

Learning outcomes ICB4



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Version control

| Version | Date | Valid from |
|-------------|------------|------------|
| Version 2.0 | 30-04-2025 | 01-09-2025 |

Configuration Management

| Date | Version | Section | Adaptation |
|------------|---------|--|---|
| 01-06-2016 | 1.0 | All | <ul style="list-style-type: none">• First final version. |
| 08-06-2016 | 1.01 | All | <ul style="list-style-type: none">• Some corrections made. |
| 12-06-2016 | 1.02 | All | <ul style="list-style-type: none">• Layout adjusted and further corrections |
| 26-06-2016 | 1.1 | All | <ul style="list-style-type: none">• Add PMO learning outcomes levels and latest changes (including translation of English final attainment levels into Dutch, reformulations, etc.) as a result of drafting exam guide texts. |
| 11-08-2016 | 1.2 | C32, C51, G51c, V21, V51, V92, V102, V111, | <ul style="list-style-type: none">• Numbering topics and spelling and word errors corrected |
| 01-12-2017 | 1.3 | All | <ul style="list-style-type: none">• Adjust PMO requirements (and some for B, C, D)• Textual changes |
| 27-02-2018 | 1.3 | cover page | <ul style="list-style-type: none">• Incorrect link reference removed |
| 01-09-2021 | 1.4 | C28b, C29a, V71a | <ul style="list-style-type: none">• Modify three learning outcomes |
| 14-01-2025 | 1.5 | Miscellaneous | Process book Project Management by ICB4, first edition and update |
| 30-04-2025 | 2.0 | Miscellaneous | Streamlining concepts of final requirements, exam guide and Dutch translation of IPMA book. |

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1 Legend

| | |
|------------------------------------|---|
| CE | Competence element according to ICB4: successively Group (Perspective, People or Practice), Sequence number of the competence and Competence name |
| No. | Subject number code or letter code of the final term |
| Subject | Learning outcomes grouping. Within each competency element, the learning outcomes are grouped into one to a maximum of nine "topics". |
| Topic and final term coding | <p>Each learning outcome has a code for reference. It is structured as follows: capital-number-number-small letter</p> <p>The capital letter represents the competency group, as follows:</p> <ul style="list-style-type: none"> ● C : Contextual competences (Perspective) ● G : Behavioral competences (People). ● V : Technical/Professional competences (Practice). <p>The letter is followed by a number (one or two digits) indicating the sequence number of the competency within the competency group.</p> <p>This is followed by a number indicating the sequence number of the topic within the competency, for example:</p> <ul style="list-style-type: none"> ● C11 : Perspective 1, topic 1 ● C29 : Perspective 2, topic 9 ● V131 : Practice 13, topic 1 <p>Within each subject, each final term has a letter code, for example:</p> <ul style="list-style-type: none"> ● G32b : People 3, topic 2, final term b ("Active listening"). |
| Explanation | Explanation of final term or reference to relevant literature |
| B, C, D | IPMA level (respectively IPMA-B, IPMA-C, IPMA-D) |
| b, t, a | <p>(Maximum) level at which the final term can be asked:</p> <p>b - understanding, t - applying or a - analyzing.</p> <p>As a basis, understanding is assumed at D-level, applying at C-level and analyzing at B-level, respectively.</p> |

2 Taxonomy

| b = Understanding | | t = Apply | | a = Analyze | |
|-------------------|-------------------|-----------|-------------------|-------------|-------------------|
| Verbs | Independent nouns | Verbs | Independent nouns | Verbs | Independent nouns |
| Recognize | Terms | Apply | Situations | Analyze | Analyses |
| Nominate | Facts | Drafting | Applications | Distract | Models |
| Compare | Processes | Implement | Principles | Review | Problems |
| Describe | Relationships | Calculate | Criteria | Design | Conclusions |
| Define | Standards | Define | Rules | Prioritize | Predictions |
| Declare | Rules | Choose | Methods | Relate | Comment |
| Reproduce | Criteria | Resolve | Conclusions | Conclude | Concepts |
| Explain | Methods | Distract | | Balance | |

