

Software Project Management

Lesson 8 – Execution Phase

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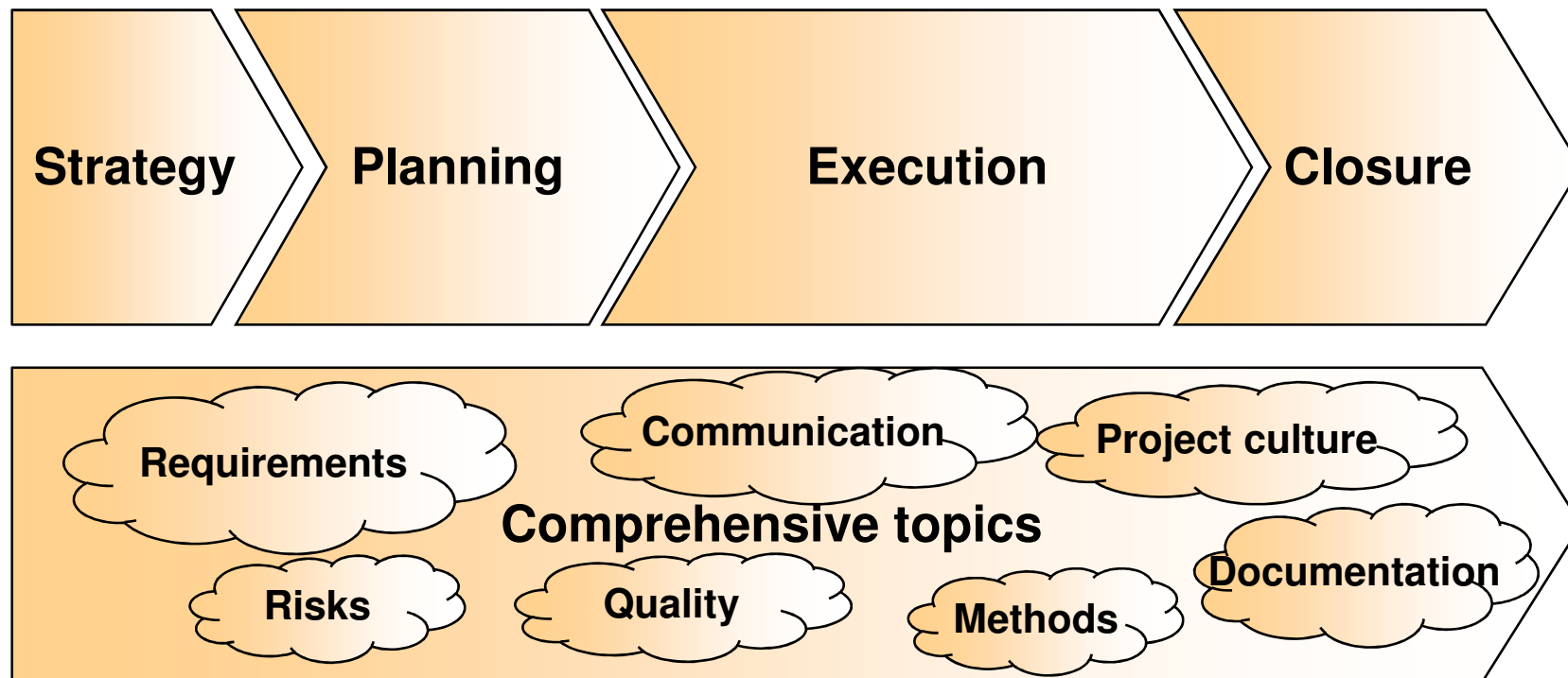
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Past
Present
Future

