria by which interested parties evaluate the outcome are also important. These factors may include the true reasons why a project is started, supported, thwarted or ended. Success criteria also address the interaction with the larger context – the personal or group interests that are influenced by the project or its result, depending on how a project supports or conflicts with other projects and programmes, activities, goals, resources, etc.

The individual collects, acknowledges, prioritises and completes both formal and informal success criteria for the project. Not only the formal criteria, but also the informal ones, need to be taken seriously by the individual, as they will significantly influence the willingness of interested parties to support and cooperate with the project and so directly influence its success. The success criteria play a crucial role in defining the approach. For instance, if the main criterion is the quality of the end product, quality processes, quality reviews and assurance and quality consideration will play an important role in the chosen approach. This approach would differ substantially from a project with the focus on time (speed of delivery) or budget. Success factors are elements that individuals can incorporate into their project to increase the likelihood of meeting the success criteria and achieving a successful outcome. These factors may come from very different sources and take different shapes. They vary from using (or avoiding) specific tools, methods or techniques, selecting specific resources, organisation setup, stages, reporting and communication means and styles, quality methods, etc. During the course of every project the relative importance of success factors and criteria may change, due to contextual or social aspects and the dynamics of the project itself. Therefore the individual periodically checks and assesses the actuality and relative importance of the success criteria and – when necessary – makes due changes in the approach in order to attain success. These changes may even include advising the organisation to prematurely end the project.

Measures

- Identifies, classifies, evaluates and prioritises influences from each of the five perspective aspects relevant for success;
- Recognises and assesses both formal and informal influencing elements;
- Evaluates and prioritises success criteria from each of the five contextual aspects;
- Acknowledges and assesses both formal and informal success criteria;
- Acknowledges and uses relevant success factors;
- Performs periodic re-assessments of the relevance of success criteria;
- Performs periodic re-assessments of the relevance of success factors.

4.5.1.2. Review, apply and exchange lessons learned from and with other projects

Description

At the start of the project, the individual gathers lessons learned from previous projects (both from his or her own organisation(s) and from the wider community, including research and benchmarks) and applies relevant lessons in the present project. Periodically and at the end of the project, the individual (with the team and relevant stakeholders) evaluates the approach and gathers lessons learned from the current project. They shall be shared within the organisation. The individual knows and uses the different methods and tools for distributing lessons learned in the organisation (e.g. strategic project office, knowledge base, internal social network, etc).

Measures

- Acknowledges and gathers lessons learned from previous projects;
- Applies relevant lessons learned;
- Acknowledges and uses research and benchmarking methods for improving the performance of the project;
- Identifies and shares lessons learned from the project with the organisation.

4.5.1.3. Determine complexity and its consequences for the approach

Description

To properly select an appropriate approach, the individual has to take into account the specific complexity of the project – the complexity of the agreed outcomes and/or of the project processes required. The complexity may have many causes and sources. It may be that the outcomes or necessary internal processes of the

project are innovative, technically complex and/or strongly intertwined. It may be that the project involves many teams, people, suppliers, dependencies, etc. It may be that the context of the project is complex, for instance many stakeholders with varying interests, many interfaces with other processes, projects, programmes, etc. Timelines may be short, budgets limited, outcomes crucial for the organisation, etc. All these internal and external factors have to be taken into account by the individual because they play an important role in defining the optimal approach for the project.

Measures

- Identifies the level of complexity of the project by applying appropriate methods;
- Acknowledges complexity-enhancing aspects;
- Identifies and defines the impact on complexity of specific processes, constraints or outcomes;
- Identifies and assesses the impact on complexity of specific external and internal parameters;
- Assesses and applies complexity-diminishing measures.

4.5.1.4. Select and review the overall project management approach

Description

At the very beginning of the project, the individual chooses an approach that has the highest probability of success, given the constraints of contextual influences and demands, complexity of the project, lessons learned, known success criteria and available success factors. The approach may contain a vision (main principles) and an architecture for the project to reach success. This approach may include a high-level definition (or modification) of scope, quality aspects, organisation, communication, documentation, planning and stakeholder approach, choice of resources, risk tolerance, management and performance criteria,
etc. The individual reviews the approach periodically, because many of the contextual and social influences may change over the lifecycle of the project.

Measures

- Assesses and appraises various possible approaches;
- Selects an approach for the project that has the highest chance of leading to success;
- Explains and defends the chosen approach and its relation to the success of

the project;
- Explains the main effects of the chosen approach on the organisation of the project;
- Explains the main effects of the chosen approach on the parent organisation;
- Periodically re-evaluates the chosen approach based on contextual and internal developments;
- Makes necessary changes to the approach and explains why these were made.

4.5.1.5. Design the project execution architecture

Description

Based on the selected approach, the individual draws a high-level 'charcoal sketch', a blueprint or even architecture for the project. This high-level plan will be detailed later via formalised plans, but the basic design only considers the essential choices (such as make or buy, waterfall or iterative, internal resources or external, what tools and methods to use, etc) and the consequences of each choice for success. These choices made by the individual also include the best way to lead the project. Project management success is an essential part of, and prerequisite for, project success. In some circumstances, this may mean choosing a strong profile as leader, or, given other criteria, act as 'first among equals' towards the team or the stakeholders. Often this choice will vary with circumstances and environments and/or the phase the project has reached. In the course of the project the individual periodically evaluates (aspects of) the design, taking into consideration the development and progress of the project, changing contextual influences and demands, known success criteria and available success factors. This often leads to minor or major changes in the chosen execution architecture.

Measures

- Establishes the project execution architecture with outcomes;
- Defines the business rules and control philosophy;
- Monitors the project against the architecture components;
- Updates the architecture based on changes.

4.5.2. Requirements and objectives

Definition

Every project is undertaken because internal and external stakeholders want to achieve something. This competence element describes the 'why' of the project – which goals are to be achieved, which benefits are to be realised, which objectives are to be reached and which stakeholders' requirements are to be fulfilled. They are derived from needs, expectations, requirements and strategic organisational goals from the stakeholders.

Purpose

The purpose of this competence element is to enable the individual to establish the relationship between what stakeholders want to achieve and what the project is going to accomplish.

Description

The individual will come across many definitions regarding requirements, objectives, benefits, effects, deliverables, value, requirements, output and outcome and how they relate to each other. They all present different views of the bridge between what stakeholders want to achieve and what a project is going to deliver. The individual is aware of this and will clearly define, for the purpose of the project, what is needed in order to answer the 'why-how-what-when-who-where-and for whom...' questions. The individual will embark on a process with all stakeholders to come to a good definition of what the project is going to achieve for them. These then have to be transformed into clearly defined outputs and deliverables of the project, which again are communicated back to stakeholders in order to define and manage expectations. This process is conducted iteratively. Changes to both the stakeholders' views and the project's outputs and outcomes will occur, requiring regular updates. This process is therefore executed initially and will be repeated on a regular basis. Communication, negotiation and analytical skills are crucial. In order to achieve a balance between stakeholders, the use of workshops instead of one-on-one interviews is very common. Stakeholders' needs and requirements need to be elicited and prioritised, clearly defining what the project will have to realise and for what reasons.

Knowledge

- Temporary and permanent organisation;
- Expectations, needs and requirements;
- Project charter;
- Project sponsor (owner);
- Fit for use, fit for purpose;

- Value management;
- Acceptance criteria;
- Benefits mapping;
- Goal analysis;
- Strategy setting.

Skills and abilities

- Corporate strategy;
- Stakeholder relationships;
- Knowledge elicitation;
- Workshop facilitation;
- Interviewing;
- Formulation of objectives (e.g. SMART-method);
- Synthesis and prioritisation.

Related competence elements

- All other practice CEs;
- Perspective 1: Strategy;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- People 3: Personal communication;
- People 5: Leadership;
- People 8: Resourcefulness;
- People 9: Negotiation.

Key competence indicators

4.5.2.1. Define and develop the project goal hierarchy

Description

Every project is started because of the needs and goals of the organisation. From these organisational goals the project goals are derived: high-level statements that provide the rationale and overall context for what the project is trying to achieve. In their turn, from these project goals, the project objectives are derived: lower level statements that describe the specific, tangible products and deliverables that the project will deliver. This goal hierarchy is influenced and determined both by contextual factors and by elements such as specific stakeholder needs and requirements. The project mission statement explains the strategic reasons for starting this project. Secondly the project objectives are defined, which are to realise the project outcomes within the constraints of acceptable risk, agreed

timeframes and budget. A third category of goals is potential positive side effects (consequential benefits). Examples include gaining new knowledge, strengthening relationships and experience with outsourcing.

Measures

- Establishes the relationship between the organisational and project goals;
- Establishes the relationship between the project goals and objectives;
- Defines a goal hierarchy for the project;
- Explains the relevance and content of the goal hierarchy.

4.5.2.2. Identify and analyse the project stakeholder needs and requirements

Description

To be competent in identifying stakeholder needs and requirements requires knowledge of, and communication with, the permanent organisation and stakeholders including customers and end users. Needs and expectations are not the same as stated requirements; often needs are not formulated, for instance because they are obvious, not conscious or hidden. As far as possible, needs should become explicit and be translated into requirements. These requirements have to be analysed, for instance using value management techniques.

Measures

- Knows the difference between need, expectations and requirements;
- Identifies and documents stakeholder needs and requirements;
- Establishes the structures for traceability of deliverables back to requirements;
- Analyses stakeholder needs and requirements.

4.5.2.3. Prioritise and decide on requirements and acceptance criteria

Description

After analysis, the requirements have to be prioritised. Priorities are determined by the project sponsor (owner), top managers or external customers. The methods for documenting the requirements must be defined (e.g. a requirement specification which can be more or less detailed or a product-backlog containing user stories). Requirements should be translated into acceptance criteria against which the deliverables can be tested.

Measures

- Prioritises stakeholder needs and requirements;
- Documents and agrees on stakeholder needs and requirements;
- Supports and oversees the translation of requirements into acceptance criteria.

4.5.3. Scope

Definition

Scope defines the specific focus or content of the project. It describes the outputs, outcomes and benefits and the work required to produce them. It also deals with the counterpart – describing what is not contained in or part of the project. In essence, scope defines the boundaries of the project.

Purpose

The purpose of this competence element is to enable the individual to acquire insight into what the boundaries of the project scope are, to manage this scope and to understand how scope influences (and is influenced by) decisions regarding the management and execution of the project.

Description

Scope covers the process of understanding, defining and managing the specific content of the project. However, what lies outside the project's scope may also need to be defined. Scope defines all boundaries, which are often crucial to understanding and making decisions about what is part of the project and what is not.

In the case of projects, scope covers the definition of the project deliverables, the creation of a scope defining structure (work breakdown structure) and, derived from this, the definition of work packages. Scope also includes the development of scope configuration control to ensure and support the continuous management of the scope. Monitoring and controlling the scope configuration may for some projects reduce the risk of unintended scope creep. Most projects operate in a dynamic environment and consequently scope will not be static. To ensure continuing relevance to the permanent organisation, a sustainable scope is maintained through ongoing monitoring and controlling of the needs, desires and expectations of (key) stakeholders.

Knowledge

- Configuration management;
- Hierarchical and non-hierarchical structures;
- Planning packages;
- Scope definition (with exclusions);
- Scope gathering methodologies, e.g. use case scenarios, history writing;
- Scope creep;
- Constraints;
- Deliverable design and control methods;
- Work breakdown structure (WBS);
- Product breakdown structure (PBS);

- Work packages;
- WBS dictionary.

Skills and abilities

- Scope configuration;
- Prioritisation;
- Defining a WBS;
- Defining a PBS;
- Using a WBS dictionary;
- Agile development.

Related competence elements

- All other practice CEs;
- Perspective 1: Strategy;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- People 5: Leadership;
- People 8: Resourcefulness;
- People 9: Negotiation;
- People 10: Results orientation.

Key competence indicators

4.5.3.1. Define the project deliverables

Description

The project deliverables are the tangible and intangible assets (results, services, outputs) of the project by means of which the expected effects and benefits are to be realised. Moreover, the project deliverables are the measurable results by which the project management success is judged. A deliverable is a tangible or intangible object produced as a result of the project that is intended to be delivered to a customer (either internal or external). The goal hierarchy, mentioned and dealt with in competence element 'requirements and objectives', is extended and completed here. The project deliverables and sub-deliverables are placed in the bottom section of the hierarchy. In the graphical presentation of the hierarchy, lines are drawn between goals and deliverables to indicate links and interrelationships.

Measures

- Defines the project deliverables;
- Knows and explains the difference between goals and deliverables;
- Organises the goals and the associated deliverable(s);
- Knows and uses the goal hierarchy and its purpose.