3 Learning outcomes

3.1 Contextual competency elements (Perspective).

| No. | Topics | Explanation | B | C | D | Explanation |
|------------|---|---|---|---|---|-------------|
| CE | Perspective 1: Strategy | | | | | |
| C11 | Mission, vision and strategy | | | | | |
| a | Mission and vision of organizations | | b | b | b | |
| b | Core values of an organization | | b | b | b | |
| c | 7-S Framework© - McKinsey Consulting | | b | | | |
| d | Business Model Canvas© | Business Model Generation - Osterwalder, 2010 | b | b | | |
| e | SWOT analysis | | a | t | b | |
| f | Strategy and strategic goals | | b | b | b | |
| C12 | Strategic performance management | | | | | |
| a | Benefits Management | | b | | | |
| b | Strategic performance management | - Performance indicators - Balanced Scorecard© | t | b | | |
| c | Benchmarking | | a | t | b | |
| C13 | Investment calculations | | | | | |
| a | Investment calculations | Including ROI | a | t | b | |
| b | NPV calculation | Incl. the concepts of Cost of Capital (WACC), discount rate, opportunity costs, sunk costs, Internal rate of return,(IRR) | a | t | | |
| c | Payback period, break-even point | | a | t | | |
| C14 | Business or organizational justification | | | | | |
| a | Business case document (format and features) | Financial and non-financial benefits. | a | t | b | |

| No. | Topics | Explanation | B | C | D | Explanation |
|------------|--|--|----------|----------|----------|-------------|
| b | Baseline scenario, base scenario, delta measurement | | a | t | b | |
| c | Business case client and contractor. | | a | t | b | |
| d | Relationship business justification and project life cycle | | a | t | b | |
| e | Relationship to feasibility study and benefit reviews and post-investment assessment | | a | t | b | |
| | | | | | | |
| CE | Perspective 2: Governance, structures and processes. | | | | | |
| | | | | | | |
| C21 | Project Management | | | | | |
| a | What is a project | | a | t | b | |
| b | What is project management | | a | t | b | |
| c | Position projects | Position of projects in organization | a | t | b | |
| d | Way of working | Improvising, routinely and systematically | a | a | b | |
| e | Conditions and characteristics of a project | | a | a | t | |
| f | Reasons for implementing a project | | a | a | t | |
| g | Projects within the life cycle of a product | | b | b | b | |
| h | Phasing, controlling and deciding | Management aspectsTriple constraint and iron square. | a | t | b | |
| i | Multi-level projects | | a | t | b | |
| | | | | | | |
| C22 | Program Management | | | | | |
| a | Program and program management | | t | b | | |
| b | When to choose a program | | t | b | | |
| c | Differences between projects and programs | | t | b | | |
| d | Program organization: roles and associated tasks, responsibilities and authority | Program principal, sponsor, sponsor group, program manager, change managers, program office, program steering committee, program assurance | t | b | | |
| e | Multi-organization programs | E.g. public-private partnership | b | | | |
| f | Program life cycle | Program phases and plateau transitions | b | | | |
| g | Core documents of a program | Vision document, blueprint, goal tree, program plan, business case | b | | | |
| | | | | | | |
| C23 | Portfolio Management | | | | | |
| a | Portfolio and multi-project management | Management through projects | b | b | b | |

| No. | Topics | Explanation | B | C | D | Explanation |
|------------|--|---|---|---|---|-------------|
| b | The portfolio organization | | t | b | | |
| c | Prioritization of projects and programs | Develop a portfolio annual plan | t | b | | |
| d | Portfolio Process | | t | b | | |
| | | | | | | |
| C24 | Setting up PPP and PMO organizations. | | | | | |
| a | Characteristics PMO | | t | b | | |
| b | Added value PMO | Services Portfolio PMO | t | b | | |
| c | Steps in introducing PPP organization | Effects on the organization upon implementation | t | | | |
| | | | | | | |
| C25 | Organization Theory | | | | | |
| a | Permanent organization | - Line, staff and auxiliary services - Separation of functions - Primary process | a | t | b | |
| b | Organizational configurations | Mintzberg on management - Mintzberg (5 basic configuration) | t | b | | |
| c | Flat versus hierarchical organization | Span of control, depth of control | a | t | b | |
| d | Supply chain/chain management | Effects of the relationship with suppliers and client organizations in the chain on the approach to the project or program. | t | b | | |
| e | Project and permanent organization interfaces | At strategic, tactical and operational levels, - Matrix, autonomous and functional project structure | a | t | b | |
| f | Systems approach | | a | t | | |
| g | TQM Total Quality Management | | b | | | |
| h | Theory of constraints | | t | | | |
| | | | | | | |
| C26 | Project, program and portfolio management standards and methods | | | | | |
| a | ISO Standard 21500:2021, Guidance on Project Management®. | | b | | | |
| b | Project management standards | Essence of and differences between international standards (PMBOK guide, PRINCE2, PM²). | b | | | |
| | | | | | | |
| C27 | Process development methods | | | | | |
| a | Agile | Agile manifesto and agile principles and values | a | t | b | |
| b | Scrum | Roles, events, artifacts, concepts | t | t | b | |

