MBA
AVIATION & TOURISM
MANAGEMENT

FRANKFURT
UNIVERSITY
OF APPLIED SCIENCES

Project Management

Fachbereich 3 Wirtschaft und Recht
Prof. Dr. Benjamin Bierwirth

About me

Scientific background

- 10/2020 Professor @ FRA UAS
- 2016– 2020 Professor at Wiesbaden Business School
- 2014 – 2016 Assistent Professor @ FRA UAS
- Since 2011 Lecturer @ FRA UAS
- 2009 PhD at Technical University of Dortmund in Aviation Logistics
- 1998 – 2004 Studied Industrial Engineering and Management at Technical University of Darmstadt

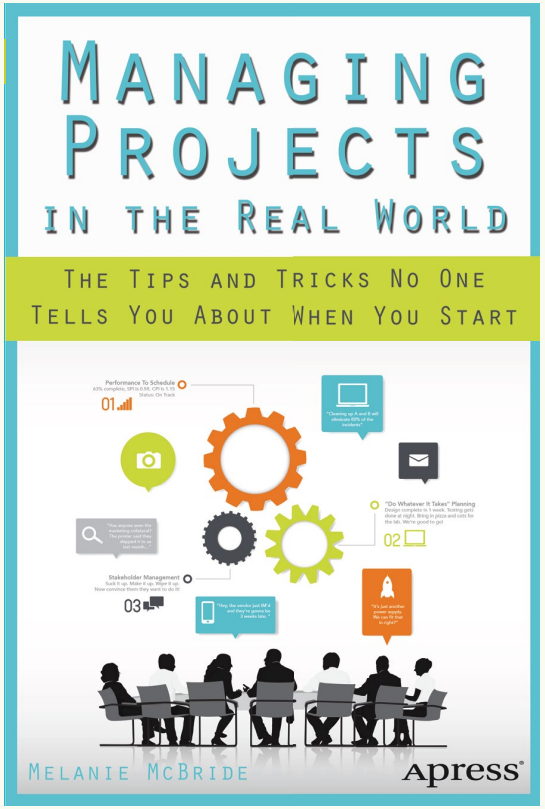
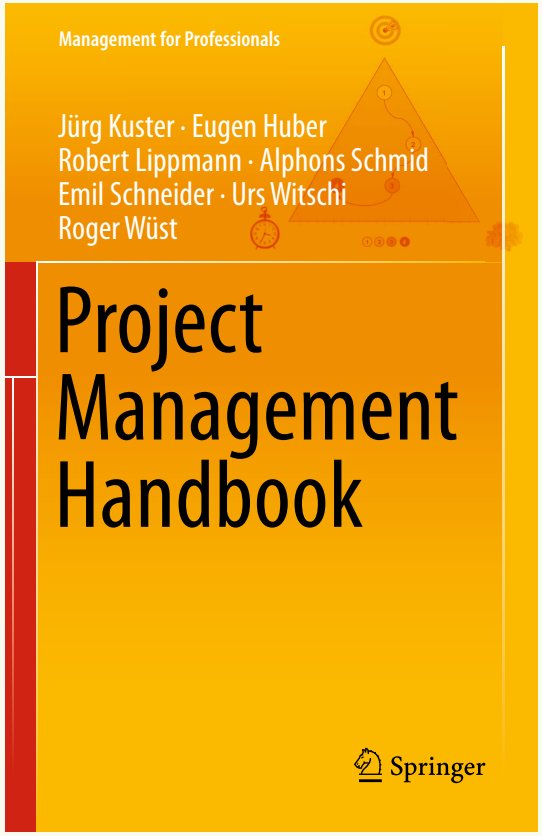
Professional experience

- Since 2012 Managing Director Avistics GmbH Consulting in Aviation and Logistics
- 2010-2011 Partner with hwup Consulting
- 2004 – 2009 Project Manager at Fraunhofer-Institute for Material flow and Logistics

Agenda - Overview

- Part 1: Background, Expectation, Experience
  - About me
  - About You
  - The MBA as a project
- Part 2: Project Management
  - Basics
  - Methods
- Part 3: Communication & Change
  - Meetings
  - Presentations
  - Change Management

Literature

McBride, Melanie: Managing Projects in the Real World	Kuster, Jürg et al.: Project Management Handbook
	

More literature

- Walter, Matthias: Multi-Project Management with a Multi-Skilled Workforce, Springer, 2015.
- Vanhoucke, Mario: Integrated Project Management and Control, Springer, 2014.
- Vanhoucke, Mario: Project Management with Dynamic Scheduling, Springer, 2013.
- von Wasielewski, Erwin: Project Knowledge Management, Springer, 2010.
- Franz, Hans-Werner; Sarcina, Ruggiera: Building Leadership in Project and Network Management, Springer, 2009.