4.5.3.2. Structure the project scope

Description

Structuring the scope entails a systematic division of the entire project content into sub-tasks and work elements. This project structure or work breakdown structure (WBS) includes an overall division followed by sub-divisions. A graphical presentation of the WBS is typically a tree structure with a number of stepwise-divided sub-levels depending on the desired level of details of task or work elements. Various principles can be used for creating the WBS. One principle is that the overall structure reflects all the sub-products necessary to deliver the project results such as analysis, design, development and testing. Another principle for structuring the scope may reflect the different functional or physical structures of the project results. Irrespective of the approach, structuring the project scope is a valuable way of creating an overview of the project content. Clarifying and structuring the scope may therefore also be relevant with an iterative (e.g. agile) approach, although the level of detail in the WBS is typically not as deep as with a linear or sequential approach.

Measures

- Knows and explains the purpose and benefits of a scope defining structure;
- Knows and applies the principles for creating the WBS;
- Explains the differences between different principles of the WBS;
- Explains the characteristics of project boundaries and can give examples;
- Argues for why and when a full WBS may be inappropriate with an iterative (agile) approach to the project.

4.5.3.3. Define the work packages of the project

Description

All the lowest elements in the WBS represent a work package with well defined boundaries. In essence, clear boundaries are indeed the overall success criterion of an effective WBS. The definition of a work package includes a description of the work to be performed, the work objectives, cost, resource need and duration. If the duration, cost and/or resource need is not yet clear, it is named a planning

package. With an iterative (e.g. agile) approach, a work package in a software development project is typically referred to as a user story. The same guidelines may apply to the definition of a user story as to a work package. Control accounts are groups of work packages typically used for reporting.

Measures

- Defines work and planning packages;
- Explains the purpose and benefits of (well) defined work packages;
- Names and explains ways to define a work package.

4.5.3.4. Establish and maintain scope configuration

Description

Scope configuration management helps to minimise deficiencies, errors and unintended scope creep. Scope configuration management is meant to ensure that the scope is aligned with the agreed stakeholder needs and requirements and that all resources assigned to the project are working with the same version of the product. Projects operate within a dynamic environment whereby changes occur and need to be captured and managed, as opposed to being treated as obstacles and as something hampering project success. A scope configuration mindset is characteristic of an iterative (e.g. agile) approach to the project and is value-driven as opposed to plan- or task-driven. Scope configuration management is often a continuous process.

Measures

- Manages the scope configuration;
- Defines roles and responsibilities related to scope configuration management;
- Relates the dependency of scope configuration and the overall approach to the project (sequential or iterative);
- Compares progress and earned value against a baseline plan.

4.5.4. Time

Definition
Time includes the identification and structuring of all components of a project in time in order to optimise the execution.

Purpose
The purpose of this competence element is to enable the individual to define, sequence, optimise, monitor and control all components necessary to delivering the agreed outcomes of the project.

Description
The aim of time scheduling is to determine what activities need to be carried out when, in order to optimise the execution of the project. For projects, the activities or components include work packages and phases.

In the case of projects, these activities have to be analysed and sequenced in time, their duration estimated and visualised in a schedule and assigned to people or teams, to have them executed in optimal order. Time also covers monitoring variances and deviations. Deviations in execution of the schedule, whether caused by external influences (changes in deliverables, requirements, scarcity of resources or money, etc) or internal ones (e.g. late or off-spec deliveries) may require rescheduling. Periodically, the schedule should be compared with the baseline and, if necessary, adjustments made. With iterative planning, the schedule may be divided into time boxes with a certain length. With each iteration, a certain sequence of activities (e.g. design, execution, test and implementation) may be defined. The overall project planning then focuses on the number of iterations and other activities (e.g. preparation, monitoring, etc). Where there is uncertainty about the timeframe required for a particular phase or activity, a time 'buffer' or 'float' should be introduced into the schedule.

Knowledge
- Planning types;
- Estimation methods;
- Levelling;
- Scheduling methods (e.g. Gantt chart, Kanban charts);
- Resource allocation;
- Network analysis;
- Baselines;
- Critical path planning;
- Crashing the schedule;
- Time boxing;

- Phases;
- Milestones;
- Fast modelling and prototyping;
- Spiral/iterative/agile development process.

Skills and abilities

- Define activities from work packages;
- Define dependencies;
- Sequence components;
- Estimate activity resources and duration.

Related competence elements

- All other practice CEs
- Perspective 2: Governance, structures and processes
- Perspective 3: Compliance, standards and regulations
- People 3: Personal communication
- People 5: Leadership
- People 8: Resourcefulness
- People 9: Negotiation

Key competence indicators

4.5.4.1. Establish the activities required to deliver the project

Description

Based on an analysis of the deliverables and/or requirements, preferably through a work breakdown structure (WBS), the activities necessary to achieve agreed results are defined. With iterative planning, the individual focuses on defining only the activities necessary for the agreed deliverables of the current iteration.

Measures

- Defines activities related to the realisation of project deliverables;
- Extracts activities from a WBS work package.

4.5.4.2. Determine the work effort and duration of activities

Description

For each activity the work effort and duration necessary for realisation has to be determined. This includes determining what resources and resource competences, and how much, are required for each activity. When several resources

(both material and personnel) are available, a balance has to be found between quality, cost and speed of delivery. This balance depends on the project success criteria and requirements.

Measures
- Determines work effort and duration of activities;
- Identifies types of resources that may be required to perform an activity;
- Identifies and decides between various resource options.

4.5.4.3. Decide on schedule and stage approach

Description
Depending on the chosen approach for the project (e.g. waterfall or iterative planning), a decision has to be made on the number, content, length and deliverables of the stages (or phases). The selection of a particular path very much depends on the specifics of the project success criteria and requirements, guidelines in the organisation and other contextual factors, uncertainty, etc. For instance, higher uncertainties may lead to shorter phases.

Measures
- Knows different planning techniques;
- Chooses the appropriate planning techniques;
- Determines appropriate stages;
- Knows the effects of uncertainty on planning; and what to do to minimise the effects.

4.5.4.4. Sequence project activities and create a schedule

Description
Many activities are dependent on availability or on previous realisation of other work packages or activities. Based on these known dependencies and the calculated duration of each activity, an activity flow can be defined. From this, the critical path can be calculated. This critical path may be influenced by the availability of resources. The activity of levelling can optimise the assignment of resources in the planning and may influence the critical path.

Measures
- Sequences a series of project activities;
- Determines dependencies and dependent relationships;

- Calculates the critical path;
- Levels resource assignment for a given plan.

4.5.4.5. Monitor progress against the schedule and make any necessary adjustments

Description

As soon as the planning is done and activities are started, control systems (such as time-writing systems and progress meetings) should be in place. Various methods, such as earned value analysis, can be used to measure realised progress versus baseline. A project plan may be subject to many disturbances, resulting in necessary adjustments. These may come from various sources (changes in deliverables, requirements, scarcity of resources or money or late or off-spec deliveries) and may demand re-planning. Periodically, the schedule should be compared against the baseline and, if necessary, adjustments should be made.

Measures

- Knows when and how to use various schedule control systems;
- Applies planning adjustments in response to various types of disturbances;
- Compares progress and earned value against a baseline plan.

4.5.5. Organisation and information

Definition

Organisation and information includes the definition, implementation and management of the temporary project organisation. Organisation and information also includes the definitions of required roles and responsibilities as well as effective information exchange for the temporary organisation. This competence element also includes the creation and storage of documentation, reporting structures and the project internal communication flows.

Purpose

The purpose of this competence element is to enable the individual to create a high-performing temporary organisation, which also includes the inseparable link between organisational structure and communication processes.

Description

This competence element describes how the project is organised. The organisation and information competence embraces both human resources and associated communication processes.

The organisation also covers the project's roles, responsibilities and mandates on the various levels. Usually, it at least distinguishes between the sponsor level, the project level and the level of components. It describes the formal information flows between these levels, so that each level is able to take the assigned responsibility and base decisions on high quality information. Usually, the sponsor level is accountable for the definition of the objective and scope of the project and the project level is accountable for delivering quality outputs.

For all levels to achieve high quality decisionmaking, all levels should be supported by the right, timely, high quality information. The individual is responsible for information quality, timeliness and flow. Internal information, documentation and communication are closely related to the management of the organisation and encompass identifying information needs, establishing the required processes and information infrastructures and finally monitoring the internal and external information flow.

Knowledge

- Organisational models;
- WBS as a base for project organisation;
- Document management systems;
- Information and documentation systems;
- Information plan;
- Regulatory requirements;

- Information security;
- Ways to organise project governance.

Skills and abilities

- Involve/convince others;
- Staffing of organisation;
- Task delegation;
- Management of interfaces to other parts of the organisation;
- Dealing with project software tools in the office;
- Preparation techniques for official documents;
- Information management planning.

Related competence elements

- All other practice CEs;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- People 3: Personal communication;
- People 5: Leadership;
- People 6: Teamwork;
- People 8: Resourcefulness;
- People 9: Negotiation.

Key competence indicators

4.5.5.1. Assess and determine the needs of stakeholders relating to information and documentation

Description

The individual knows about the close link between information and organisation and that needs for information may also determine the need for specific organisational structures. For example, in organisations practising outsourcing with one or more virtual teams, the need for a high level of information is evident. Care must be taken in deciding who gets what information – overwhelming people with too much information must be avoided. Interested parties in general should receive only the information they need and in a suitable form. The individual must discern the needs for formal and informal information/documentation. Knowing the corporate structures and processes will automatically outline part of the formal information and documentation (specifications, plans, budgets, reports and more). It is the responsibility of the individual to ensure that the information and organisational needs are defined.

Measures

- Assesses and documents the information and documentation needs of the project;
- Establishes various modes of communication, including formal and informal;
- Determines the project characteristics influencing the organisational needs.

4.5.5.2. Define the structure, roles and responsibilities within the project

Description

The individual can structure the temporary organisation in various ways and is aware of the influences from governance and contextual characteristics such as strategy, structures and processes, power and interest, standards and regulations, culture and values. Applied technologies, anticipated solutions, required competences and the geographical location of the participant will also have a high impact on the design of the organisational structure. The individual knows about the advantages and disadvantages of different structures and is also capable of designing, staffing and implementing the temporary organisation. If necessary, an appropriate governance framework and structure will be established for the project, as well as for all subordinate projects (if any). As part of this framework, roles and responsibilities are clearly defined and decision-making authorities and delegation levels are also identified.

Measures

- Explains some fundamental ways to structure a temporary organisation;
- Designs and develops a governance framework and structure;
- Defines the responsibilities of the various key personnel on the project;
- Identifies links to and interfaces with corporate governance arrangements;
- Identifies and records the differences between the organisation's functional authorities and the project's authorities.

4.5.5.3. Establish infrastructure, processes and systems for information flow

Description

The individual knows how to establish communication processes including roles and responsibilities and all rules and guidelines for what internal information to communicate and how. Additionally, appropriate systems and methods are implemented to support the governance arrangements. How to limit and/

or prevent redundant information is a key success criterion for establishing efficient information processes – and information must be consistent and unambiguous. Information infrastructures cover the systems, means and methods required for documenting, storing and communicating the internal information. Information infrastructures and IT are inseparable in a modern organisation and consequently, being aware of the corporate IT systems and policies is important for the individual.

Measures

- Explains the purpose and contents of information processes;
- Communicates internal information via various methods;
- Ensures redundant information is limited and/or prevented;
- Explains the benefits of different types of meetings;
- Explains what is covered by an infrastructure for communication;
- Establishes planning and control mechanisms (e.g. documentation of key decisions).

4.5.5.4. Implement, monitor and maintain the organisation of the project

Description

The individual knows how to manage the project organisation, including implementation, monitoring and maintenance of the temporary organisation. Implementation means to make the initially defined organisational structure operational – to make it work. However, implementation also includes changes to the organisation when necessary. The need for changes to the temporary organisation should be anticipated as the project evolves. Any given structure of an organisation is valid only for a limited period of time. In particular, changes in contextual factors (such as strategy and/or power and interest) tend to influence the temporary organisation and call for changes or minor adjustments. Through the ongoing monitoring of the project's environment, the individual has to proactively envisage the need for changes to the temporary organisation.

Measures

- Implements new organisational structures;
- Monitors the organisation, including the roles involved;
- Adjusts the organisation, including the roles involved.

4.5.6. Quality

Definition

Quality in projects has two key drivers. On the one hand, it is about the quality of the process, the way in which the project is organised. This is about developing, implementing and reviewing standards for the way quality is addressed in component sub-projects and tasks. On the other hand, it is about managing, assuring and controlling the quality of the output and outcome of the project. Quality encompasses the entire project from initiation to posttransition, throughout the whole lifecycle.

Purpose

The purpose of this competence element is to enable the individual to establish and manage the quality of the service/product to be delivered and the delivery process being managed; and to recognise quality as an invaluable tool for the benefits realisation management process.

Description

Quality in projects is on the one hand about ensuring the right quality of intermediate services or products delivered specific to the project. On the other hand, it is about ensuring that quality processes are well implemented throughout the project. Ensuring quality processes are well implemented means setting a standard and measuring its effectiveness. Usually this is based upon the quality standards and methods of the organisation behind the project, as sponsor or as supplier. These should be tailored towards this project and then implemented, measured and adapted.