| | | | | | |
|------------|--|--|----------|----------|----------|
| c | Lean Six Sigma | DMAIC and DMADV | b | b | |
| d | Kanban | | t | t | b |
| | | | | | |
| C28 | Personnel Management | | | | |
| a | Role of project, line and HR manager in HRM of project employees | In acquisition, management and termination/responsibilities, dependencies and cohesion between project and standing organization | b | b | |
| b | Competency Management | | t | b | |
| c | Knowledge Management | | t | b | |
| | | | | | |
| C29 | Financial administration | | | | |
| a | Cost Classification | Fixed and variable costs, direct and indirect costs | b | b | b |
| b | Allocation of indirect costs | | b | b | |
| c | Fundamentals of financial accounting | - Fundamentals of financial accounting - Accounting records | b | b | |
| d | Annual financial Statements | - Balance sheet, Profit & Loss statement (EBIT and EBITDA), cash flow statement, IFRS | t | b | |
| e | Investments and depreciation | Operating expenditures (OPEX) and Capital expenditures (CAPEX). | b | b | |
| f | Valuation of projects | Projects in progress | t | b | |
| | | | | | |
| CE | Perspective 3: Compliance, standards and regulations. | | | | |
| | | | | | |
| C31 | Sustainability | | | | |
| a | Sustainable development | People, planet, profit Triple bottom line | a | t | b |
| b | CSR: Corporate Social Responsibility | Corporate social responsibility© (CSR) | t | b | b |
| c | ISO standard 26000: 2010 CSR | | b | | |
| | | | | | |
| C32 | Laws and regulations | | | | |
| a | Areas and forms of law | - Private law, Public law, Mandatory, regulatory and supplementary law | b | b | |
| b | Responsibilities of the project manager in law enforcement | | t | b | b |
| c | Agreements | | a | t | b |
| d | Failure to perform a contract | Strict liability | a | t | b |
| e | Unlawful act | Strict liability, causation | b | b | b |
| f | Norms, regulations and standards | | t | t | b |
| g | Intellectual property law | Copyright patent and trademark law, patent, licensing | b | b | |

| | | | | | |
|------------|---|---|----------|----------|----------|
| h | Supervisory bodies | | b | b | |
| | | | | | |
| | | | | | |
| C33 | Health, security, safety and environment | | | | |
| a | ARBO (OHS) legislation | Risk inventory, safety plan, duty of care | t | b | b |
| b | Millieu legislation | Environment Act, Environment permit, Environmental permit, EIA (environmental impact assessment), environmental offenses. | b | b | |
| c | Legislation on data security, privacy, etc. | | t | b | b |
| d | Security | | t | b | b |
| | | | | | |
| CE | Perspective 4: Power and interests | | | | |
| | | | | | |
| C41 | Influence and interests | | | | |
| a | Power and authority | | b | b | b |
| b | Principles of influence - Robert B Cialdini | | t | t | b |
| c | Sources of interest | | a | b | |
| d | Power sources | PESTLE analysis | a | t | b |
| | | | | | |
| CE | Perspective 5: Culture and values | | | | |
| | | | | | |
| C51 | Culture and values | | | | |
| a | Projects in relation to culture and values | | t | t | b |
| b | Culture Dimensions | Culture and organizations - Hofstede | a | t | b |
| c | Organizational culture and decision-making | Investigating and changing organizational culture - Quinn | b | | |
| d | Organizational culture model - Schein | Values, artifacts and assumptions | b | b | b |
| | | | | | |

3.2 Behavioral competency elements (People).

| No. | Topics | Explanation | B | C | D |
|------------|--|--|----------|----------|----------|
| CE | People 1: Self-reflection and self-management | | | | |
| | | | | | |
| G11 | Self-reflection and analysis | | | | |
| a | Emotional intelligence - Goleman | Self-awareness, self-management, social skill, empathy, motivation | t | b | b |
| b | - Rational-Emotional Therapy© (RET) | | b | b | |
| c | - Johari diagram | | t | t | b |

| No. | Topics | Explanation | B | C | D |
|--|---|---|---|---|---|
| d | - Core quadrants | Inspiration and quality in organizations - Daniel D. Ofman | a | t | b |
| G12 Personal goal setting and time management | | | | | |
| a | Self-motivation | | b | b | b |
| b | Steps in goal setting | Goal setting - Locke and Latham | t | b | |
| c | Seven Characteristics of Effective Leadership (Covey) | | t | b | |
| d | Personal time management | Eisenhowermatrix | t | t | t |
| e | Techniques personal time management | | t | b | |
| G13 Stress Management | | | | | |
| a | Tension versus stress / burnout | Balance between load and load capacity | b | b | b |
| b | Symptoms & triggers of stress | | b | b | b |
| c | Stress management for self and others | Relaxation techniques, reduce physical, emotional and rational tension | b | b | b |
| d | Intervention techniques for reducing stress | Vitalizing/energizing, team building activities, escalating and de-escalating | b | b | |
| CE People 2: Personal integrity and reliability | | | | | |
| G21 Ethics | | | | | |
| a | Types of ethics | Virtue ethics, duty ethics, consequence ethics, care ethics | t | b | b |
| b | Social justice and sustainability principles | | t | b | |
| c | Personal ethics versus business ethics | | b | b | |
| G22 Reliability | | | | | |
| a | Aspects of reliability | Consistency/Transparency/Consequent action/Predictability | b | b | b |
| b | Building reliability in a network of stakeholders | Strong and weak ties (The strength of weak ties - Granovetter) | t | b | |
| c | UN Universal Declaration of Human Rights. | | b | b | |
| CE People 3: Personal communication | | | | | |
| G31 Communications | | | | | |
| a | Communication model | Transmitter, channel, receiver, message, feedback, noise | b | b | b |

