

Project time management according to
standard guidelines for project management

Project Time Management

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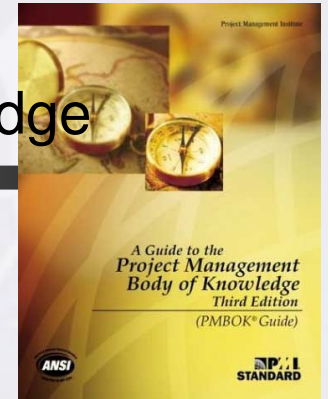
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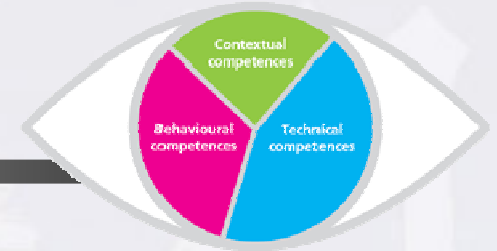
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- **PMBOK® – Activity Sequencing**

General introduction – Project Management Body of Knowledge



- **Process oriented in 5 groups among 9 knowledge areas**
 - Integration – Scope – Time – Cost – Quality
 - Human Resources – Communications – Risk – Procurement
- **Started by PMI in 1987, now 3rd edition**
- **Set up by to identify common PM practices**
- **International standard, IEEE 1490-2003**
- **Detailed description - gives input, output and techniques for each process**



- **Competence oriented in 3 groups**
 - Technical – Behavioural – Contextual
- **Set up by IPMA for personnel certification**
- **Strong focus on managerial skills**
- **4 levels of certification**
 - Certified Projects Director
 - Certified Senior Project Manager
 - Certified Project Manager
 - Certified Project Management Associate

- **Process oriented with 6 process groups**
 - Planning – Organising – Monitoring – Controlling
 - Reporting - On-going corrective actions
- **Guideline for quality management in projects**
- **Evaluation of customer/stakeholder needs**
- **Assures organisational qualities are met**
- **Not for certification/accreditation**
- **Initial structure based on PMBOK®**