Knowledge

- Validation and verification;
- Process quality management techniques (e.g. Lean, Six Sigma, Kaizen);
- Product quality management;
- Cost of quality;
- Quality management standards (e.g. TQM, EFQM, Theory of Constraints, Deming Cycle);
- Organisational quality analysis tools;
- Standard operating procedures;
- Policies implementation;
- Design for testing;
- Utilising indicators;
- Inspection methods and techniques;
- Risk-based testing;

- Testing techniques, including, for example, automated testing;
- Continuous integration;
- Software application for handling and managing tests and defects.

Skills and abilities

- Analysing the impact of quality management on projects and people;
- Implementing a standard (process and people);
- Adapting a quality standard;
- Correcting people's and the group's behaviours with a wide variety of interventions;
- Developing and executing quality plans;
- Conducting quality assurance procedures;
- Performing quality audits and interpreting their results;
- Design of test plans.

Related competence elements

- All other practice CEs;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- Perspective 5: Culture and values;
- People 6: Teamwork;
- People 8: Resourcefulness;
- People 10: Results orientation.

Key competence indicators

4.5.6.1. Develop and monitor the implementation of and revise a quality management plan for the project

Description

The purpose of managing the quality is to plan and guarantee the quality requirements and standards applicable to the project and the project deliverables. Planning of the quality includes determining and agreeing with the project sponsor/owner and other key stakeholders on the quality objectives to be achieved. It includes defining indicators and setting quality target values for those indicators in the project at hand. It includes establishing the tools, procedures, techniques and resources necessary to achieve the quality objectives. It also includes developing the quality plan, including type of reviews, responsibilities, participants and a time schedule developed in accordance with the overall project time schedule. It includes the monitoring and assessment of the tasks defined in the plan and closing the quality tasks, like all others in the project.

Measures

- Develops and monitors a quality plan;
- Names different types of quality objectives;
- Implements measures to achieve defined quality objectives;
- Defines and implements quality measures;
- Explains and names different types of tools/techniques for achieving quality objectives;
- Explains and names procedures for achieving quality objectives;
- Explains how to align the quality management activities to the overall project activities and also refers to own experiences (projects).

4.5.6.2. Review the project and its deliverables to ensure that they continue to meet the requirements of the quality management plan

Description

The purpose of performing quality management is to continuously review the project and the project deliverables. It encompasses all processes, tools, procedures, techniques and resources necessary to meet the defined and planned quality objectives. The quality management process ensures that the quality goals to be achieved are communicated, understood, accepted and followed by the members of the temporary project organisation. The process also includes executing the quality plan as the project progresses, revising it and delivering indicators of its fulfilment. Quality audits can be performed by various parties, by people from inside or outside the temporary project organisation, or even by external parties such as customers. Audits serve a relevant and important purpose, as they determine the performance of the quality process, the quality control and their output must be analysed to determine the need for corrective and preventive actions or change requests. Quality audits can also be used as a means of reporting progress.

Measures

- Explains different ways of reviewing the project performance and the project processes;
- Names key elements necessary for an effective and efficient project review;
- Explains how to communicate project quality objectives;
- Names different reasons for performing a project audit;
- Performs a quality audit;
- Analyses a quality audit and is able to define measures or change requests;
- Presents at least one example of a corrective action.

4.5.6.3. Verify the achievement of project quality objectives and recommend any necessary corrective and/or preventive actions

Description

The purpose of performing verification is to determine whether the established project quality requirements, objectives and standards are being met, in each phase of the project development. The process of performing verification is done during the entire project lifecycle, usually at the end of each phase. It includes establishing whether the quality of the project deliverables and processes is being met and detecting defects by using established tools, procedures and techniques. It also includes analysing possible causes of defects, determining the appropriate corrective and preventive actions and formulating recommendable change requests. Finally it includes communicating the recommended corrective and preventive actions and change requests to relevant members of both the temporary and permanent project organisation.

Parties representing the permanent organisation may perform verification activities. It has been proven that it is more cost-efficient to perform verification at early stages of the development of the project, instead of leaving verification to the end of the project.

Measures

- Describes the outcome of a planned and performed verification process referring to own experiences gained on projects;
- Explains the contents and outputs of a root cause analysis carried out on the basis of detected defects;
- Explains the process and goals of peer reviews;
- Performs verification and recommends corrective actions;
- Outlines the contents and steps in communicating preferred and recommended corrective actions and change requests, referring to own experiences gained on projects.

4.5.6.4. Plan and organise the validation of project outcomes

Description

It is often not feasible to assess whether a specific, measurable, achievable and timed goal or objective is met or not, or the degree or percentage to which the goal or objective is met. The anticipated value gained from a project by means of the project deliverables is an example of this, as it is often difficult to measure and verify explicitly. In such cases, validation is a feasible way to determine the

quality level of the value gained from the project outcome. The goal of validation is to create a formal acceptance by the client of the project.

Validation is typically performed by either the permanent organisation or other external parties (e.g. customers) and rarely by the temporary organisation itself. However, it is the responsibility of the individual to plan and organise the validation. Validation can be done in various ways: in a single event or as a process to ensure continuous validation.

Measures

- Explains the difference between verifying and validating;
- Documents different types of quality objectives suitable for quality validation;
- Conducts a validation exercise of project outcomes;
- Obtains a term of acceptance from a client.

4.5.6.5. Ensure quality throughout the project

Description

Based upon the quality procedures both of the organisations and the suppliers, a quality approach for the project is chosen and implemented. It should be fit for purpose and implementable with relative ease. Adaptation, integration and implementation will require dealing with several organisations (or parts of organisations) who all prefer doing it their own way. Once implemented, regular check-ups and improvements need to take place to maintain the fitness for purpose. Since quality is about people, not just about processes, special attention should be paid to quality awareness and 'the right quality for this project'.

Measures

- Assesses, adapts and integrates quality standards being used by organisations;
- Implements quality processes in the project;
- Conducts regular assessments of the implemented processes and improves them when needed
- Implements quality awareness in the project, so that everyone involved knows what quality is required;
- Conducts regular assessments of the quality awareness and takes corrective action when needed.

4.5.7. Finance

Definition

Finance includes all activities required for estimating, planning, gaining, spending and controlling financial resources, both the inflow and outflow to the project. Finance therefore includes the cost management (outflow often related to a budget) as well as the financing (inflow external to the organisation) and/or funding (inflow from within the organisation) required for successful management of the project.

Purpose

The purpose of this competence element is to enable the individual to ensure that enough financial resources are provided to the project at any time, that the financial targets of the project can be met and that the financial status is monitored, reported and properly used for adequate management of financial resources.

Description

Initially the individual has to make an estimate of the costs that are necessary to execute the project – i.e. define the budget. The individual also has to take actions related to the way the project is financed or funded. The individual therefore has to know what the planned (or expected) and actual costs of the project are and how they relate to the progress of the work done and the objectives achieved.

In addition, cost management systems have to be established within the organisation of the project. These are used to monitor the financial status and provide a forecast on financial and performance issues so the individual can make appropriate decisions.

The individual needs to know what funding is contracted and what funding is expected. In this way, the individual can use the key performance indicators to make forecasts of the future performance of the project and, if cost breaches are signalled, should report on these according to the project's organisation and governance and suggest appropriate mitigation plans. The term 'funding' is used when an organisation finances the project internally. The term 'financing' is used when the organisation acquires funds for the project from external sources (e.g. loans, joint ventures, etc).

For every project, the proper management of cash flow in terms of expenditure and income is crucial. The cash inflows and outflows must be calculated and evaluated regularly so the appropriate actions can be taken to ensure sufficient financial resources. The setup of the financial management system has to be made in cooperation with the financial and/or treasury department and other relevant parts of the permanent organisation.

Knowledge

- Financial accounting basics (cash flow, chart of accounts, cost structures);
- Cost estimating methods (e.g. single or multi-expert estimations (Delphi method), historical data, analogies, effort models, parametric estimations (function point method), three point estimation);
- Cost calculation techniques (e.g. direct, indirect calculation, activity-based costing, etc);
- Design-to-cost/target costing;
- Processes and governance for cost management;
- Methods for monitoring and controlling expenditures;
- Performance indicators (earned value);
- Reporting standards;
- Forecasting methods (linear, parametric, velocity analysis);
- Financing options;
- Funding sources;
- Financial management concepts and terms, such as (but not limited to) cash flow, debt-asset ratio, return on investment, rates of return;
- Contingency approaches;
- Relevant conventions, agreements, legislation and regulations, including (but not limited to) taxation, currency exchange, bilateral or regional trade agreements, international commercial terms, World Trade Organisation determinations.

Skills and abilities

- Convincing/negotiating with sponsors;
- Scenario techniques;
- Interpreting and communicating the actual cost situation;
- Developing financial forecasts and models;
- Writing skills;
- Presentation skills;
- Reading financial statements;
- Interpreting financial data and identifying trends;
- Financial management approach analysis;
- Developing a project budget;
- Setting frameworks for resource project cost estimation;
- Directing and authorising cost strategies and cost management plans;
- Developing and maintaining cost management systems;
- Conducting analysis, evaluating options and implementing responses to project cost variations.

Related competence elements

- All other practice CEs;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- People 5: Leadership;
- People 8: Resourcefulness;
- People 9: Negotiation;
- People 10: Results orientation.

Key competence indicators

4.5.7.1. Estimate project costs

Description

The individual estimates or, if possible, calculates the costs needed to execute the project. Direct costs, such as labour hours, materials, investments, ongoing operating costs, travel expenses, training costs and indirect costs, such as overhead fees or licences or even opportunity costs — all have to be identified and estimated. Cost estimation includes the utilisation of a cost breakdown structure (possibly derived from a WBS) or other appropriate methods, in order to categorise the estimated costs. Cost estimation is mostly done 'top-down', based on the experience of subject matter experts, historical data, group estimation, 'bottom-up' or other domain-specific techniques. Cost targets for the whole project or single cost categories might be defined 'top-down' or 'bottom-up'. When doing the calculation the individual also needs to be aware of any normative cost standards which could help in doing the more accurate calculation (e.g. engineering industry cost calculation standards). Furthermore, dependent on the specifics of the industry and the nature of the goods or services sold on the market, the individual needs to be able to apply the appropriate cost calculation technique.

Measures

- Sets up cost structures and identifies cost categories;
- Selects appropriate cost calculation technique (e.g. direct calculation);
- Sets the cost targets by consulting any relevant standards or internal guidelines.

4.5.7.2. Establish the project budget

Description

Establishing budgets is closely related to estimating costs. Based on the cost estimation, the individual defines the budgets on appropriate levels of the cost breakdown structure (CBS). A close link to the WBS will ensure that it is possible to identify when costs will be expended and on what. The individual gets an overview of the time-related expenditure of funds. By taking not only the outflows but also the inflows of cash into account, a cash flow can be forecast even at an early stage of the project. The costs should be connected with time, in order to check whether the costs can be secured by the funding function of the organisation and, if not, to ensure that the appropriate adjustments are made. The project budget should include contingencies that are held in reserve to fund uncertainties, risks, claims or cost overruns.

Measures

- Establishes budget plans;
- Develops budget scenarios based on cost-relevant items;
- Plans budget for contingencies;
- Assesses the budget against the time and funding and makes possible adjustments;
- Sets the final budget.

4.5.7.3. Secure project funding

Description

The individual ensures the availability of financial resources at the right time to make sure costs are covered. The individual must follow the organisational approval processes (if in place) to get the financial needs granted. Discussions around the funding may be influenced by political circumstances. In this case, the individual may need to promote the project to potential internal and external sponsors. Even though the financing part should fall under the accountability of the project sponsor, usually the project manager needs to determine the finance structure.

Measures

- Establishes funding strategies for projects;
- Identifies sources of funds;
- Handles the organisational approval processes;
- Cooperates, keeps close contact to and can negotiate with potential sponsors in order to get funds.

4.5.7.4. Develop, establish and maintain a financial management and reporting system for the project

Description

A financial management and reporting system must be established so that an overview of the financial situation and status of the project is available at any time. The financial management system links the project cost structure, the organisational cost structure and the time schedule. It includes not only processes but also roles and responsibilities (e.g. payment authorisations). Financial reports are the visual output of the management system. The individual establishes performance management indicators to monitor the relationships between cost and progress (e.g. cost to complete and earned value). Bases for these indicators include the mapping of cost structures and project structures. In most organisations the project financial management is closely linked to organisational accounting and controlling processes. If in place, mandatory methods and instruments may have to be used, but adapted to the specific needs of the project. If not in place, a project-specific financial management system must be defined and applied.

Measures

- Defines processes and governance for financial management;
- Defines financial performance indicators on the project;
- Relates the project cost structure to the organisational cost structure (e.g. aggregating work packages);
- Develops appropriate reports in accordance with the project's organisation and governance.