| No. | Topics | Explanation | B | C | D |
|--------------------------------|--|--|----------|----------|----------|
| b | Communication aspects | How do you mean? - Schultz von Thun: Content, relational, expressive, appealing | a | t | b |
| c | Communication channels | Oral, written, audiovisual, digital (including social media) | b | b | b |
| d | Miscommunication and noise | Selective perception, cognitive dissonance, internal and external noise | a | t | b |
| e | Criteria for good communication | - Effective, efficient, acceptable - Understandable (connect with target audience) | a | a | t |
| G32 Conversation Skills | | | | | |
| a | Verbal and nonverbal communication | | t | t | t |
| b | Active listening | Hm, summarize, paraphrase and ask through; report making, empathy | t | t | t |
| c | Asking the right questions | Open, closed, suggestive and rhetorical questions | t | t | t |
| d | Giving and receiving feedback | | a | t | t |
| e | Bad news conversation | | t | | |
| G33 Meeting | | | | | |
| a | Effective meetings | Success and failure factors and interventions during preparation, actual meeting and follow-up | a | t | b |
| b | Agenda and agenda items | - Layout and order of agenda items - Opinion forming, commenting, decision-making and planning phases | a | t | b |
| c | Meeting roles | Chairman, secretary or note taker, participant | a | t | b |
| G34 Workshops | | | | | |
| a | Feature workshops | | b | b | b |
| b | Setting up and conducting workshops | Process steps and workshop phases | a | t | b |
| c | Roles and responsibilities workshops | Workshop owner, facilitator, participant and secretary/workshop supporter | a | t | b |
| G35 Presenting | | | | | |
| a | Effectiveness presentation | Speaking schedule, verbal and nonverbal behavior, connecting with target audience | a | t | b |
| b | Elevator pitch | | t | t | |
| c | Considerations of good visual support presentation | | a | t | b |
| | | | | | |

| No. | Topics | Explanation | B | C | D |
|--|--|---|----------|----------|----------|
| G36 | Communicating in writing | | | | |
| a | Communicating effectively in writing | Requirements: comprehensibility; accuracy; conciseness; attractiveness | a | t | b |
| b | Design and structure documents | Each communication includes the theme of the text, the <i>questions</i> to be discussed and the <i>answers</i> to those questions | a | t | b |
| | | | | | |
| CE People 4: Relationships and engagement | | | | | |
| | | | | | |
| G41 | Openness | | | | |
| a | Creating an open project culture | Action science - Argyris (model 1/model 2). | b | | |
| b | Aspects, characteristics and policies regarding openness | - Frankness, accessibility, compassionate and introspective openness - Influence corporate culture, confidentiality and security aspects | a | t | b |
| | | | | | |
| G42 | Advising | | | | |
| a | Role of PM as advisor | Process Consultation Revisited - Schein (3 models, 10 principles) | a | t | |
| b | Relationships in consulting work | Below-above / together-against | t | b | |
| | | | | | |
| G43 | Motivation | | | | |
| a | Motivation and hygiene factors | How Do You Motivate Employees - Herzberg | t | b | |
| b | Maslow hierarchy of needs | | t | t | b |
| | | | | | |
| CE People 5: Leadership | | | | | |
| | | | | | |
| G51 | Leadership | | | | |
| a | Differences and similarities between leadership and management | | b | b | b |
| b | Leadership | Three Levels of Leadership - Scouller (public, private and personal leadership) | a | b | |
| c | Situational leadership | According to Johnson, Hersey & Blanchard | t | t | b |
| d | Styles of leadership | Leadership that gets results - Goleman. Authoritative style, relational style, democratic style, coach style, pacesetter style and authoritarian style. | t | t | |
| e | Influence and involvement | Circles of influence and involvement | t | t | b |
| f | Assertiveness | Assertiveness vs. compliant vs. aggressiveness | t | t | b |