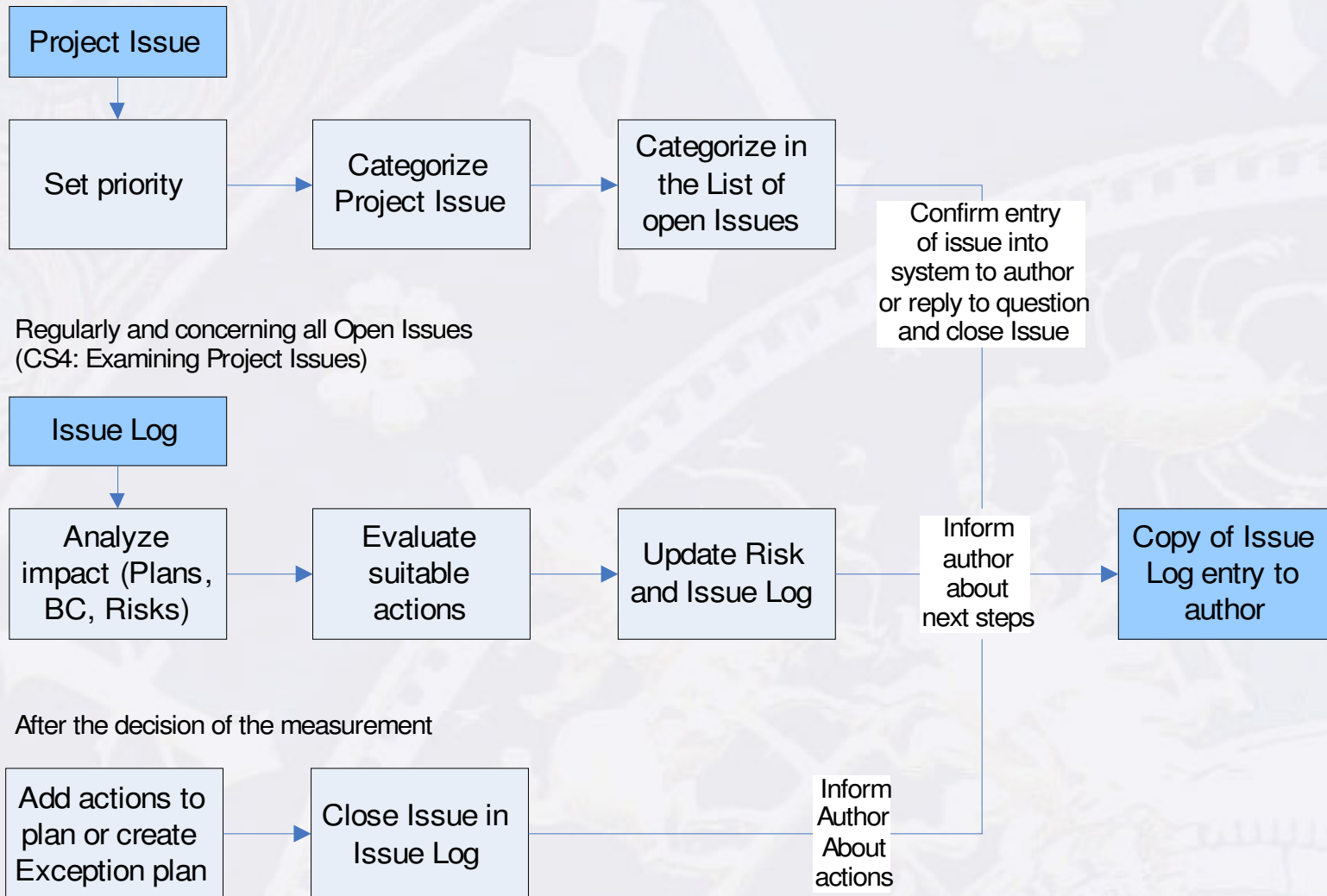


- **Process oriented with 10 steps**
 - Define the work - Build the schedule and budget
 - Manage schedule and budget - Manage Issues
 - Manage change - Manage communication - Manage risk
 - Manage human resources - Manage quality - Manage metrics
- **Incorporated by a consulting company**
- **No sequential progression besides planning**
- **Higher step → more attention**



- **Process oriented approach with 8 processes and 45 sub-processes**
 - Starting Up a Project - Planning - Initiating a Project
 - Directing a Project - Controlling a Stage - Managing Product Delivery
 - Managing Stage Boundaries - Closing a Project
- **Started in 1989 as UK standard for IT PM**
- **Most practical approach**
- **Special techniques**
 - Product Based Planning (PBS)
 - Quality Review (Chairman – Reviewer - Scribe)
 - Change Control (Change means Project Issue)

General introduction – PRINCE2 – Change Control



Comparison of selected standards – PMBOK® and ICB

6 Project time management	ICB does not want to include the detailed specific description of the PMBOK Guide
6.1 Activity Definition	14. Time schedules
6.2 Activity Sequencing	14. Time schedules
6.3 Activity Resource Estimating	15. Resources
6.4 Activity Duration Estimating	14. Time schedules
6.5 Schedule Development	14. Time schedules
6.6 Schedule Control	20. Controlling

Based on KNÖPFEL, Hans

Comparison of selected standards – PMBOK® and ICB

- **ICB only proposes steps, no direct definition**
- **Time related processes spread around competences**
 - Finance
 - Personnel Management
 - Efficiency
 - Control and reports
- **Based on Soft Skills – competences**
 - Contextual competences
 - Technical competences
 - Behavioural competences

- **Possible processing steps could be:**
 - Define and sequence the activities and/or work packages
 - Estimation duration
 - Schedule the project or phase
 - Allocate and balance resources
 - Compare target, planned and actual dates and update forecast as necessary
 - Control the time schedule with respect to changes
 - Document the lessons learned and apply to future projects

Comparison of selected standards – PMBOK® and ISO 10006:2003

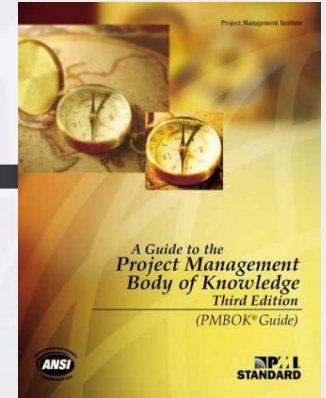
6 Project Time Management

7.4 Time-related processes

6.1 Activity Definition	7.3.4 Definition of activities
6.2 Activity Sequencing	7.4.2 Planning of activity dependencies
6.3 Activity Resource Estimating	6.1.2 Resource planning
6.4 Activity Duration Estimating	7.4.3 Estimation of duration
6.5 Schedule Development	7.4.4 Schedule development
6.6 Schedule Control	7.4.5 Schedule control