MBA AVIATION & TOURISM MANAGEMENT

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About You

- Where do You come from?
- Have You participated in projects before?
- What is Your experience and knowledge regarding Project Management?
- What was Your best/worst project(-related) experience?
- What are Your expectations?

My expectations

By the end of the week You should

- have learned the basics of project management
  - What You should have in mind when planning/doing a project
  - Find Your personal way and decide about what is more or less important
- Be prepared for the consulting project

- Have a little fun

The MBA as Your Project

- Look at Your MBA program as a project
  - Make up a plan
  - What are the important aspects?
  - What Do You have to consider?

- Prepare Your Plan (alone):
  - 5-10 Min.

- Present Your plan and discuss in group of 3-4 students and update Your Plan:
  - 30 Min.

- We collect the different views and discuss

What is a project?

Characteristics of a project

- Time constraints
- Change
- Innovative
- Complex, inter-disciplinary
- Own budget
- Own organization
- Have to be flexible, hard to plan
- Risks

Definition

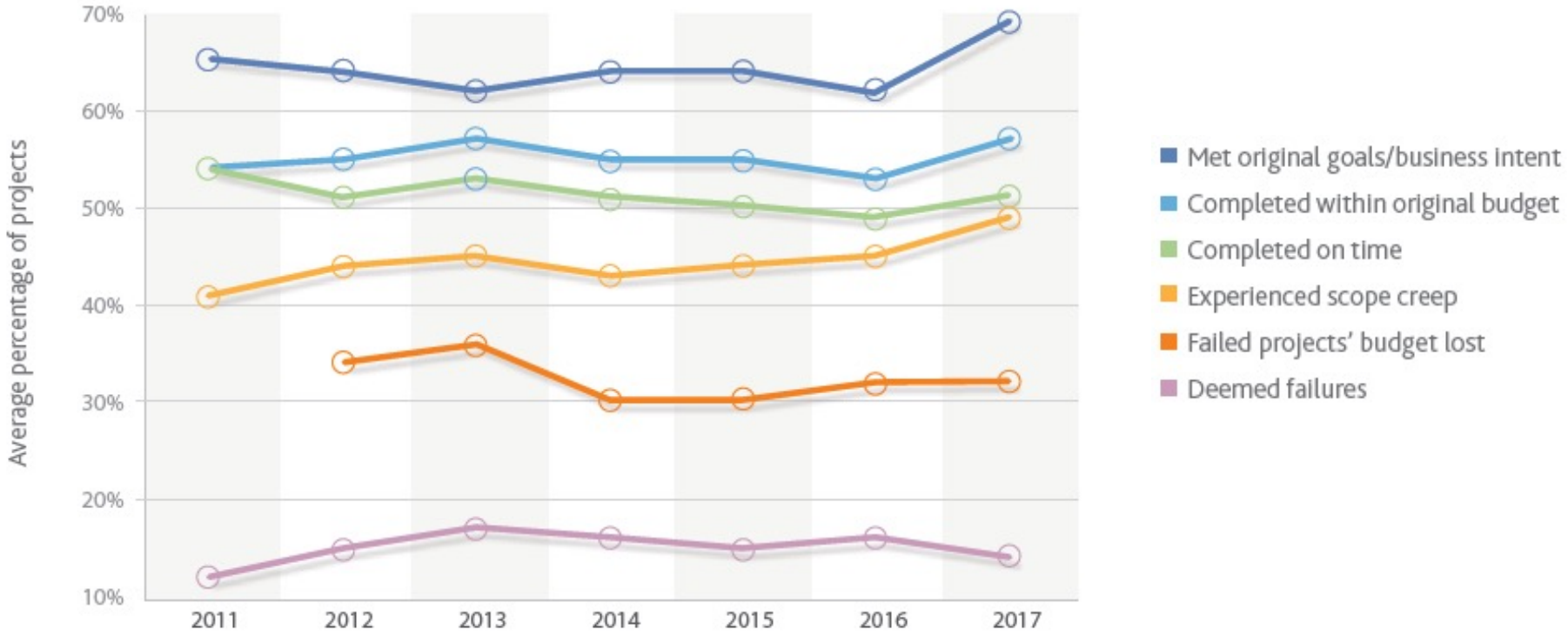
„If a one-off initiative extends across departments, has a limited time frame, is focused on a specific objective, is interdisciplinary and is so important, critical and urgent that it cannot be easily managed by the existing line organisation, but instead needs special organisational measures to be taken, then we can call it a project.“

(Kuster et al, Project Management Handbook, p.6)

Do You know successful projects?