| No. | Topics | Explanation | B | C | D |
|---|--|--|----------|----------|----------|
| g | Balance role perceptions and role expectations | | t | b | |
| h | Coaching | | t | | |
| I | Servant leadership | | t | | |
| j | Vroom and Yetton decision model | | t | | |
| | | | | | |
| CE People 6: Teamwork | | | | | |
| | | | | | |
| G61 Life cycle teams | | | | | |
| a | Team development stages | - Model of Tuckman: Forming, storming, norming, performing and adjourning - Team building | t | t | t |
| b | Phases of team formation in relation to situational leadership | | t | t | b |
| | | | | | |
| G62 Successful teams | | | | | |
| a | Team composition | Professional and work content, collaboration and competence | t | t | |
| b | Team Roles | Team roles - Belbin | t | b | |
| c | Dealing with resistance, the need for 'difficult' people on the team | | t | t | b |
| d | Causes, symptoms and occurrence of group blindness | | t | b | |
| e | Management of remote teams | | t | b | |
| f | Develop an effective project culture | | t | b | |
| | | | | | |
| CE People 7: Conflict and crisis | | | | | |
| | | | | | |
| G71 Crisis Management | | | | | |
| a | Crisis Plan | Content and composition | t | | |
| b | Crisis and crisis management | Desired leadership style and competences when managing crisis | t | b | |
| | | | | | |
| G72 Conflict Management | | | | | |
| a | Types of conflicts | Business, scarcity, power and socioeconomic conflicts | b | b | - |
| b | Functional vs. dysfunctional conflicts | | b | b | b |
| c | Stages in a conflict | Pondy: 4 stage escalation model (1 Latent, 2 Perceived, 3 Felt, 4 Manifest) | t | t | b |

| No. | Topics | Explanation | B | C | D |
|------------|--|---|---|---|---|
| d | Conflict deregulation mechanisms in different phases of conflict | | a | t | b |
| e | Styles of conflict management | Thomas & Kilmann model | t | t | b |
| f | PM in different roles in conflicts | | t | t | |
| | | | | | |
| CE | People 8: Resourcefulness | | | | |
| | | | | | |
| G81 | Troubleshooting | | | | |
| a | Cause identification and analysis techniques | Cause-effect diagrams, analysis techniques, systems approach | t | b | |
| b | Solution identification and analysis techniques | Among other things, expert opinion, scenario analysis, value analysis and SWOT analysis | t | b | |
| c | Solution assessment and evaluation techniques | Among others, prototyping for assessment and multicriteria analysis for evaluation | t | b | |
| d | Decision-making techniques | Consensus, majority, unanimity, compromise, authority, delegation | t | t | b |
| e | Analytical problem solving | | t | t | b |
| | | | | | |
| G82 | Creativity | | | | |
| a | Stages in the creative process | Starting, diverging, converging and decision-making phases | t | t | b |
| b | Divergent creativity techniques | Solution-focused formulation, mind mapping, brainstorming, analogies, brown paper session | t | t | b |
| c | Additional divergent creativity techniques | Inside-out listening, formulating stepping stones, lateral thinking and De Bono's Thinking Hats) | b | | |
| d | Converging creativity techniques | Nominal choice as an example of filtering, and mood boards/cartoons and mirror conversations as examples of developing | t | t | b |
| e | Additional convergent creativity techniques | COCOD-box© and sensory deepening in addition to more analytical techniques such as value analysis and scenario analysis | b | | |
| f | Structured decision-making procedures | | b | | |
| | | | | | |
| CE | People 9: Negotiating | | | | |
| | | | | | |
| G91 | Negotiate | | | | |
| a | Negotiation Strategy | Thomas & Kilman/Win-Win, Win-Lose (analog to conflict management) | t | t | b |
| b | Harvard Method | Excellent Negotiation - Fisher, Ury, Patton (4 principles, plus BAZO: Best Alternative Without Agreement) | t | t | b |

| No. | Topics | Explanation | B | C | D |
|-------------|--|--|---|---|---|
| c | Positional bargaining | Opening bid, target point, resistance point, outcome expectation, breaking point | t | t | b |
| d | Stages in negotiation | Preparation, run-up, opening, exploration, implementation and closure | t | t | |
| e | Aspects of negotiation | Interests, balance of power, climate, content and latitude (constituency) | t | b | |
| | | | | | |
| CE | People 10: Result orientation | | | | |
| | | | | | |
| G101 | Results Orientation | | | | |
| a | Efficiency, effectiveness and productivity | | b | b | b |
| b | Entrepreneurship | Entrepreneurship - Hisrich, Peters, Shepherd | b | | |
| c | Principles and conditions continuous improvement | Kaizen: The Key To Japan's Competitive Success - Masaaki Imai | b | b | - |
| d | Techniques for efficiency | Kaizen: 5S improvement approach, 5xW and 1xH, Kaizen: 4xM checklist | b | b | |
| e | Political and social sensitivity | | t | b | |
| | | | | | |