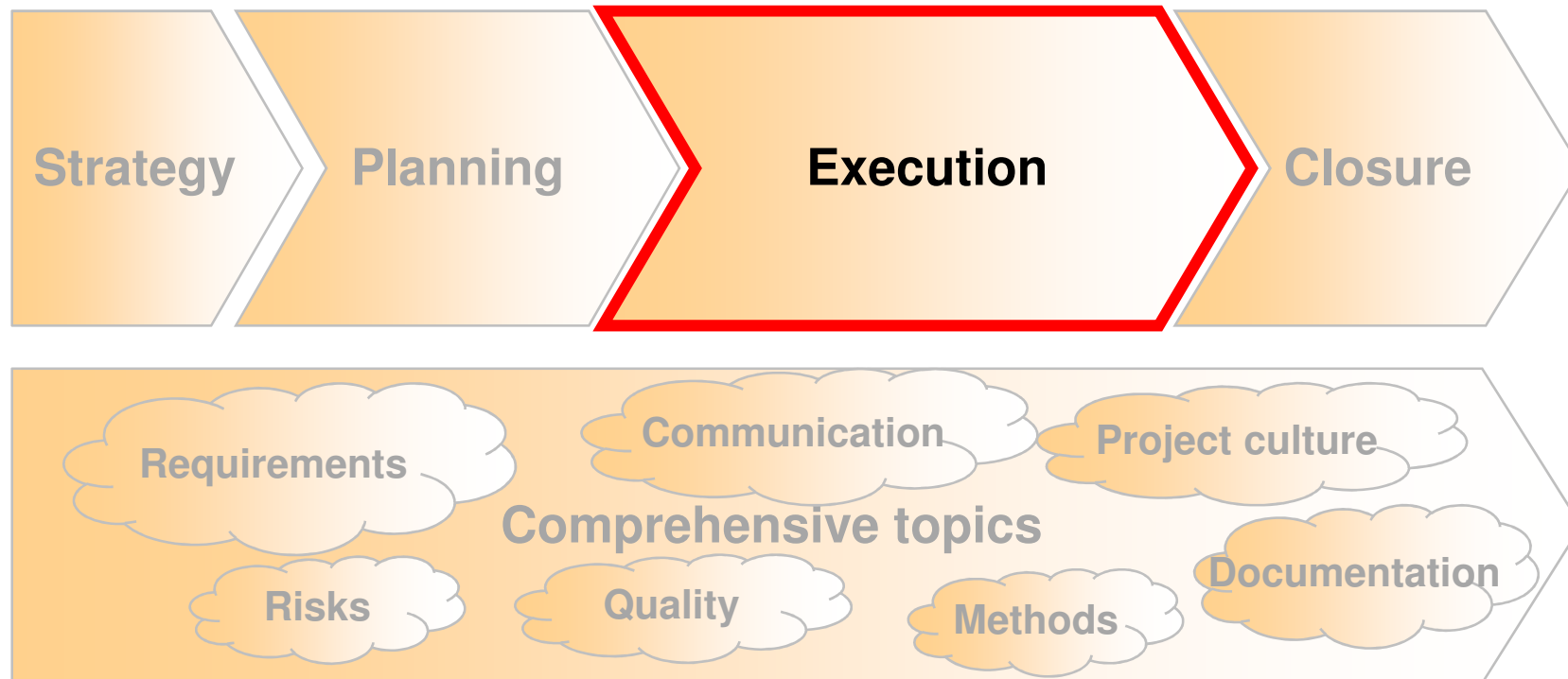


Introduction





Introduction





Goal / Results

- Project stage: Execution Phase
Synonyms: Construction phase, Doing phase, Implementation phase, Operational phase,
- Goal of the execution phase is to achieve the project objective(s)



Goal / Results

- The result is depending on the project goals:
Hence it could be
 - a service
 - a product
 - a document
 - something else
- Abstractly consolidated a result is:
 - Project success
 - Partial project success
 - Project stop



Goal / Results

- Basically the project control covers all activities to ensure that the project goals could be reached
- Always knowing
 - the current status of work and
 - how much has to be done until the end of project
- Supporting good working in the project team
- Having always an updated plan



Definition

- Project control covers
 - Target-performance comparison with cause analysis, if variations occur
 - Evaluation of the consequences of new findings and (positive or negative) events affecting the progress of the project
 - Planning, developing, executing, and controlling of operation of (corrective) activities
 - Update of the planning and analysis of the further progress of the project