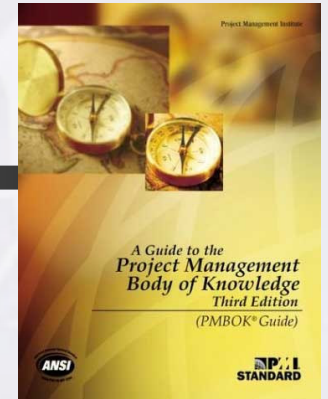
- **No introduction of possible techniques**
- **Activities directly and only related to time**
 - No activity definition and activity resource estimation
- **No direct definition of inputs/outputs**
 - No direct link between processes
- **Much higher abstraction level**
 - Better scalability, “at owner's risk“
- **No misleading security**

PMBOK® – Time Management – Tools & Techniques



- **Expert**
 - Visualized schedule activities and logical connections
- **Activity List**
 - Updated Activity List after possible change requests
- **Activity Attributes**
 - Updated with leads and lags, containing logical connections
- **Milestone List**
 - Updated with leads and lags, containing logical connections
- **Change Request**
 - Updated with leads and lags, containing logical connections

PMBOK® – Time Management - Specialities



- **Rolling Wave Planning**
 - Decomposition of WBS abstraction level on time
- **Templates**
 - Activity Lists for former projects
- **Crashing**
 - Higher costs, higher compression of the schedule
- **Fast tracking**
 - Increase on costs, compression of the schedule

- **Project Scope Statement**
 - Common description of deliverables for team and stakeholders
- **Activity List**
 - Decomposed WBS
- **Activity Attributes**
 - Resource requirements, logical relationships, activity identifiers
- **Milestone List**
 - Schedule control points, sub-deliverables of the project
- **Approved Change Request**
 - New requirements to project scope

- **Project Schedule Network Diagrams**
 - Visualized schedule activities and logical connections
- **Activity List**
 - Updated Activity List after possible change requests
- **Activity Attributes**
 - Updated with leads and lags, containing logical connections
- **Milestone List**
 - Updated with leads and lags, containing logical connections
- **Change Request**
 - Updated with leads and lags, containing logical connections

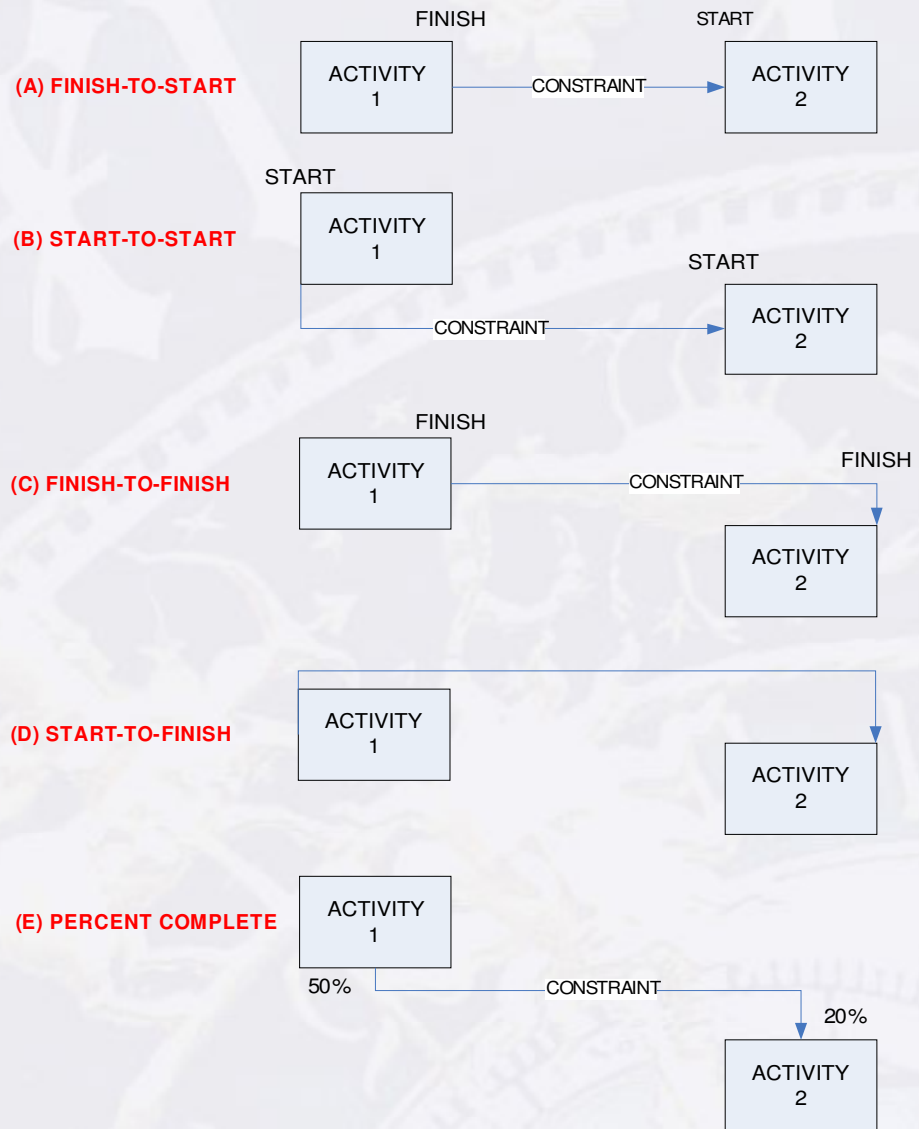
- **Schedule Network Templates**
 - Used to accelerate the preparation of networks of project schedule activities
- **Dependency Determination**
 - Mandatory dependencies
 - Discretionary dependencies
 - External dependencies
- **Applying Leads and Lags**
 - Leads – acceleration of the successor activity
 - Lags – delay in the successor activity
- **Expert Judgment**
 - Also called Lessons learned by other methods