3.3 Technical/Professional competence elements (Practice).

| No. | Topics | Explanation | B | C | D |
|------------|--|--|---|---|---|
| CE | Practice 1: Design | | | | |
| | | | | | |
| V11 | Project approach | | | | |
| a | Success and Failure Criteria | | t | t | t |
| b | Success and failure factors | | t | t | b |
| c | Project success and project management success | | t | t | b |
| d | Project performance management. | | t | b | |
| e | Learning (and periodic recalibration) based on learning points (Lessons Learned) | | t | t | b |
| | | | | | |
| CE | Practice 2: Requirements and goals | | | | |
| | | | | | |
| V21 | Expectations and requirements | | | | |
| a | Project objectives versus project goals | Purpose of the project (what the client wants to achieve with the project result) vs. objectives of the project (the | a | t | b |

| No. | Topics | Explanation | B | C | D |
|------------|--|--|----------|----------|----------|
| | | mission statement for the project team) | | | |
| b | Value Management | | t | b | |
| c | Total cost of ownership | | b | b | |
| d | Expectations, requirements and acceptance criteria | Explicit and implicit expectations, MoSCoW technique | a | t | b |
| e | Specification and quality requirements | Functional and technical requirements, program of requirements | a | t | b |
| f | Fit for use, fit for purpose | | a | t | b |
| CE | Practice 3: Scope | | | | |
| V31 | Scope and delineation | | | | |
| a | Scope | Scoped definition, delineation and interfaces with other projects or initiatives | a | t | b |
| b | Scope creep | Scopemanagement | a | t | b |
| V32 | Product decomposition | | | | |
| a | Project decomposition | | a | t | b |
| b | Work decomposition structure (WBS) | - Project structure coding - WBS dictionary | a | t | b |
| c | Product decomposition structure | Product flow chart, PBS, Product descriptions Swimlanes. | a | t | b |
| V33 | Configuration Management | | | | |
| a | Configuration management and configuration items | ISO 10007:2017 Configuration management© | t | b | |
| b | Configuration item records and configuration management database | | t | b | |
| c | Configuration management strategy and plan | | t | b | |
| d | Configuration baselines | | t | b | |
| CE | Practice 4: Time | | | | |
| V41 | Planning and phasing | | | | |
| a | Plan levels | Project, phase and team plans | t | t | b |
| b | Baselines | | a | t | b |
| c | Bar Chart (Gantt Chart) | | t | t | t |
| d | Precedence chart | Total slack, critical path, Planning Restriction End-Start | t | t | |
| e | Other planning restrictions | Start-start, start-end, end-end relationships - ALAP/ASAP, no earlier than etc.; lead, lag | a | b | |

| No. | Topics | Explanation | B | C | D |
|------------|---|---|---|---|---|
| | | Free play | | | |
| f | Milestones, phases and decision points | | t | t | b |
| g | Phasing models | Linear phasing (waterfall), parallel or subproject phasing, development phasing, parallel phasing, timeboxing, subproject phasing | t | t | b |
| h | Shorten time schedule | Crashing, fast tracking | t | t | b |
| | | | | | |
| CE | Practice 5: Organization and information management | | | | |
| | | | | | |
| V51 | Project organization | | | | |
| a | Project governance | | a | t | b |
| b | Principle principal/contractor | Three project interests: customer, user, supplier | b | b | b |
| c | Principle separation of technology and management | | b | b | b |
| d | Project organization, project management team, project management structure | Project Organization Chart | a | t | b |
| e | Roles and role descriptions | | a | t | b |
| f | Consultation structure and linking-pin principle | | a | t | b |
| g | Responsibilities matrix (RASCI model, RAM). | | a | t | b |
| | | | | | |
| V52 | Information Management | | | | |
| a | Information management and information management strategy | | a | t | b |
| b | Information versus data | | b | b | b |
| c | Document Management | Release levels, version management | t | t | b |
| d | Information management infrastructure | | t | t | b |
| e | I/O matrix | | t | b | |
| f | Information (management) plan | | t | t | b |
| g | Quality and security requirements information and document management | Among other legal requirements | b | b | b |
| h | Project file structure | Management and specialist files | t | t | b |
| | | | | | |
| CE | Practice 6: Quality | | | | |
| | | | | | |
| V61 | Quality | | | | |
| a | Process and product quality | | b | b | b |
| b | Standard operating procedures | | b | b | |