4.5.7.5. Monitor project financials in order to identify and correct deviations from the project plan

Description

The goal of financial controlling is to identify deviations from the plan to enable timely reactions. The individual monitors planned and actual costs, liabilities and expected costs of the project as well as the cash flow. After analysing the deviation and its possible causes, necessary actions are taken. Planned costs are derived from the latest project plan (latest approved budget updated with changes). The actual costs come from the actuals monitored by the project team. However, the real figures are often provided by the organisational accounting. They encompass expenses for all planned cost items, such as labour hours, travel costs or bills, and any other liabilities covered by the procurement agreement and not stated in the cost calculation (e.g. material transport, consultancies, etc). The liabilities are often

included in cost controlling. Liabilities are expenses bound by purchase orders but not yet paid. Comparing actual costs to planned costs is especially informative when the costs are related to the project progress. The individual uses the financial performance indicators to monitor the relationships between planned cost, actual cost, actual work done and progress trends (e.g. earned value indicators, SPI, CPI, etc). Thus the individual analyses the current project performance by controlling the financial resources and manages any underspending or overspending. Finally, the individual uses the performance indicators to make forecasts of the future project performance. If cost breaches have been forecast, the individual needs to report in accordance with the project's organisation and governance and suggest an appropriate mitigation plan.

Measures

- Establishes and evaluates cost reports;
- Analyses and interprets financial situations;
- Uses financial performance indicators to monitor and control the project;
- Produces project performance forecasts based upon the financial indicators;
- Signals cost breaches and suggests mitigation plans in accordance with the project's organisation and governance for any cost breaches that cannot be handled by the project budget contingencies.

4.5.8. Resources

Definition

The resources competence element includes defining, acquiring, controlling and developing the resources that are necessary to realising the project's outcome. Resources include people, expertise, facilities, equipment, materials, infrastructure, tools and other assets required to carry out the activities according to the objectives. This competence element includes defining a strategy for acquiring and utilising the resources for the best performance of the project, optimising the utilisation of the resources given the time and financial constraints and the continuous monitoring and control of these.

Purpose

The purpose of this competence element is to enable the individual to ensure that the resources required are available and assigned as needed in order to meet the objectives.

Description

To realise its objectives, a project needs resources. Managing resources means applying a proper approach to defining and obtaining these resources. Resource allocation must be prepared during the planning phase and should be continuously monitored and adjusted throughout the whole lifecycle of the project. The individual should make sure that the personnel have the necessary competences and that they are provided with adequate information, tools and training to perform the required tasks successfully. Since resource needs and availability change regularly, for both controllable and uncontrollable reasons, resourcing is a continuous or regular process.

In the case of projects, individuals often have to negotiate with the permanent organisation or external service providers in order to obtain the desired resources. With some kinds of resources, conflicts in availability may occur, due to unexpected events such as funds shortage, performance troubles, equipment failure, weather, labour unrest, etc. Such conditions may require re-scheduling of activities and a change in the resources involved in the current or subsequent activities, especially if critical activities are affected by such events. Procedures should therefore be put in place to identify such unexpected events and ensure that the necessary adjustments are made as soon as possible.

Knowledge

- Resource allocation methods;
- Resource assessment;
- Resource utilisation calculations and collection techniques;

- Competence management;
- Procurement processes, supply and demand concepts;
- Training.

Skills and abilities

- Resource planning, allocation and management;
- Identifying and classifying different ways of working;
- Developing resources skills matrix – identifying skills and documenting individual skills gaps;
- Prioritising and allocating resources, given multiple competing priorities.

Related competence elements

- All other practice CEs;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- Perspective 5: Culture and values;
- People 5: Leadership;
- People 6: Teamwork;
- People 8: Resourcefulness;
- People 9: Negotiation.

Key competence indicators

4.5.8.1. Develop strategic resource plan to deliver the project

Description

The strategic resource plan stipulates who is responsible for which part of the resource definition, resource allocation, resource development, resource distribution and resource freeing. Responsibilities may lie with the programme manager if the project is part of a programme, with the constituent organisations, with resource managers or with the underlying projects. The strategic resource plan needs to be in line with the schedule. The individual develops, organises and assesses a plan and adapts it to changes whenever needed.

Measures

- Identifies project resource requirements based on resource forecasts;
- Captures baseline of existing and proposed resources;
- Reviews and analyses the resource capacity of the organisation and identifies trends;
- Coordinates with constituent organisation or portfolio management processes.

4.5.8.2. Define the quality and quantity of resources required

Description

The individual must identify the resources (type, quantity and quality) that are needed to successfully deliver the project results, based on the strategic resource plan. Resources include people, expertise, facilities, equipment, materials, infrastructure, tools, non-financial funds or services. After identifying these resource needs, a more detailed analysis is conducted that defines when the resources need to be available and of what quality and in what amount they are needed. This may result in a detailed operational resource plan(s).

Measures

- Describes the resources needed for the project;
- Draws up a resource plan (based on detailed project planning);
- Defines the amount and quality of the required resources.

4.5.8.3. Identify the potential sources of resources and negotiate their acquisition

Description

Once the needed resources have been defined, the right resource providers must be identified. Resources can be sourced with the organisations, or with commercial parties. Many organisations provide sourcing guidelines that have to be followed. Especially when 'make or buy' decisions have to be taken, the individual must rely on formal and informal networks. A good knowledge of the organisation, as well as a broad overview of the markets for resources, is necessary, in order to create and decide on sourcing alternatives. Obtaining external resources is very different from allocating internal resources. While acquiring internal resources is merely a question of availability and quality, the costs for external resources also have to be negotiated.

Measures

- Takes 'make or buy' decisions;
- Creates and evaluates sourcing alternatives;
- Defines a sourcing strategy;
- Engages with resource providers;
- Negotiates resource availability.

4.5.8.4. Allocate and distribute resources according to defined need

Description

Resource allocation means assigning resources to specific projects or activities. This enables monitoring, controlling and management of the resources, their results and the related costs. Allocating resources is in general closely linked to scheduling. Changes in the schedule and changes in the resource availability or quality often affect each other. Some specialities have to be taken into account when human resources are allocated, as productivity or learning speed may differ between individuals. The resources that are contracted need to be distributed within the project according to needs and according to the strategic resource plan. The conditions under which resources are contracted need to be adhered to. When there are conflicting resource needs, the individual needs to consider all options and come up with the best way to handle these needs, based on priorities, urgency, or other criteria. Measures to overcome resource shortage have to be developed and implemented. The individual has to be able to organise the resource distribution and adapt it as necessary. This is the case not only for the resources the individual is directly responsible for, but also for resources critical to the delivery of benefits that are under the jurisdiction of other parties (stipulated by the strategic resource plan).

Measures

- Links resources with project structure;
- Creates schedules (or task lists) for resources;
- Negotiates resource conflicts.

4.5.8.5. Evaluate resource usage and take any necessary corrective actions

Description

All the relevant resources parameters and indicators must be monitored to ensure the proper usage of resources. Evaluating resources entails applying a systematic approach in order to derive productivity numbers. When required, the individual should take corrective action. In the case of over- or under-estimation new assignments must be checked.

The individual should also regularly evaluate the quality and availability of assigned resources. In the case of external resources, consultations with suppliers and other contractors may be necessary in order to improve or exchange the resource. The performance of people may have to be improved. These people

would then need development, coaching and specific training measures. This should be negotiated and coordinated with the resource suppliers. The individual is responsible for allocating and re-allocating critical resources, even beyond the resources for which the individual is directly responsible.

Measures

- Defines a systematic approach to evaluating the use of resources;
- Provides opportunities to enhance competences/skills;
- Addresses a skill shortage with the relevant team member and his or her line management.

4.5.9. Procurement

Definition

Procurement is a process of buying or obtaining goods and/or services from external parties. It includes all processes, from purchase planning to making the purchase and contract administration. Because procurement focuses on the suppliers outside the parent organisation, it procures resources (people, tools, material and sub-deliverables) that are not available from within the organisation. This competence element also includes choosing or taking the optimal procurement routes, which should fit the long-term objective of the client but also the organisation (e.g. partnership, joint ventures, etc). These routes can mean sharing funding, expertise, etc, but also entail the risks of failing on the market.

Purpose

The purpose of this competence element is to enable the individual to obtain the best value possible from the chosen suppliers or partners and thus deliver the best value for the buyer and the organisation.

Description

The process of procurement enables organisations to acquire the necessary resources that these organisations do not possess or produce themselves (at least, in the amounts needed). Organisations' procurement policies are often imposed top-down. When procurement aspects involve a substantial portion of a project, or when there are multiple procurement items, the procurement approach should be documented in a procurement plan covering at least:

- Types of contracts to be used;
- Roles and responsibilities;
- Supplier selection procedures;
- Subcontracting rules.

The management of procurement is either performed by individuals assigned to the project, delegated to specialists or departments (e.g. legal department, finance department), directed by the programme level responsible for organisation-wide procurement and strategic partnerships, or even influenced by the portfolio level. Strategic considerations such as sustainability, lifecycle costs and reduced overheads from the development of positive relationships with suppliers, partners or buyers, and the risks connected with them, must also be taken into account. For each item to be acquired, the basic process includes defining needs, identifying potential suppliers or partners, obtaining technical and financial proposals, selecting a preferred supplier or partner and negotiating an agreement with the preferred supplier, making the purchase and contract administration. The

inventory, disposals and other relevant functions are often considered as indirect procurement. The amount of effort devoted to each step should correspond to the size and complexity of the item being procured.

An exchange of goods or services between units of the same legal entity may sometimes be treated as procurement. In such cases, the procurement should be treated as if it were between independent parties and subject to the same degree of control.

Knowledge

- Sourcing strategies;
- Make/buy analysis;
- Supplier development methodologies;
- Organisational procurement policies, procedures and practices;
- Procurement methods (e.g. RFI, RFP, RFQ);
- Contract types (e.g. firm fixed price, time and materials, cost plus);
- Claim management processes, methods and tools;
- Tender procedures and practices;
- Contractual judicial knowledge;
- Contractual terms and conditions;
- Supply chain management.

Skills and abilities

- Tactical know-how;
- Presentation skills;
- Contract administration.

Related competence elements

- All other practice CEs;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- Perspective 5: Culture and values;
- People 4: Relationship and engagement;
- People 5: Leadership;
- People 8: Resourcefulness;
- People 9: Negotiation.

Key competence indicators

4.5.9.1. Agree on procurement needs, options and processes

Description

Needs and options identification is the process of determining which resources or services are to be procured or for which aspects of the project that partners will be acquired. This may result from shortage or lack of internal availability or a conscious choice to acquire resources externally (make or buy strategy).

The procurement options, routes, acquisition requirements, tender documents and selection criteria must be agreed on. The individual manages this process, often in close cooperation with or delegated to specialised departments or the management, ensuring that relevant information is made available and that the relevant internal and external stakeholders are informed.

Measures

- Defines reasons (based on needs) for procurement or partnership;
- Prepares, produces or collects the necessary information as input to the procurement subject matter experts;
- Defines tender documents and selection criteria based on needs;
- Supports procurement preparation processes and procedures.

4.5.9.2. Contribute to the evaluation and selection of suppliers and partners

Description

The individual ensures that the possible partner organisation and/or other experts, suppliers or partners are identified, evaluated and selected. In this selection process, the defined tender documents and selection criteria are applied (or, if no supplier is able to deliver in accordance with the terms of reference, reformulated). These tender and selection criteria and the procurement process may be subject to formal regulations (e.g. in Roman-Germanic law countries). The selection process itself often includes various steps, such as requests for information (RFI) and requests for proposal (RFP) or requests for quotation (RFQ). If the procurement leads to any partnership models and the bidding process is not being used, the individual shall follow a careful process to safeguard the quality of the selection of partners.

Measures

- Launches request for quotation (tender), if necessary in cooperation with the procurement function;
- Outlines and defines the various steps in a supplier selection process;
- Defines and explains the contents of tender documents;
- Defines and uses the selection criteria;
- Aligns with formal procurement regulations (international, national and branch-specific);
- Assesses the specifics of the procurement and suggests partnership models (e.g. joint ventures, long-term partnerships, etc).

4.5.9.3. Contribute to the negotiation and agreement of contractual terms and conditions that meet project objectives

Description

Once the supplier or partner is selected, a negotiation process may follow, in order to reach agreement about the contractual terms and conditions. The individual oversees this process and makes sure that the negotiators have a clear mandate, in close cooperation with purchasing and/or legal specialists.

The contracts may vary in form, level of detail, contract duration, terms and conditions, penalties, applicable law and many other aspects. The individual takes care that these aspects closely relate to and serve the objectives of the project and the organisation.

When the contract negotiations are complex and long-lasting, sometimes a precontractual arrangement is agreed on to make preliminary work or deliveries possible.

Measures

- Defines a negotiation mandate and sets objectives to be negotiated;
- Distinguishes different contractual forms and their implications for the project;
- Knows contractual terms and conditions and reflects their implications for the project;
- Negotiates a contract by establishing price, availability and customisation possibilities and procurement schedules.