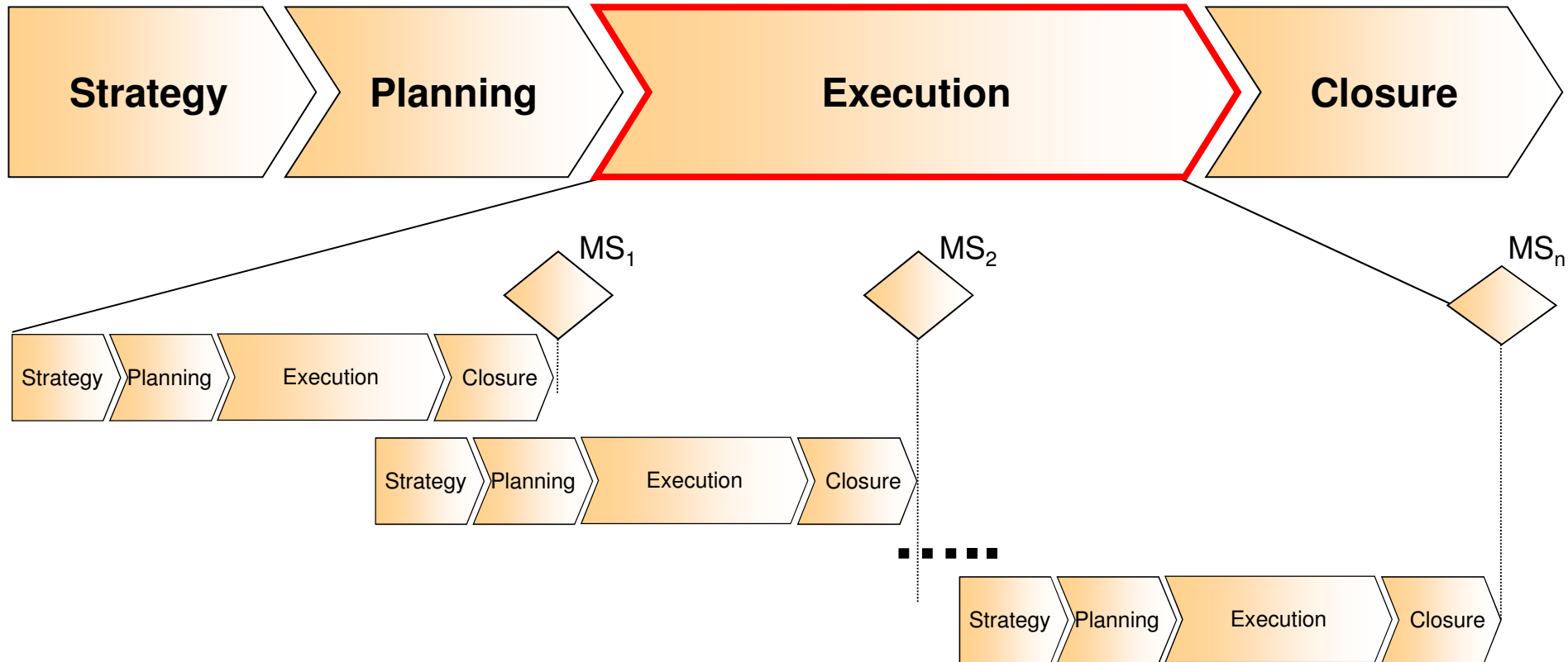


Milestones

- Milestone management makes a project manageable
- Contents of a milestone
 - Complete information and presentation of the current status to involved people, especially steering committee
 - Acceptance of partial success, milestone results
- Milestone plan
 - Update of overall plan if necessary, uncovering and solving conflicts concerning time / scope of milestones
 - Planning next milestone concerning contents
 - Planning next but one milestone concerning dates and headlines



Milestones



In-between milestones: “Projects in project”
→ Consider overlapping of phases



Project monitoring

- Project monitoring as prerequisite for an efficient project control
- Scope
 - Target-performance comparison
 - Use of key figures / key performance indicators
 - Objective progress – in terms of content against the goals
 - Dates – based on Time schedule
 - Cost control
 - Milestone management (Activities, if necessary)
 - Presentation of the project status