| No. | Topics | Explanation | B | C | D |
|------------|--|--|---|---|---|
| c | Verification and validation | | t | t | b |
| d | Quality Management | Quality planning, assurance, control and improvement | t | t | b |
| e | Quality management strategy and plan | | a | t | b |
| f | Basic quality tools | histogram, fishbone diagram, Pareto analysis flowchart | a | t | b |
| g | Advanced quality tools | Run chart, control chart, scatter diagram, | a | t | |
| | | | | | |
| V62 | Quality assessment, audit and evaluation | | | | |
| a | Quality review, audit and evaluation | | t | t | b |
| b | Inspection methods and techniques | | t | b | |
| c | Test concepts and methods | | t | b | |
| d | Quality register, test register | | t | t | b |
| | | | | | |
| CE | Practice 7: Finance | | | | |
| | | | | | |
| V71 | Cost estimate | | | | |
| a | Cost composition | Incl. cost components, cost types, cost items and cost carriers | t | t | t |
| b | Linking CBS with WBS and OBS | Management points/control accounts | t | t | t |
| c | Reserves | Contingency and management reserves; risk budget, change budget, contingency budget, margin, tolerance | t | b | b |
| | | | | | |
| V72 | Cost Management | | | | |
| a | Procurement | | t | b | b |
| b | Reconciliation of financial project and business records | | t | b | b |
| c | Estimating, budgeting, monitoring | | t | t | t |
| d | Reporting Standards | | t | t | t |
| e | Cost and budget monitoring | | a | t | t |
| | | | | | |
| V73 | Project Funding | | | | |
| a | Project Funding | Internal and external financing; venture and non-risk financing options | b | | |
| b | Financial control and liquidity planning | | t | b | |
| | | | | | |
| CE | Practice 8: Resources | | | | |
| | | | | | |

| No. | Topics | Explanation | B | C | D |
|-------------|--|--|---|---|---|
| V81 | Capacity Management | | | | |
| a | Capacity Management | | t | t | b |
| b | Leveling and smoothing | | t | t | b |
| c | Capacity Plan | | t | t | b |
| d | Critical-chain method | 'Theory of constraints' - Goldrath: Student syndrome, Parkinson's law and multitasking, project buffers and run-up buffers | t | b | |
| | | | | | |
| CE | Practice 9: Contracts & Procurement | | | | |
| | | | | | |
| V91 | Procurement | | | | |
| a | Make or buy: analysis and decision-making | - Purchasing or outsourcing - Role business strategy | t | t | b |
| b | Procurement strategy and plan | | t | b | |
| c | Purchasing Process | - Longlist, shortlist - Selection and award criteria - Relationship of project and procurement department | t | b | b |
| d | RFI, RFS, RFP, RFQ | | t | b | |
| e | Precontractual agreements | Letter of intent and pre-agreement and early implementation agreements. | t | b | |
| f | Collaborations | Consortium, comakership, General Partnership, back-to-back agreement | b | | |
| g | European tender | Principles, sectors, threshold amounts, procedures, selection and award criteria. | a | t | b |
| h | Procurement procedures | | t | b | |
| | | | | | |
| V92 | Agreements | | | | |
| a | Contract types | | t | b | |
| b | Common contract articles | General conditions | t | t | b |
| c | Effort and result commitment | | t | t | b |
| d | Financial securities | Bank guarantees, letters of credit, export guarantees | t | b | |
| e | Contract Management | | t | b | |
| f | Claim management | Defensive and offensive claim strategy. | t | b | |
| | | | | | |
| CE | Practice 10: Plan and control | | | | |
| | | | | | |
| V101 | Project preparation phase | | | | |
| a | Project mandate, project application and project preparation phase | | t | t | b |

| No. | Topics | Explanation | B | C | D |
|-------------|---|---|----------|----------|----------|
| b | Project assignment | | t | t | b |
| c | First project decision | Decision to Justify | t | t | b |
| | | | | | |
| V102 | Project definition phase | | | | |
| a | Start-up workshops and kick-off meeting | Differences and characteristics | a | t | b |
| b | Project management plan | Project definition phase | a | t | b |
| c | Setting up project support | | t | t | |
| d | Project review, second project decision | (Decision to Fund) | a | t | b |
| | | | | | |
| V103 | Estimation methods | | | | |
| a | Gross-net (available) capacity | Deployment of people | a | t | b |
| b | Estimation methods and techniques | Single or multi-expert estimates (Delphi method), equal bet, velocity analysis, historical data, analogies, effort models, parametric estimates (function point method), three-point estimation | a | t | b |
| c | Uncertainty Analysis | PERT (mean and standard deviation), z-table | a | t | |
| | | | | | |
| V104 | Control and reporting | | | | |
| a | Management 'by Objectives' | Setting SMART goals | a | t | b |
| b | Management 'by Exception' | Tolerances and escalations | a | t | b |
| c | Daily management | | a | t | b |
| d | Managing a phase transition | - Objection procedure - Phase transition and phase plan | t | t | t |
| e | Escalation procedure | | a | t | b |
| f | Project Management | Project management products | t | t | b |
| g | Deming's management cycle | Plan-Do-Check-Act | t | t | t |
| h | Management and reporting levels | | t | t | t |
| i | Earned Value Analysis | | a | t | |
| j | Trend Analysis | Slip charts | a | a | t |
| k | Various reports in the project | Progress report, phase final report, deviation report, project final report, learning points report | a | t | b |
| | | | | | |
| V105 | Change Control | | | | |
| a | Change control versus change management | | b | b | b |
| b | Changes and project issues | Distinguish change requests, deviations from specifications, other project issues | t | t | t |
| c | Change strategy and procedure | Issue Register | t | t | t |