4.5.9.4. Supervise the execution of contracts, address issues and seek redress where necessary

Description

Contract performance means the continuous supervision of the supplier or partner once the contract has been established, to ensure the correct and timely execution of the contract. In case of deviations from the contract, the individual has to take action or escalate, whenever necessary, within his or her own organisation. If one or more of the contract terms (such as delivery time, quality, etc) are not met, the individual must take action to address this issue and if possible solve it. This may include various techniques, from soft notices to serious renegotiations, and the individual needs to know when to use each of these. After the techniques are applied, if the contract partner remains in default, the individual should take or invite a decision as to whether a penalty should be claimed or whether to seek redress from the contract partner by other means. This situation may include legal action or involve legal specialists, always consulting the management in order to align with the strategic procurement long-term policies.

Measures

- Implements measures to manage contract performance;
- Identifies deviations from the contract;
- Handles contractual breaches by taking corrective measures (e.g. talks, renegotiations, etc);
- Involves – in the case of difficulties in renegotiations – legal, logistic and/or procurement functions of the organisation;
- Handles contractual disputes and claims issued by the supplier;
- Concludes and ends the agreed business relationship when either the project is in risk or all of the obligations in the contract have been met.

4.5.10. Plan and control

Definition

Based on the design, all elements come together in a balanced plan, the execution of which is controlled. The plan should be regularly updated, based on changes happening within the project or in its context. Control is also regularly adapted and improved, so that the individual remains in control.

Purpose

The purpose of this competence element is to enable the individual to establish and maintain a balanced and integrated view over the management of a project. Maintaining the balance, consistency and performance is crucial in order to achieve the agreed outcomes.

Description

The plan and control competence is where all information comes together and decisions are prepared or taken. Many processes and activities are described and managed in detail in the other competence elements. In this competence element, they are viewed and managed in combination, as stipulated in the architecture document developed in design. The basic, cyclical process is: plan, execute, monitor, adjust plan or adjust execution.

The focus from a project management point of view is on planning and monitoring. Information has to be acquired and combined, the organisation and its teams have to be selected and choices have to be made. The individual must determine how to plan and scale the project management effort and the way to manage the project. This includes choosing the right management style, how much and what to delegate, etc. All this is laid down in one or more decision documents (e.g. vision, roadmap, plan, etc) that need discussion and agreement.

Once the project is established, monitoring processes should be in place. These processes gather information regularly on progress, finances and utilisation of resources compared with baselines, adherence to quality and other standards, stakeholder satisfaction, etc. Regular reporting – both by lower levels to the project manager and by the project manager to stakeholders – is an essential part of the competences.

To continuously support the learning process, the management performance effort should also be evaluated on a regular basis. Based on this information, changes may be required. A predefined and transparent change management process is another essential element of project control.

At the orderly conclusion of a phase during the project lifecycle, an evaluation should take place and a report should be prepared stating the project outcomes, success and lessons learned.

Knowledge

- Phase/stage transitions;
- Reporting;
- Project office;
- Deming cycle (plan-do-check-act);
- Request for change;
- Management by objectives;
- Management by exception;
- Lessons learned report;
- Phase/stage/sprint/release planning;
- Decision to fund and make or buy;
- Exception reports;
- Issue reports;
- Project management plan;
- Project (phase) evaluation;
- Discharge;
- Decisionmaking authority.

Skills and abilities

- Progress control meetings;
- Change management;
- Reporting;
- Negotiation of change requests;
- Start-up workshop;
- Kick-off meeting;
- Close-out meeting;
- Issue management;
- Earned value analysis;
- Slip charts.

Related competence elements

- All other practice CEs;
- Perspective 1: Strategy;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- People 5: Leadership;
- People 7: Conflict and crisis;
- People 8: Resourcefulness;
- People 9: Negotiation.

Key competence indicators

4.5.10.1. Start the project and develop and get agreement on the project management plan

Description

The first phase of every project is essential, as it provides the basis for a successful project. This preparation phase is frequently characterised by uncertainty, with information that is sketchy or not yet available. Stakeholder requirements may be only roughly defined, their expectations unrealistic and timeframe undeliverable, while early optimism and enthusiasm needs to be tempered with reality. A proactive project management style, a well prepared and effectively managed start-up workshop and the recruitment of the right project team personnel can improve the chances of a successful project. One or more start-up workshops should focus on developing the project charter and preparing the project management plan, setting out the team roles and critical path for the project.

The individual prepares and plans a project. Starting from the predefined high-level design, the individual gathers, analyses, values and prioritises enough information from the stakeholders and experts to fine-tune this approach and make an overall project management plan. This plan will be based on information and choices about requirements and quality, agreed deliverables and constraints, organisation and communication structures, necessary resources and budget, planning and main risks, etc. Finally the plan needs to be validated and agreed upon (and the necessary resources and budget made available) to initiate the start-up and the execution phase(s) of the project.

Measures

- Organises the project start-up process;
- Gathers all necessary information from the stakeholders and experts;
- Analyses, values and prioritises information;
- Organises and facilitates a project start-up workshop;
- Prepares the project charter or project management plan and gets agreement on it;
- Prepares and communicates the plan for the project management effort;

4.5.10.2. Initiate and manage the transition to a new project phase

Description

Following the decision to fund and continue with the project, the start-up of the next phase and all subsequent phases are all carried out with the following in mind:

- The specific objectives for this next phase of the project;
- Any necessary organisational changes;
- The need to reconfirm or modify the project charter and project management plans.

The detailed time schedule, cost and resource plans, risk register and possibly the expected benefits (business case) all need to be updated. Depending on the size or complexity of the project, a kick-off meeting is an effective means to inform and engage the project team(s) about the plans, demands and goals of the project or project phase. This meeting or workshop may also be used to define the work breakdown, planning, assignments or project values in more detail.

Measures

- Organises the management of the project execution process;
- Defines the goals and deliverables of the following phase(s);
- Manages the phase transition;
- Organises and facilitates a kick-off meeting.

4.5.10.3. Control project performance against the project plan and take any necessary remedial actions

Description

Control is based on project objectives, plans and contracts. This management process measures actual project progress and performance, compares it against the baseline, and takes any necessaryremedial action. Controlling is normally done through checks against pre-set objectives by measuring results and correcting deviations (diagnostic control). When there are major uncertainties, these can be reduced by using feedback and suggestions from operational members to adjust the process (interactive control). Control and reporting is carried out for the current period and includes a forecast for an appropriate number of future time periods. An integrated project controlling and reporting system covers all project objectives and the corresponding success criteria for the relevant project phases and requirements of all stakeholders.

Measures
- Defines a performance control cycle;
- Describes means and methods applicable for performance control;
- Measures progress and performance.

4.5.10.4. Report on project progress

Description
Reporting provides information and communication about the status of work on the project (cost, time, resources, risks and opportunities, exceptions, etc) in the current and previous phases, and forecasts developments for the current phase and up until the end of the project. Reporting includes both periodic verbal and written status updates and forecasts by team members or team leads to the project manager and by the project manager to stakeholders, such as the principal and project boards. Reporting also includes financial audits and reviews of the project. Where the individual and/or team are very experienced, it may be sufficient and acceptable for stakeholders to 'report only by exception'. This means only issuing a report when there is something significant that needs to be reported, rather than being monitored via regular status or update reports.

Measures
- Prepares a reporting structure (what, when, how often, how, etc);
- Prepares a progress report;
- Prepares a forecast report;
- Prepares phase transition reports.

4.5.10.5. Assess, get agreement on and implement project changes

Description
Changes are often necessary in a project due to unanticipated occurrences. It may be necessary to change the project specification or the contract terms with suppliers or customers. Changes must be monitored against the original project goals and objectives as set out in the business case and/or project charter. At the start of a project, the change management process to be adopted should be agreed with all relevant stakeholders. A formal, proactive change management process that anticipates the need for change is preferable to a process that only reacts after the need for change is obvious.

A change to the scope of a project or to the specification of a deliverable is made by a formal, predefined process. The change process embraces everything that results from the change required or new opportunity identified. It includes agreement on the change decision process, agreement on the need for change and the decision to accept the change and its implementation. This applies for all kinds of changes. Change management identifies, describes, classifies, assesses, approves or rejects, realises and verifies changes against legal and other agreements. Changes can be requested by any party and have to be managed as both proposed and approved changes, as well as properly communicated to all relevant stakeholders. For the management of a change, its direct and indirect effects on the whole project and its context are taken into account. The impact of the changes on the project deliverables, configuration, time schedule, cost, finance plan and risks are determined by comparison with the project baseline. Once the changes have been accepted, the project plan is adjusted accordingly.

Measures

- Organises a process for managing changes;
- Makes an exception or change report;
- Changes the scope configuration.

4.5.10.6. Close and evaluate a phase or the project

Description

The close-out process takes place after the completion of the project or of a phase of the project, after the results of the project or phase have been delivered. Each phase of a project or sub-project should be formally closed with an evaluation and documentation of the phase carried out, checking that objectives have been achieved and customer expectations met. In the close-out of a phase, the proposals for the next phase(s) of the project should be reviewed and any issues requiring a decision submitted to the appropriate body for authorisation.

Where a formal contract has been signed, considerations include transfer of responsibilities from the contractor to the project owner, the commencement of the warranty period and the final payments that need to be invoiced. Handover (also known as 'as built') documentation needs to be produced and training provided to those who will use the project results. These are essential to ensure that the benefits of the investment made in the project are realised.

Project results and experience gained are evaluated and lessons learned are documented so that they can be used to improve future projects. The members of the project team will be required for new assignments and should be formally released from their roles and responsibilities.

Measures

- Organises the project close-out process;
- Organises and facilitates a close-out workshop;
- Facilitates a complete project evaluation;
- Prepares a project 'lessons learned' report.

4.5.11. Risk and opportunity

Definition

Risk and opportunity includes the identification, assessment, response planning and implementation and control of risks and opportunities around projects. Risk and opportunity management helps decision-makers to make informed choices, prioritise actions and distinguish among alternative courses of action. Risk and opportunity management is an ongoing process taking place throughout the lifecycle of the project.

Purpose

The purpose of this competence element is to enable the individual to understand and effectively handle risks and opportunities, including responses and overall strategies.

Description

Risk (negative effects) and opportunity (positive effects) are always viewed in their relation to and consequences for realising the objectives of the project. It is advisable as a first step to consider which overall strategies would best serve the handling of risks and opportunities relative to the corporate strategies and the project in question. After that, the risk and opportunity management process is characterised by first identifying and assessing risks and opportunities, followed by the development and implementation of a response plan covering the intended and planned actions for dealing with identified risks and opportunities. The response plan should be developed and implemented in line with the chosen overall risk and opportunity strategies. The individual is responsible for involving team members and keeping the team committed to the risk and opportunity management process; for making the team alert to risks and opportunities; for involving other stakeholders in the process and for involving the appropriate subject matter experts whenever necessary.

Knowledge

- Strategies for managing risk and opportunity;
- Contingency plans, fallback plans;
- Cost and duration contingency reserves;
- Expected monetary value;
- Qualitative risk assessment tools and techniques;
- Quantitative risk assessment tools and techniques;
- Risk and opportunity response strategies and plans;
- Risk identification techniques and tools;
- Scenario planning;

- Sensitivity analysis;
- Strengths, weaknesses, opportunities, threats analysis (SWOT);
- Risk exposure, appetite, aversion and tolerance;
- Project risks and business risks and opportunities;
- Residual risk;
- Risk and opportunity probability, impact and proximity;
- Risk and opportunity owner;
- Risk and opportunity register;
- Sources of risk and opportunity.

Skills and abilities

- Risk and opportunity identification techniques;
- Risk and opportunity assessment techniques;
- Developing risk and opportunity response plans;
- Implementing, monitoring and controlling risk and opportunity response plans;
- Implementing, monitoring and controlling overall strategies for risk and opportunity management;
- Monte Carlo analysis;
- Decision trees (e.g. Ishikawa analysis).

Related competence elements

- All other practice CEs;
- Perspective 1: Strategy;
- Perspective 2: Governance, structures and processes;
- Perspective 3: Compliance, standards and regulations;
- Perspective 4: Power and interest;
- People 5: Leadership;
- People 7: Conflict and crisis;
- People 8: Resourcefulness.

Key competence indicators

4.5.11.1. Develop and implement a risk management framework

Description

The individual designs, develops and implements a risk management framework in order to ensure that risks and opportunities are managed consistently and systematically throughout the project lifecycle. The risk management framework should include the definition of the methods to be used to identify, categorise, evaluate, assess and treat risks and should link to the organisation's risk

management policy and international, national or industry standards. When projects are part of a programme or portfolio, the risk management framework also describes who is responsible for handling which risks and opportunities and what kind of escalation paths there are (upwards, downwards, sideways).

Measures

- Identifies a range of potential risk management models;
- Develops a risk management framework consistent with organisational policy and international standards;
- Ensures the consistent application of the risk management framework.