Do remember failures?

Some statistics



Source: PMI – Project Management Institute (eds.) (2017): The Pulse of the Profession. 9th Global Management Survey 2017, Newton Square, Pennsylvania, p. 5

Reasons for failures

Source: PMI – Project Management Institute (eds.) (2017): The Pulse of the Profession. 9th Global Management Survey 2017, Newton Square, Pennsylvania, p. 11

Project characteristics and organizational forms

Type of process	Repeated process	One-off process		
	Low complexity	Low to medium complexity	Medium to high complexity	High to very high complexity
	Short / medium-term	Short-term	Short-term	Short / medium-term
Type of organisation	**Ongoing business:** Permanent process organisation	**Special initiative:** Temporary person or working group	**Project:** Temporary project organisation	**Programme:** Temporary programme organisation

Fig. 7.2 Project characteristics and organisational forms

Source: Kuster et al, Project Management Handbook, p. 36

Project types

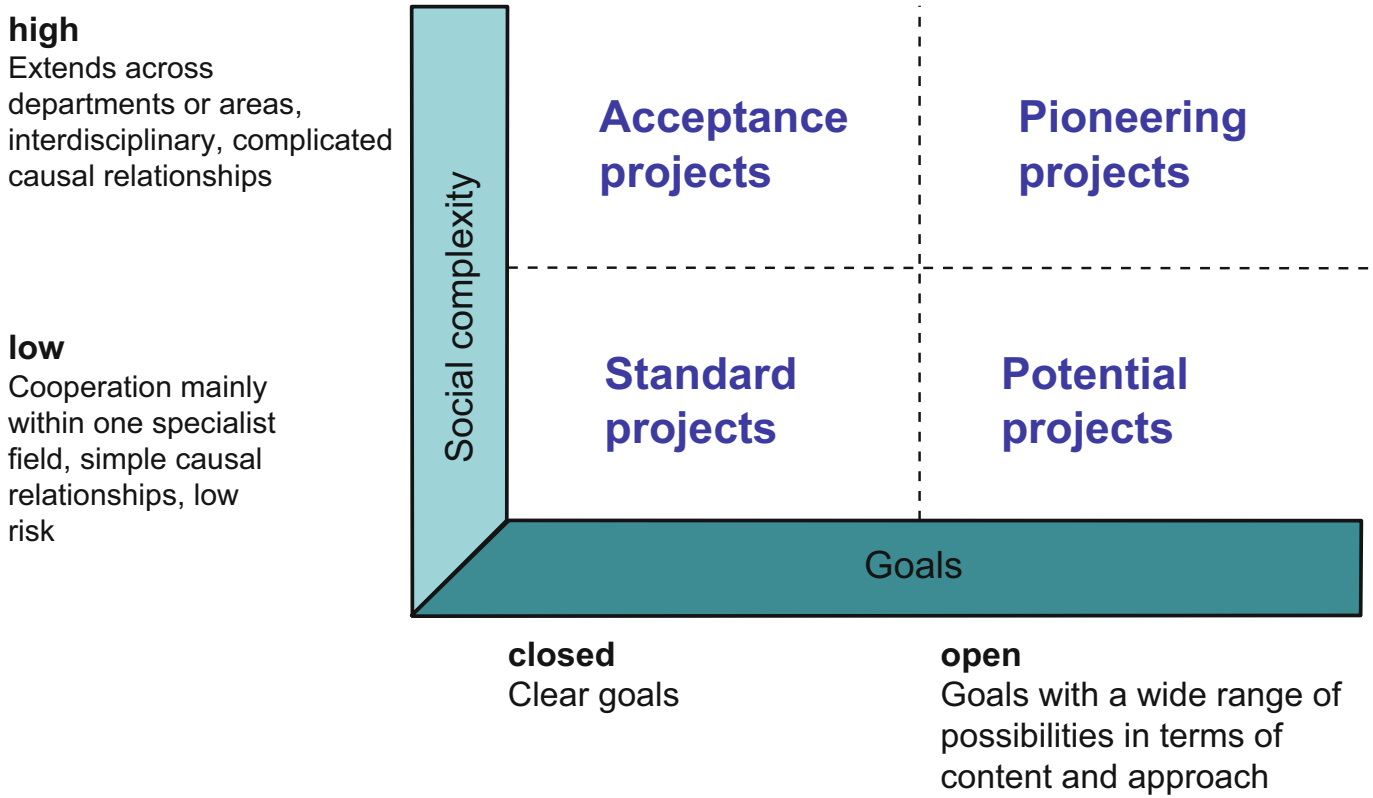


Fig. 2.1 Project types

Source: Kuster et al, Project Management Handbook, p. 8

Classification of projects

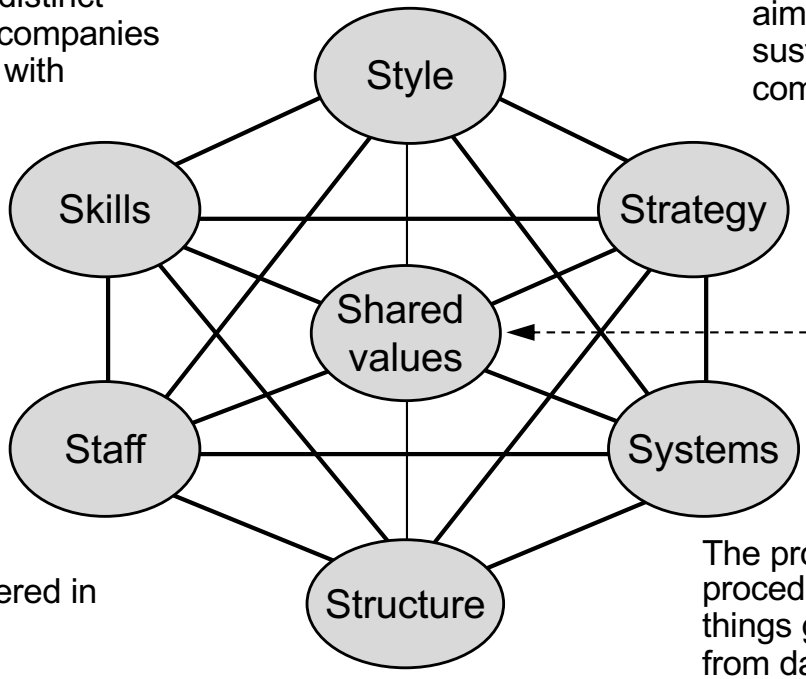
- Investment projects