| No. | Topics | Explanation | B | C | D |
|--|---|---|---|---|---|
| d | Change authority and change budget. | | t | t | b |
| e | Priority and urgency | | t | t | t |
| V106 Closing | | | | | |
| a | Delivery and transfer of project result | <ul style="list-style-type: none"> - Statement of acceptance (user and management acceptance). - Completion (handover, protocol of delivery), including 'as built' documents - Commissioning | t | t | b |
| b | Wind down project | <ul style="list-style-type: none"> - Identify/recommend follow-up actions, including post-investment review - Wind down project and project team, release - Cleaning up, closing and transferring project file | t | t | b |
| c | Evaluation | Project justification (project final report) and project evaluation (lessons learned report) | t | t | b |
| d | Closure and discharge | | t | t | b |
| CE Practice 11: Risk and opportunities | | | | | |
| V111 Risk management: terms, definitions and categories | | | | | |
| a | Risk management strategy | | a | t | b |
| b | Risk Management | | t | t | t |
| c | Risks and opportunities | Difference between risks/opportunities and issues | b | t | b |
| d | Risk terms | including risk exposure, willingness, aversion and tolerance | b | b | b |
| e | Opportunity/risk owner and opportunity/risk action holder | | t | t | b |
| g | Probability, impact and horizon | | t | t | b |
| h | Different types of risks and opportunities | Internal and external risks and opportunities Project and business risks and opportunities | t | b | |
| i | Risk and opportunity categories | Political, economic, technological, legal and environmental (PESTLE) | t | t | b |
| V112 Risk management framework | | | | | |
| a | ISO 31000©;2018 Risk management | | t | b | |
| b | The 8 risk measures (in ICB4 par. 4.5.11.4) | - avoidance | t | t | t |

| No. | Topics | Explanation | B | C | D |
|---|--|---|---|---|---|
| | | <ul style="list-style-type: none"> - accepting/increasing the risk to take advantage of an opportunity - removal of the source of risk - reducing probability - reducing the impact/impact - sharing the risk with another party - accepting the risk - contingency plan | | | |
| c | The 4 opportunity measures (in ICB4 par. 4.5.11.4) | <ul style="list-style-type: none"> - seizing the opportunity - sharing the opportunity with a third party - increasing probability and/or impact - ignore | t | t | |
| d | Inherent, residual and secondary risk | | b | b | b |
| V113 Risk management techniques | | | | | |
| a | Risk and opportunity register | Includes risk matrix | t | t | b |
| b | Risk and probability identification techniques | Risk decomposition structure, fishbone diagram/cause and effect diagram, Pre-mortem analysis | t | t | |
| c | Risk and opportunity assessment techniques | Among others: Monte Carlo, scenario planning, sensitivity analysis, decision tree, expected monetary value, probability theory and statistical techniques, among others | t | b | |
| d | Time and cost reserves | | a | t | b |
| CE Practice 12: Stakeholders | | | | | |
| V121 Stakeholder analysis and stakeholder management | | | | | |
| a | Analyze stakeholders | Identify stakeholders, recognize interrelationships, analyze interest and influence, establish relationship to project | a | t | t |
| b | Stakeholder Management | Stakeholder management strategy and communication plan | t | t | b |
| c | Engaging stakeholders | <ul style="list-style-type: none"> - Inform, maintain interest, actively consult, actively engage - Expectation management | a | t | b |
| CE Practice 13: Change and transformation | | | | | |

| No. | Topics | Explanation | B | C | D |
|-------------|---|-------------|----------|----------|----------|
| V131 | Organizational Change | | | | |
| a | Change Management | | t | b | b |
| b | Change management approach | | t | b | b |
| c | Kotters 8-stage model of change | | t | b | |
| d | Diffusion of innovations - Rogers | | t | b | |
| e | Disciplines of the Learning Organization/The fifth discipline - Senge | | t | b | |