Project monitoring

Objective progress

- Most important control task, but the most difficult as well
- How to determine the degree of completion of a working package?
- Example: Measuring of the degree of completion in percent → 90-percent-complete trap
- Progress control should be based on technical facts – professional know-how needed!
- Proposal:
 - Common definition of indicators and criteria
 - Judging of quality with maturity levels



Project status

Presentation of project status

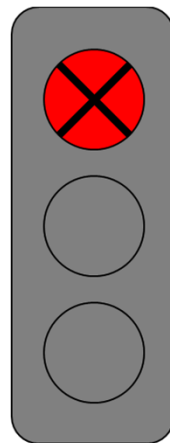
... is done typically by status reports

- Goals
 - Information for principal
 - Feedback and validation for the project team:
Are we still on the right way?
 - Target-performance comparison,
depicting of project management ratios
- Use of traffic lights logic
- Proposal: Every two to four weeks
... depending on size, duration and project phase



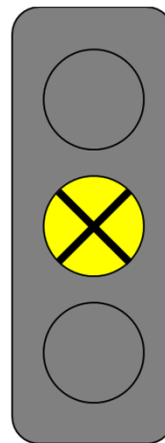
Project status

Meaning of traffic light colors



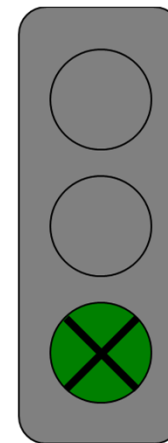
Red

Escalation
required



Yellow

Critical



Green

Okay

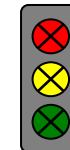


Project status

- Template Example

Project status

Project name	<Name of project>	Project No.	<Number of project>
Project manager	<Name of project manager>		
Report period	<CW05>	Version / Date	<0.0.1 / dd.mm.yy>
Author	<Name of author>		



1. Status

Result	<1. First result achieved> <2. Second result achieved> <3. Third result achieved>
Activities	<1. First activity description> <2. Second activity description> <3. Third activity description>



Project status

- Template
Example 2. Forecast

Planned activities	<i><1. Most important planned activity until next status report> <2. Second planned activity until next status report> <3. Third planned activity until next status report></i>
Planned activities until end of project (Backlog)	<i><1. Most important planned activity until end of project> <2. Second planned activity until end of project> <3. Third planned activity until end of project></i>
Risks	<i><1. Highest risk description and planned measures> <2. Second highest risk description and planned measures></i>
Open points, issues	<i><1. Highest rated issue, comments, proposals> <2. Second highest rated issue, comments, proposals ></i>



Project control

Main activities

- Declaring the (successful) end of the project or applying for cancellation of the project
- Applying / accompany a project review / audit
- Dealing with work packages
 - Starting
 - Accompanying (changes), and
 - Finishing
 - Approval of (partial) work packages results
- Regular update of plans (dates, work packages)
- Control activities, if deviations occur



Project control

Main activities

- Management of project members
- Ensuring communication, e. g. with regular meetings
 - Principal / steering committee
 - Project team / Core project team
 - to the outside world
- Presentation of results / status, status reports
- Conflict management in case of trouble
- Change management



Trend analysis

- Statements concerning the further project progress
- Contents
 - Forecast project progress
 - Considering cognitions and communicating them
Looking for solutions, deciding, and realizing
 - Continuous updating and correction of the project plan as reaction on interfering events and new knowledge
→ Continuous process