4.5.11.2. Identify risks and opportunities

Description

The individual is responsible for the ongoing task of identifying all sources of risks and opportunities and involving others in this process. There are various sources of risks and opportunities, both internal to the project and external. The individual can make use of various techniques and sources to identify risks and opportunities (e.g. from lessons learned, literature, risk and opportunity breakdown structures and interactive sessions with team members, stakeholders and subject matter experts). The identification process is not only about identifying risks, but also about opportunities that could, for instance, make the deliverables cheaper, or make the project run faster, less prone to risks or simply better from a quality perspective. Because the influences coming from the environment of the project do change over time, risk and opportunity identification should be a continuous and ongoing process.

Measures

- Names and explains various sources of risk and opportunity and the differences between them;
- Identifies risks and opportunities;
- Documents risks and opportunities in a register.

4.5.11.3. Assess the probability and impact of risks and opportunities

Description

The individual is responsible for the ongoing task of assessing identified risks and opportunities. Risk and opportunity assessment can be done qualitatively and quantitatively. The best approach is to do both and to regularly re-assess both risks and opportunities. The qualitative assessment could cover a more in-depth analysis of the sources behind identified risks and/or opportunities; it also deals with conditions and impacts. An example is scenario planning.

The quantitative assessment deals with probabilities and estimates and it also translates probabilistic impacts into quantifiable measures. Quantitative assessment provides numerical values measuring probability and impact expected from risks and opportunities. Monte Carlo analysis and decision trees are examples of powerful quantitative risk assessment techniques.

Measures

- Engages in qualitative risk and opportunity assessment;
- Engages in quantitative risk and opportunity assessment;
- Makes and interprets a risk or opportunity decision tree, with outcomes.

4.5.11.4. Select strategies and implement response plans to address risks and opportunities

Description

The individual is responsible for the ongoing process of selecting and implementing optimal responses to any identified risk or opportunity. This process entails assessing various possible types of responses and finally selecting the ones that are optimal or most appropriate. For each risk the response options may include:

- Avoiding the risk by deciding not to start or continue with the activity that gives rise to the risk;
- Accepting or increasing the risk in order to pursue an opportunity;
- Removing the risk cause;
- Changing the likelihood;
- Changing the consequences;
- Sharing the risk with another party or parties (including contracts and risk financing)
- Accepting the risk by informed decision;
- Preparing and implementing a contingency plan.

Similar response options apply to opportunities:

- Eliminating the uncertainty by making the opportunity definitely happen (exploit);
- Allocating ownership to a third party who is best able to handle it (share);
- Increasing probability and/or impact, by identifying and maximising key opportunity drivers (enhance);
- Taking no special measures to address the opportunity (ignore).

Those risks that are not acceptable and those opportunities that are to be pursued require an appropriate response plan. Often, even after implementing risk responses, there is a residual risk that still has to be managed.

Measures

- Explains various means and methods for implementing a chosen overall strategy for the risk and opportunity management process;
- Evaluates responses to risks and opportunities, including their strengths and weaknesses;
- Evaluates alternative means and methods for implementing a risk and opportunity response plan;
- Influences the plan for resources and competences required to implement responses;
- Implements and communicates a risk and opportunity response plan.

4.5.11.5. Evaluate and monitor risks, opportunities and implemented responses

Description

After the appropriate risk and opportunity responses have been implemented (this may include appointing risk owners for certain or all risks) the risks and opportunities will need to be monitored. The risks and opportunities and the appropriateness of the selected responses should be re-assessed periodically. Risk and opportunity probabilities and/or impacts may change, new information may become available, new risks and opportunities may arise and the responses may no longer be appropriate. The overall strategies may also need to be evaluated. In fact, risk and opportunity management is not just a periodic process, but should take place continuously as all actions may carry a risk aspect.

Measures

- Monitors and controls the implementation and execution of a risk and opportunity response plan;
- Communicates the risks and opportunities and the appropriateness of the selected responses.

4.5.12. Stakeholders

Definition

The stakeholders competence element includes identifying, analysing, engaging and managing the attitudes and expectations of all relevant stakeholders. All individuals, groups or organisations participating in, affecting, being affected by, or interested in the execution or the result of the project can be seen as stakeholders. This may include sponsors, clients and users, suppliers/subcontractors, alliances and partners and other projects, programmes or portfolios. Stakeholder engagement includes constantly revising, monitoring and acting upon their interests and influence on the project. Stakeholder engagement may also involve building strategic alliances that create organisational capacities and capabilities where both risks and rewards are shared.

Purpose

The purpose of this competence element is to enable the individual to manage stakeholder interests and influence, to engage stakeholders and to effectively manage their expectations.

Description

Stakeholder engagement is an ongoing process, taking place throughout the lifecycle of the project. Stakeholders are the partners for and through whom the project will achieve success. Stakeholders' expectations, needs and ideas create the need and form the basis for the project. Stakeholders' money and resources are necessary inputs and stakeholders use the outcome.

Stakeholders come in various forms and groupings (e.g. higher management, users, suppliers, partners, pressure and special interest groups, etc) and have varying attitudes, interests and influence. Therefore, each stakeholder or stakeholder group has different information needs. An engagement strategy – often laid down in a communication plan – is therefore essential. This strategy might be executed by focusing on both formal and informal communication channels as well as more involving forms such as alliances, collaboration or networks. Alliances are often documented and formalised through a contract document such as an alliance contract, or through the establishment of a joint venture entity. Collaborators may often be employed in separate parts within an organisation, or may comprise one or more different organisations. Networks have no clear power structure and hence are more difficult to engage with.

During the execution of the engagement strategy, the stakeholder environment should be constantly monitored for changes to ensure continuous alignment and improvement.

Knowledge
- Stakeholder interests;
- Stakeholder influence;
- Engagement strategies;
- Communication plan;
- Collaborative agreements and alliances;
- External environment scanning relating to social, political, economic and technological developments.

Skills and abilities
- Stakeholder analysis;
- Analysis of contextual pressures;
- Demonstrating strategic communication skills;
- Expectations management;
- Formal and informal communication;
- Presentation skills;
- Networking skills to identify potentially useful and opposing stakeholders;
- Contextual awareness;
- Undertaking conflict resolution.

Related competence elements
- All other practice CEs;
- All perspective CEs;
- People 3: Personal communication;
- People 4: Relationships and engagement;
- People 5: Leadership;
- People 8: Resourcefulness.

Key competence indicators

4.5.12.1. Identify stakeholders and analyse their interests and influence

Description
The individual identifies all individuals, groups and organisations relevant to the project. The individual first has to analyse the attitudes of each stakeholder group and find out the reasons for these attitudes (the interests of the stakeholder in the project's outcome or process). Secondly the individual needs to know the potential beneficial or harmful effect (influence) this stakeholder or group can have on the project. Their interests can come from various sources. For instance, because they may want to, or have to, use the project's

deliverables or because they are competing for scarce resources or budget. They can be great or small, positive or negative. In the latter case they are opposed to the project, for whatever reason.

A stakeholder's influence can also be greater or smaller and may be concentrated in one or more areas (e.g. being able to supply or withhold funding, resources, office space and equipment, priority, access, etc). The individual should be able to make a stakeholder analysis at the beginning of each project, identifying stakeholders, their interests and influence. During the project, the individual should maintain an active analysis of the environment of the project, to identify new stakeholders, changed interests or changed influences. These changes in the stakeholder environment can be the result of changes in the project itself (e.g. going from a design to an execution phase). More often, they are the result of changes in the context of the project (e.g. organisational changes, personal changes in management, change in the economy, new regulations, etc). The individual should analyse the relevance of these changes for the project.

Measures

- Identifies the major stakeholder categories;
- Identifies and names various stakeholders' interests;
- Identifies and evaluates stakeholders' influence;
- Identifies relevant changes in or around the project;
- Analyses the consequences of changes for the project;
- Takes actions in order to manage stakeholders.

4.5.12.2. Develop and maintain a stakeholder strategy and communication plan

Description

The individual will devise a stakeholder strategy – how to engage, keep informed, involve and commit the various stakeholders to the project and its objectives. This can be done by approaching each stakeholder, or group of stakeholders, differently, depending on their interest and influence. To make it manageable, stakeholders with similar interests and influence can be grouped together. The stakeholder strategy is often laid down in a communication plan, which describes for each stakeholder or group the why, what, when (and how often), how (through which communication channel), who (should communicate) and the level of detail of the communication. The 'what' is essential; the message should be tuned to the specific stakeholders' expectations and should be aimed at committing each stakeholder to supporting (or at least not thwarting) the project.

The communication plan is central to expectation management. This can be summed up as the efforts of the individual to influence the expectations of the various stakeholders so that these come to expect and appreciate what (and when) the project can and will deliver and not become disappointed because of wrongly-held expectations about progress and outcomes.

Of course every communication is at least two-sided, so attention and care should be given to whether and how the sent communication was received, and follow-up should be given to feedback and other incoming communication.

As circumstances change, the communication plan should be regularly revised and updated. Potential alliances are developed and potential collaborators are identified. The benefits and outcomes of the potential partnership or alliance are identified for all parties. A relationship is established and developed with potential collaborators.

Measures

- Describes the importance of a stakeholder strategy;
- Prepares a communication plan;
- Adjusts the communication plan and/or strategy based on changed circumstances;
- Explains reasons for changing a communication plan;
- Identifies and evaluates opportunities for alliances and partnerships;
- Identifies and evaluates potential collaborators.

4.5.12.3. Engage with the executive, sponsors and higher management to gain commitment and to manage interests and expectations

Description

For almost all projects the most important stakeholders include executives and sponsors. Often the executive is the supplier of funds (budget) and/or can decide on resources, priority of requirements, definition of scope, etc. With these primary stakeholders, expectation management is of the utmost importance. The commitment and confidence of the executive, higher management and/or sponsor(s) is of great benefit both to the success of the project and that of management. A good working relationship and open communication should be established.

Sometimes the roles are combined in one person, but more often different people fulfil one or more of these roles. They all have their own expectations, interests and influence on the project. Depending on the project, the executive and/or sponsor(s) can play their part in the stakeholder management and act as ambassadors, as they often have status and connections that the individual manager lacks.

Measures

- Engages management and/or sponsor(s);
- Manages expectations of the project's executive, higher management and/or sponsor(s);
- Employs the executive and/or sponsor(s) to act as ambassadors.

4.5.12.4. Engage with users, partners, suppliers and other stakeholders to gain their cooperation and commitment

Description

For almost all projects, early and thorough involvement of users is a prerequisite for success. Users or their representatives can provide information such as needs and requirements and how the outcome will be used. This is often essential to the definition of each deliverables. Users or user groups may also provide resources.

Suppliers can provide the project with resources, knowledge, subproducts, etc. Care should be taken in choosing the best providers, especially if the knowledge, resources and/or sub-products can only be obtained from outside the organisation and formal contracts have to be closed to obtain these.

Partners are people, groups or organisations that cooperate to jointly deliver part of the deliverables, or they may make a broader contribution to achieving project objectives. These partners may only join efforts for a specific part, or they may work together on a more permanent, alliance basis. Partners may also be other managers with whom the pace, or deliverable content, of this project has to be tuned to optimise the benefit for the organisation.

When the project has a steering committee, one or more senior users or user representatives, senior suppliers or supplier representatives are part of that committee. Users and other stakeholders may be part of a sounding board that advises the executive or steering committee. The individual has to focus on these stakeholder groups from very early on in the project, and use his or her influence to select the right user representatives and suppliers.

Measures

- Engages users and commits them to the project;
- Commits suppliers to the project;
- Cooperates with partners to deliver the optimal result for the organisation.

4.5.12.5. Organise and maintain networks and alliances

Description

As part of the stakeholder strategy, networks and alliances can be implemented. These can be both formal and informal. When they are formal, agreements are negotiated and documented and a plan for ongoing cooperation is developed and implemented. As part of this plan, performance measures are identified and an exit strategy is developed.

All networks and alliances should be evaluated frequently and improved when necessary. Alliances can be ended by design, or because the formal relationship is no longer beneficial to the constituent organisations or stakeholders. Often, the organisation is quite likely to want to establish alliances with the same partners for new ventures in the future, so the ending of a formal relationship needs to be handled carefully.

Networks are more informal and tend to be sustained beyond the lifecycle of the project.

Measures

- Negotiates and documents the alliance agreement;
- Develops and implements a plan for cooperation;
- Develops and evaluates measures for success;
- Maintains key partnership agreements;
- Closes all formal contractual agreements.

4.5.13. Change and transformation

Definition

Newly developed capabilities only deliver benefits when they are put to use and when they are supported by the organisations and the people receiving them. Change (improvement of a current situation, keeping the past in mind) and transformation (the emerging development of new situations, based on a vision of the future) provide the process, tools and techniques that can be utilised to help individuals and organisations make successful personal and organisational transitions resulting in the adoption and realisation of change.

Purpose

The purpose of this competence element is to enable the individual to help societies, organisations and individuals to change or transform their organisation, thereby achieving projected benefits and goals.

Description

Projects are organised in order to achieve improvements. In many cases, these improvements are not only achieved by delivering an outcome but also require small or large changes in the behaviour of the organisation.