- **Critical Chain Method**
 - Modify the project schedule
 - Focuses on managing the buffer activity duration
 - Focuses on managing the resources applied to planned schedule activities
 - Deterministic and probabilistic approaches
 - Add buffers to critical milestones

PMBOK® - Activity Sequencing – Tools & Techniques

Activity-On-Node (AON) or Precedence Diagramming Method (PDM)

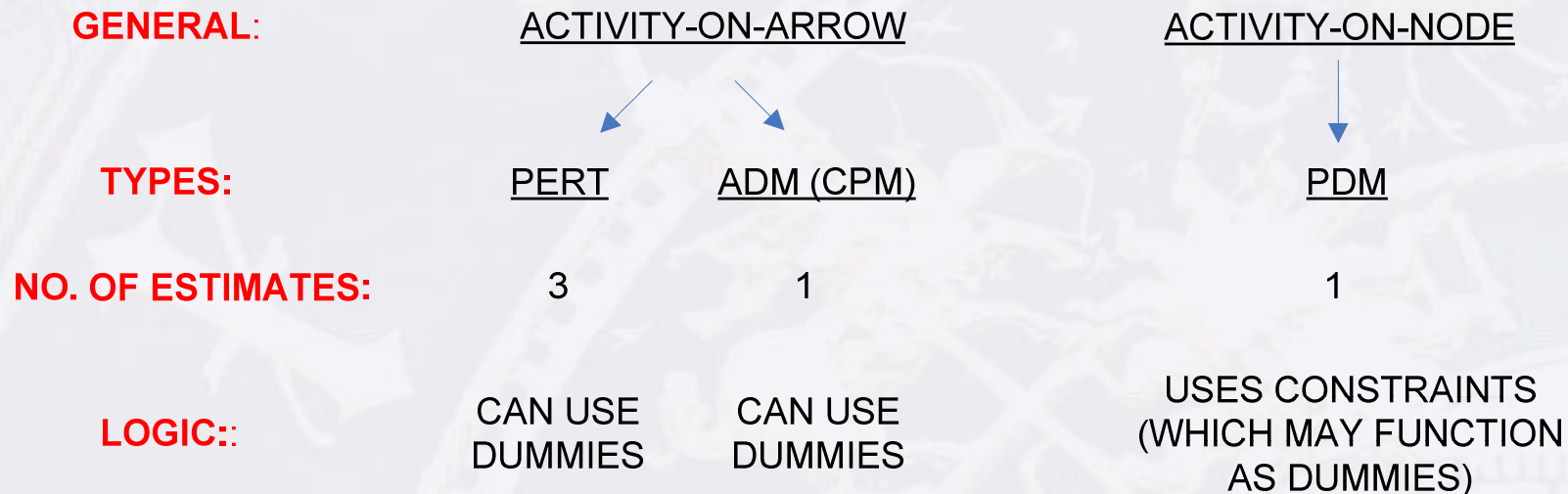
- Scheduling activities
- Between milestones
- Start before the former ends
- Consist of five types:
 - finish-to-start
 - start-to-start
 - finish-to-finish
 - start-to-finish
 - percent complete



Activity-On-Arrow (AOA)

- PERT
- Finish-to-start
- Three scenarios
- Use dummies

- ADM or CPM
- Finish-to-start
- One scenario
- Use dummies



**Thank You
for your attention..**



Questions Left ??