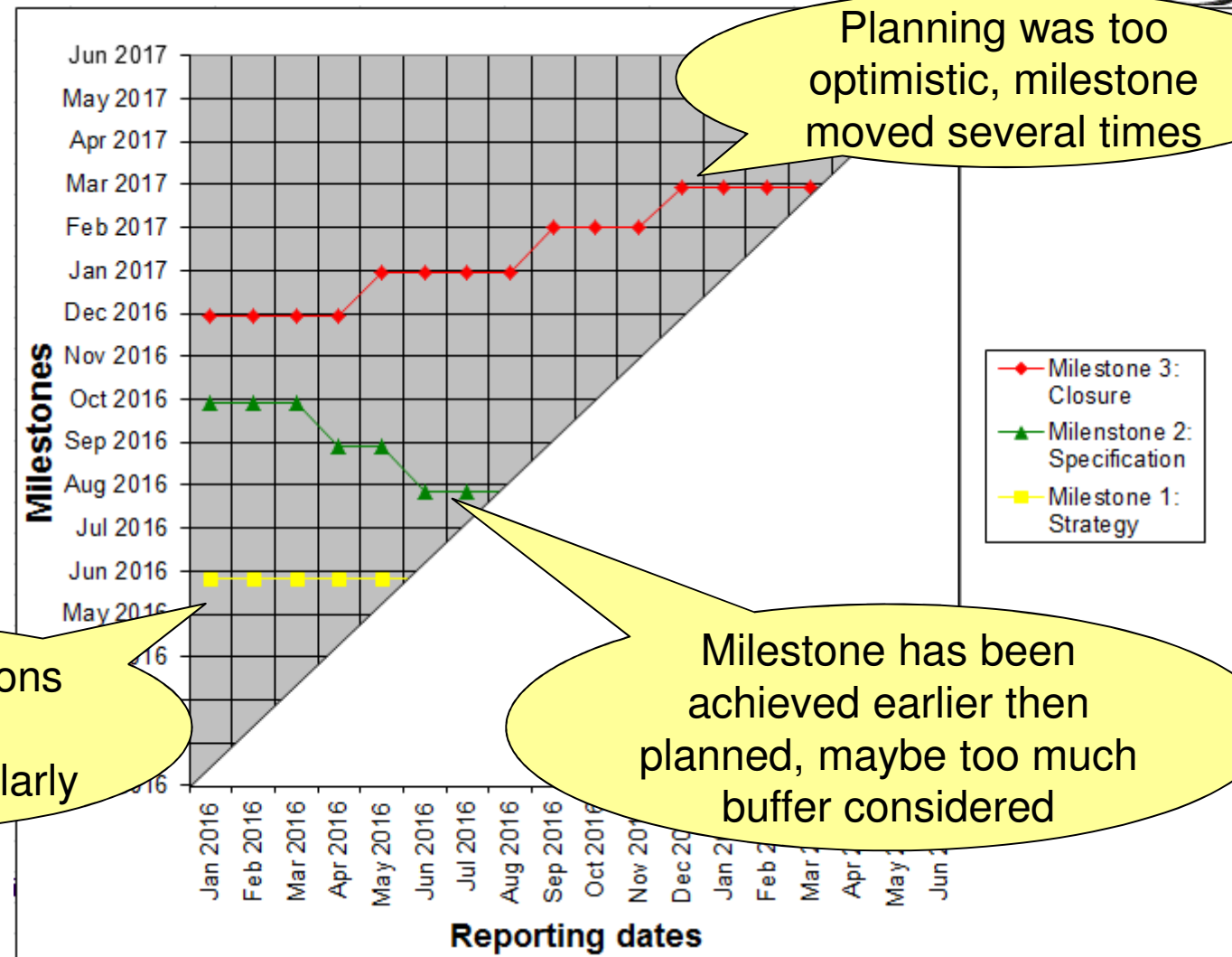
Trend analysis

- Milestone trend analysis (MTA)
 - Special form of trend analysis based on milestone plan
 - Monitoring the progress of the project and detection of possible delays in time
 - Regular meetings between responsible people and involved people to discuss the status of the milestones



Trend analysis

Example





Summary

- The execution phase is used to achieve the project objective(s)
- Splitting execution phase with milestones
- Regular target performance comparisons, management activities in case of derivations, issues
- Milestone trend analysis to predict future course
- Comprehensive topics to be considered
 - Project documentation
Minutes and project status reports including documentation of decisions and agreements
 - Project communication
 - Advancement of project culture
 - Project marketing



Sources

- [AG16] Daud Alam, Uwe Gühl:
Projektmanagement für die Praxis, Springer
Vieweg Berlin Heidelberg, 2016 (in German)