People usually do not object to change – they object to being changed. Successfully addressing their objections can be done by, for example, building support, addressing resistance and developing the required knowledge and ability to implement the change. More strategic change will also encompass influencing a leading coalition and other psychological and psychosocial interventions. When change management is done well, people feel engaged in the change process and work collectively towards a common objective, realising benefits and delivering results.

Transformation occurs when, based on a vision, behaviour is changed because there is a will to do things differently. Transformation is vision-led, and depends largely on the strength of the vision and the willingness of the people who share the vision to really put their energy into making it happen.

The level of change and transformation management required by a project will largely depend on the amount of disruption created in individuals' and groups' day-to-day lives, plus attributes such as culture, value system and history with past changes. Change and transformation do not primarily happen 'by design' and are not usually a linear process. The individual needs to regularly monitor and evaluate the effectiveness of the changes and adapt the change or transformation strategy. The individual also needs to take into account the change capacity and capabilities of people, groups or the organisation in order to help them successfully adapt or transform.

Projects usually deliver new capabilities. However, it is only when these capabilities are put to use that value is added and benefits can be achieved. Organisational or business changes often affect or alter processes, systems, organisational structure and job roles, but most of all they influence people's behaviour. Changes can be quite small or they can require a complete transformation. Sometimes, they can even be disruptive, which means special skills are needed to bring them about. In many cases, a project will induce and organise change but will have ended before the benefits resulting from it are realised.

Knowledge

- Learning styles for individuals, groups and organisations;
- Organisational change management theories;
- Impact of change on individuals;
- Personal change management techniques;
- Group dynamics;
- Impact analysis;
- Actor analysis;
- Motivation theory;
- Theory of change.

Skills and abilities

- Assessing an individual's, group's or organisation's change capacity and capability;
- Interventions on behaviour of individuals and groups;
- Dealing with resistance to change.

Related competence elements

- All other practice CEs;
- Perspective 1: Strategy;
- Perspective 2: Governance, structures and processes;
- Perspective 4: Power and interest;
- Perspective 5: Culture and values;
- People 3: Personal communication;
- People 5: Leadership;
- People 8: Resourcefulness.

Key competence indicators

4.5.13.1. Assess the adaptability to change of the organisation(s)

Description

Organisations and people have limited capacity, capability and willingness to change. This is influenced, among other factors, by the success of earlier changes, stress and pressure, the understood need for this particular change, culture and atmosphere and by seeing good or facing bad perspectives. There might also be resistance to the proposed change, either open or hidden, which negatively influences the adaptability to change. In many cases, opposition does not come from the people who are directly affected by the change, but from those who manage them. The adaptability to change is not fixed but will be influenced by factors both inside and outside the project.

Measures

- Analyses the adaptability to the required change, based on previous successful and unsuccessful changes in the organisation;
- Assesses possible areas (topics, people) for resistance to the change;
- Recognises and influences circumstances which can improve the adaptability;
- Takes action when the required or expected change or transformation is not within the capabilities of the organisation(s).

4.5.13.2. Identify change requirements and transformation opportunities

Description

For a business perspective-oriented projects, organisational requirements and the project's context are analysed to determine which transformation or business change needs to occur and when. For a more societal perspective-oriented project, the analysis needs to determine which societal groups can and should be influenced by the project. This can be done by interviewing, gathering knowledge, analysis of data or using workshops. Sometimes, opportunities arise because of changes in market conditions, the project's environment or other organisational or societal changes. Change requirements and opportunities will change regularly, so they need to be regularly reviewed and adapted.

Measures

- Identifies groups and individuals affected by change
- Maps group interests
- Identifies change requirements and opportunities regularly
- Adapts to changing interests and situations

4.5.13.3. Develop change or transformation strategy

Description

A change strategy is developed by the individual (or emerges and therefore is put together by the individual) to address the envisioned changes or transformations. It will be based upon the intensity and the impact of the change and takes into account the ability to change or the willingness to transform of the organisation, society or people. The timing of changes to align with organisational or societal dynamics and opportunities also needs to be considered. The plan is developed through consultation and is regularly updated.

Learning, monitoring and assessing what works and what doesn't and in which situations, is part of the strategy. Changes and transformation do not happen overnight, but usually take a while before value is added.

When changes or transformations are more consequential, a stepwise approach is developed so that early successes can be valued and used as incentives for further change. Change plans can sometimes be planned and structured, but can also be focused on group behaviours, on power, on learning, on emergence. There is no one right way to do change, but the individual needs to anticipate the change.

Measures

- Identifies societal, organisational and personal change or transformation strategies, recognising, for example, innovators, early adopters, the majority and laggards;
- Collaborates with others to validate strategies;
- Documents strategies into a comprehensive change plan;
- Develops a step-by-step approach if this is required;
- Regularly adapts the change or transformation plan to incorporate lessons learned and changes in the project's environment, or in society;
- Regularly adapts the strategy because the change has succeeded and benefits have been achieved.

4.5.13.4. Implement change or transformation management strategy

Description

Based on the change strategy, a set of possible interventions is planned. These might include work-shops, training, information sessions, pilots, serious games and visioning, but there will also certainly be interventions to be made regarding power and influence and handling resistance. Once a change is made, measures should be taken to sustain the change and to help organisations and individuals to avoid falling back into old behaviour.

Measures

- Designs a coherent intervention plan;
- Implements selected interventions;
- Leads or organises workshops and training;
- Addresses resistance to change;
- Organises and implements mass media interventions;
- Uses reinforcement techniques to ensure new behaviour is sustainable.

Annex A:
Cross reference to ISO21500: 2012

These correspondence tables show the equivalent IPMA Individual Competence Baseline (IPMA ICB®) competence element(s) and/or key competence indicator(s) for each ISO21500 element. The correspondence is only shown for the IPMA ICB project management elements, as ISO21500 only applies to project management and not to programme management or portfolio management.

It should also be noted that ISO21500 is a process-based standard, whereas IPMA ICB is an individual competence-based standard. The table below identifies the corresponding aspects between IPMA ICB knowledge, skills, and abilities and ISO21500 explained processes. Where the ISO21500 correspondence is in brackets, it shows a partial correspondence to the IPMA ICB competence element or key competence indicator. Where the ISO21500 correspondence states 'not addressed', there is no corresponding ISO21500 content.

IPMA ICB People competence elements

IPMA ICB competence elements	ISO21500 correspondence
People 1: Self-reflection and self-management	(3.9. Competences of project personnel)
People 2: Personal integrity and reliability	(3.9. Competences of project personnel)
People 3: Personal communication	(3.9. Competences of project personnel) (4.3.20. Manage project team)
People 4: Relationships and engagement	(3.9 Competences of project personnel) (4.3.20. Manage project team)
People 5: Leadership	(3.9 Competences of project personnel) (4.3.20. Manage project team)
People 6: Teamwork	(3.9. Competences of project personnel) (4.3.20. Manage project team)
People 7: Conflict and crisis	(3.9. Competences of project personnel) (4.3.20. Manage project team)
People 8: Resourcefulness	(3.9. Competences of project personnel)
People 9: Negotiation	(3.9. Competences of project personnel)
People 10: Results orientation	(3.9. Competences of project personnel) (4.3.20. Manage project team)

IPMA ICB Practice competence elements

IPMA ICB competence elements	ISO21500 correspondence
Practice 1: Project design	3.4.2. Opportunity evaluation and project initiation 3.6. Project governance (3.8. Stakeholders and project organisation) (3.10. Project lifecycle) (4.3.2. Develop project charter) 4.3.8. Collect lessons learned
Practice 2: Requirements and objectives	3.4.3. Benefits realisation (3.11. Project constraints) 4.3.2. Develop project charter
Practice 3: Scope	(3.11. Project constraints) 4.3.11. Define scope 4.3.12. Create work breakdown structure 4.3.13. Define activities 4.3.14. Control scope
Practice 4: Time	(3.10. Project lifecycle) 4.3.21. Sequence activities 4.3.22. Estimate activity durations 4.3.23. Develop schedule 4.3.24. Control schedule
Practice 5: Organisation and information	(4.3.15. Establish project team) 4.3.17. Define project organisation (4.3.38. Plan communications) (4.3.39. Distribute information) (4.3.40. Manage communications)
Practice 6: Quality	4.3.32. Plan quality 4.3.33. Perform quality assurance 4.3.34. Perform quality control
Practice 7: Finances	(3.11. Project constraints) 4.3.25. Estimate costs 4.3.26. Develop budget 4.3.27. Control costs

IPMA ICB competence elements	ISO21500 correspondence
Practice 8: Resources	(3.9. Competences of project personnel) (3.11. Project constraints) (4.3.15. Establish project team) 4.3.16. Estimate resources 4.3.18. Develop project team 4.3.19. Control resources
Practice 9: Procurement	4.3.35. Plan procurements 4.3.36. Select suppliers 4.3.37. Administer procurements
Practice 10: Plan and control	(3.10. Project lifecycle) 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
Practice 11: Risk and opportunity	(3.11. Project constraints) 4.3.28. Identify risks 4.3.29. Assess risks 4.3.30. Treat risks 4.3.31. Control risks
Practice 12: Stakeholders	3.8. Stakeholders and project organisation 4.3.9. Identify stakeholders 4.3.10. Manage stakeholders (4.3.38. Plan communications) (4.3.39. Distribute information) (4.3.40. Manage communications)
Practice 13: Change and transformation	Not addressed in ISO21500

IPMA ICB Perspective competence elements

IPMA ICB competence elements	ISO21500 correspondence
Perspective 1: Strategy	3.4.1. Organisational strategy
Perspective 2: Governance, structures and processes	3.5. Project environment 3.6. Project governance (3.7. Projects and operations) (3.8. Stakeholders and project organisation)
Perspective 3: Compliance, standards and regulations	3.5. Project environment (3.11. Project constraints)
Perspective 4: Power and interest	(3.8. Stakeholders and project organisation)
Perspective 5: Culture and values	3.5. Project environment

Annex B:
Cross reference to IPMA ICB Version 3.0

These mapping tables show the equivalent IPMA ICB Version 4.0 competence element(s) and/or key competence indicator(s) for each IPMA ICB Version 3.0 competence element. The mapping is only shown for the IPMA ICB Version 4.0 project management elements. Where the IPMA ICB Version 4.0 competence element or key competence indicator is in brackets, it shows a partial mapping.

IPMA ICB Version 3.0
Technical competence elements

IPMA ICB Version 3.0 competence elementsw	IPMA ICB Version 4.0 mapping
1.01. Project management success	**Practice 1:** Project Design **Perspective 1:** Strategy: KCI 4 Determine, assess and review critical success factors (**People 10:** Result orientation: KCI 1 Evaluate all decisions and actions against their impact on project success and the objectives of the organisation) (**People 10:** Result orientation: KCI 5 Deliver results and get acceptance)
1.02. Interested parties	**Practice 12:** Stakeholders (**Perspective 4:** Power and interest)
1.03. Project requirements and objectives	**Practice 2:** Requirements and objectives
1.04. Risk and opportunity	**Practice 11:** Risk and opportunity
1.05. Quality	**Practice 6:** Quality
1.06. Project organisation	**Practice 5:** Organisation and information: KCI 2 Define the structure, roles and responsibilities within the project **Practice 5:** Organisation and information: KCI 4 Implement, monitor and maintain the organisation of the project
1.07. Teamwork	**People 6:** Teamwork
1.08. Problem resolution	**People 8:** Resourcefulness, especially KCIs 2-5

IPMA ICB Version 3.0 competence elementsw	IPMA ICB Version 4.0 mapping
1.09. Project structures	**Practice 3:** Scope: KCI 2 Structure the project scope **Practice 3:** Scope: KCI 3 Define the work packages of the project
1.10. Scope and deliverables	**Practice 3:** Scope: KCI 1 Define the project deliverables **Practice 3:** Scope: KCI 4 Establish and maintain scope configuration
1.11. Time and project phases	**Practice 4:** Time
1.12. Resources	**Practice 8:** Resources
1.13. Cost and finance	**Practice 7:** Finance
1.14. Procurement and contract	**Practice 9:** Procurement
1.15. Changes	**Practice 10:** Plan and control: KCI 5 Assess, get agreement on, and implement project changes
1.16. Control and reports	**Practice 10:** Plan and control: KCI 3 Control project performance against the project plan and take any necessary remedial actions **Practice 10:** Plan and control: KCI 4 Report on project progress

IPMA ICB Version 3.0 competence elementsw	IPMA ICB Version 4.0 mapping
1.17. Information and documentation	**Practice 5:** Organisation and Information: KCI 1 Assess and determine the needs of stakeholders relating to information and documentation **Practice 5:** Organisation and information: KCI 3 Establish infrastructure, processes and systems for information flow
1.18. Communication	**People 3:** Personal communication
1.19. Start-up	**Practice 10:** Plan and control: KCI 1 Start the project and develop and get agreement on the project management plan **Practice 10:** Plan and control: KCI 2 Initiate and manage the transition to a new project phase
1.20. Close-out	**Practice 10:** Plan and control: KCI 6 Close and evaluate a phase or the project

IPMA ICB Version 3.0
Behavioural competence elements

IPMA ICB Version 3.0 competence elements	IPMA ICB Version 4.0 mapping
2.01. Leadership	**People 5:** Leadership
2.02. Engagement and motivation	**People 4:** Relationships and engagement **People 5:** Leadership: KCI 2 Take ownership and show commitment **People 4:** Relationships and engagement: KCI 5 Share own vision and goals in order to gain the engagement and commitment of others **People 6:** Teamwork: KCI 4 Empower people by delegating tasks and responsibilities to teams **People 1:** Self-reflection and self-management: KCI 3 Identify,and reflect on, personal motivations to set personal goals and keep focus
2.03. Self-control	**People 1:** Self-reflection and self-management **People 2:** Personal integrity and reliability: KCI 3 Take responsibility for own decisions and actions
2.04. Assertiveness	**People 5:** Leadership: KCI 3 Provide direction, coaching and mentoring to guide and improve the work of individuals and teams **People 5:** Leadership: KCI 4 Exert appropriate power and influence over others to achieve the goals

IPMA ICB Version 3.0 competence elements	IPMA ICB Version 4.0 mapping
2.05. Relaxation	**People 1:** Self-reflection and self-management: KCI 4 Organise personal work depending on the situation and own resources **People 3:** Personal communication: KCI 5 Employ humour and sense of perspective when appropriate **People 10:** Result orientation: KCI 3 Create and maintain a healthy, safe and productive working environment
2.06. Openness	**People 8:** Resourcefulness: KCI 1 Stimulate and support an open and creative environment (**People 3:** Personal communication: KCI 2 Facilitate and promote open communication)
2.07. Creativity	**People 8:** Resourcefulness: KCI 1 Stimulate and support an open and creative environment **People 8:** Resourcefulness: KCI 4 Promote and apply creative techniques to find alternatives and solutions
2.08. Results orientation	**People 10:** Result orientation
2.09. Efficiency	**People 10:** Result orientation: KCI 2 Balance needs and means to optimise outcomes and success
2.10. Consultation	**People 4:** Relationships and engagement: KCI 4 Show confidence and respect by encouraging others to share their opinions and concerns **People 4:** Relationships and engagement: KCI 5 Share own vision and goals in order to gain the engagement and commitment of others

IPMA ICB Version 3.0 competence elements	IPMA ICB Version 4.0 mapping
2.11. Negotiation	**People 9:** Negotiation
2.12. Conflict and crisis	**People 7:** Conflict and crisis
2.13. Reliability	**People 2:** Personal integrity and reliability: KCI 4 Act, take decisions and communicate in a consistent way **People 2:** Personal integrity and reliability: KCI 5 Complete tasks thoroughly in order to build confidence with others
2.14. Values appreciation	**People 4:** Relationships and engagement: KCI 4 Show confidence and respect by encouraging others to share their opinions or concerns (**Perspective 5:** Culture and values)
2.15. Ethics	**People 2:** Personal integrityand reliability: KCI 1 Acknowledge and apply ethical values to all your decisions and actions **Perspective 3:** Compliance, standards and regulations: KCI 3 Identify and ensure that the project complies with all relevant codes of conduct and professional regulation (**People 2:** Personal integrity and reliability: KCI 2 Promote the sustainability of outputs and outcomes) **Perspective 3:** Compliance, standards and regulations: KCI 4 Identify and ensure that the portfolio complies with, relevant sustainability principles and objectives

IPMA ICB Version 3.0
Contextual competence elements

IPMA ICB Version 3.0 competence elements	IPMA ICB Version 4.0 mapping
3.01. Project orientation	**Perspective 2:** Governance, structures and processes: KCI 1 Know the principles of project management and the way they are implemented
3.02. Programme orientation	**Perspective 2:** Governance, structures and processes: KCI 2 Know and apply the principles of programme management and the way they are implemented
3.03. Portfolio orientation	**Perspective 2:** Governance, structures and processes: KCI 3 Know and apply the principles of portfolio management and the way they are implemented
3.04. Project, programme and portfolio implementation	**Perspective 3:** Compliance, standards and regulations: KCI 6 Assess, benchmark and improve the organisational project management competence
3.05. Permanent organisation	**Perspective 2:** Governance, structures and processes

IPMA ICB Version 3.0 competence elements	IPMA ICB Version 4.0 mapping
3.06. Business	**Perspective 1:** Strategy (**Perspective 2:** Governance, structures and processes: KCI 5 Align the project with the organisation's decision-making and reporting structures and quality requirements) (**Perspective 4:** Power and interest)
3.07. Systems, products and technology	**Perspective 2:** Governance, structures and processes **Perspective 3:** Compliance, standards and regulations: KCI 3 Identify and ensure that the project complies with, all relevant codes of conduct and professional regulation **Perspective 3:** Compliance, standards and regulations: KCI 5 Assess, use and develop professional standards and tools for the project **Perspective 1:** Strategy: KCI 5 Determine, assess and review key performance indicators
3.08. Personnel management	**Perspective 2:** Governance, structures and processes: KCI 6 Align the project with human resource processes and functions
3.09. Health, safety, security and environment	**Perspective 3:** Compliance, standards and regulations: KCI 2 Identify and ensure that the project complies with, all relevant health, safety, security and environmental regulations (HSSE) **Perspective 3:** Compliance, Standards and Regulations: KCI 4 Identify and ensure that the portfolio complies with, relevant sustainability principles and objectives

IPMA ICB Version 3.0 competence elements	IPMA ICB Version 4.0 mapping
3.10. Finance	**Perspective 2:** Governance, structures and processes: KCI 7 Align the project with finance and control processes and functions
3.11. Legal	**Perspective 3:** Compliance, Standards and Regulations: KCI 1 Identify and ensure that the project complies with, all relevant legislation

Annex C:
Competence table

To apply the IPMA ICB for individual competence evaluation and development, a comprehensive table with the competence elements described in the IPMA ICB and Bloom's taxonomy can be used.

The different levels of competence include:

- **Knowledge:** Exhibit memory of learned materials by recalling facts, terms, basic concepts and answers;
- **Comprehension:** Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating the main ideas;
- **Application:** Using acquired knowledge to solve problems in new situations by applying acquired knowledge, facts, techniques and rules;
- **Analysis:** Examine and break information into parts by identifying motives or causes, make inferences and find evidence to support generalisations;
- **Synthesis:** Build a structure or pattern from diverse elements and act of putting parts together to form a whole; compile information together in a different way by combining elements in a new pattern or proposing alternative solutions;
- **Evaluation:** Present and defend opinions by making judgments about information, validity of ideas or quality of work based on a set of criteria.

		Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Perspective	Strategy						
	Governance, structures and processes						
	Compliance, standards and regulations						
	Power and interest						
	Culture and values						
People	Self-reflection and self-management						
	Personal integrity and reliability						
	Personal communication						
	Relationships and engagement						
	Leadership						
	Teamwork						
	Conflict and crisis						
	Resourcefulness						
	Negotiation						
	Result orientation						
Practice	Project design						
	Requirements and objectives						
	Scope						
	Time						
	Organisation and information						
	Quality						
	Finance						
	Resources						
	Procurement						
	Plan and control						
	Risk and opportunities						
	Stakeholders						
	Change and transformation						

Annex D:
Key Competence Indicator table

4.3.	Perspective	39
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4.3.1.1.	Align with organisational mission and vision	42
4.3.1.2.	Identify and exploit opportunities to influence organisational strategy	42
4.3.1.3.	Develop and ensure the ongoing validity of the business / organisational justification	43
4.3.1.4.	Determine, assess and review critical success factors	44
4.3.1.5.	Determine, assess and review key performance indicators	44
4.3.2.	Governance, structures and processes	46
4.3.2.1.	Know the principles of project management and the way in which they are implemented	47
4.3.2.2.	Know the principles of programme management and the way in which they are implemented	48
4.3.2.3.	Know the principles of portfolio management and the way in which they are implemented	48
4.3.2.4.	Align the project with supporting functions	49
4.3.2.5.	Align the project with the organisation's decision-making and reporting structures and quality requirements	50
4.3.2.6.	Align the project with human resource processes and functions	50
4.3.2.7.	Align the project with finance and control processes and functions	51
4.3.3.	Compliance, standards and regulations	52
4.3.3.1.	Identify and ensure that the project complies with all relevant legislation	54
4.3.3.2.	Identify and ensure that the project complies with all relevant health, safety, security and environmental regulations (HSSE)	54

4.3.3.3.	Identify and ensure that the project complies with all relevant codes of conduct and professional regulation	55
4.3.3.4.	Identify and ensure that the project complies with relevant sustainability principles and objectives	55
4.3.3.5.	Assess, use and develop professional standards and tools for the project	56
4.3.3.6.	Assess, benchmark and improve the organisational project management competence	56
4.3.4.	Power and interest	58
4.3.4.1.	Assess the personal ambitions and interests of others and the potential impact of these on the project	60
4.3.4.2.	Assess the informal influence of individuals and groups and its potential impact on the project	60
4.3.4.3.	Assess the personalities and working styles of others and employ them to the benefit of the project	61
4.3.5.	Culture and values	62
4.3.5.1.	Assess the culture and values of the society and their implications for the project	64
4.3.5.2.	Align the project with the formal culture and corporate values of the organisation	64
4.3.5.3.	Assess the informal culture and values of the organisation and their implications for the project	65
4.4.	**People**	**67**
4.4.1.	Self-reflection and self-management	68
4.4.1.1.	Identify and reflect on the ways in which own values and experiences affect the work	69
4.4.1.2.	Build self-confidence on the basis of personal strengths and weaknesses	70
4.4.1.3.	Identify and reflect on personal motivations to set personal goals and keep focus	70

4.4.1.4.	Organise personal work depending on the situation and own resources	71
4.4.1.5.	Take responsibility for personal learning and development	71
4.4.2.	Personal integrity and reliability	73
4.4.2.1.	Acknowledge and apply ethical values to all decisions and actions	74
4.4.2.2.	Promote the sustainability of outputs and outcomes	74
4.4.2.3.	Take responsibility for own decisions and actions	74
4.4.2.4.	Act, take decisions and communicate in a consistent way	75
4.4.2.5.	Complete tasks thoroughly in order to build confidence with others	75
4.4.3.	Personal communication	76
4.4.3.1.	Provide clear and structured information to others and verify their understanding	77
4.4.3.2.	Facilitate and promote open communication	77
4.4.3.3.	Choose communication styles and channels to meet the needs of the audience, situation and management level	78
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4.4.4.	Relationships and engagement	80
4.4.4.1.	Initiate and develop personal and professional relationships	81
4.4.4.2.	Build, facilitate and contribute to social networks	82
4.4.4.3.	Demonstrate empathy through listening, understanding and support	82
4.4.4.4.	Show confidence and respect by encouraging others to share their opinions or concerns	83
4.4.4.5.	Share own vision and goals in order to gain the engagement and commitment of others	83

4.4.5.	Leadership	85
4.4.5.1.	Initiate actions and proactively offer help and advice	86
4.4.5.2.	Take ownership and show commitment	86
4.4.5.3.	Provide direction, coaching and mentoring to guide and improve the work of individuals and teams	87
4.4.5.4.	Exert appropriate power and influence over others to achieve the goals	88
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4.4.6.2.	Promote cooperation and networking between team members	92
4.4.6.3.	Support, facilitate and review the development of the team and its members	92
4.4.6.4.	Empower teams by delegating tasks and responsibilities	93
4.4.6.5.	Recognise errors to facilitate learning from mistakes	93
4.4.7.	Conflict and crisis	95
4.4.7.1.	Anticipate and possibly prevent conflicts and crises	96
4.4.7.2.	Analyse the causes and consequences of conflicts and crises and select appropriate response(s)	97
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4.4.7.4.	Identify and share learning from conflicts and crises in order to improve future practice	98
4.4.8.	Resourcefulness	100
4.4.8.1.	Stimulate and support an open and creative environment	101
4.4.8.2.	Apply conceptual thinking to define situations and strategies	102
4.4.8.3.	Apply analytic techniques to analysing situations, financial and organisational data and trends	103

4.4.8.4.	Promote and apply creative techniques to find alternatives and solutions	103
4.4.8.5.	Promote a holistic view of the project and its context to improve decision-making	104
4.4.9.	Negotiation	105
4.4.9.1.	Identify and analyse the interests of all parties involved in the negotiation	106
4.4.9.2.	Develop and evaluate options and alternatives with the potential to meet the needs of all parties	106
4.4.9.3.	Define a negotiation strategy in line with own objectives that is acceptable to all parties involved	107
4.4.9.4.	Reach negotiated agreements with other parties that are in line with own objectives	108
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4.4.10.1.	Evaluate all decisions and actions against their impact on project success and the objectives of the organisation	111
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4.4.10.4.	Promote and 'sell' the project, its processes and outcomes	113
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