- Infrastructure projects
- Product development projects
- Organisational projects
- Organisational development projects
- Information technology projects (ICT projects)
- Construction projects

The McKinsey 7-S-model is helpful to describe what is important for project management

The way managers collectively behave with respect to use of time, attention and symbolic actions

Capabilities possessed by the organization as a whole as distinct from the individuals. Some companies perform extraordinary feats with ordinary people

A coherent set of actions aimed at gaining a sustainable advantage over competition



Those ideas of what is right and desirable (in corporate and/or individual behavior) which are typical of the organization and common to most of its members

The people in the organization, considered in terms of corporate demographics, not individual personalities

The processes and procedures through which things get done from day-to-day

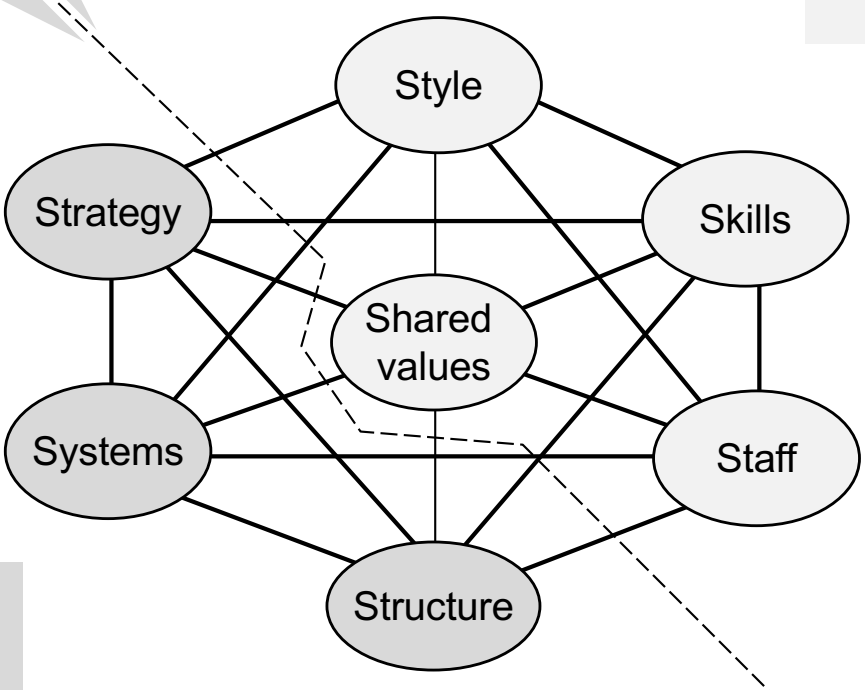
The organization chart and accompanying baggage that show who reports to whom and how tasks are both divided up and integrated

The 7S-model encompasses hard & soft aspects

More **cultural** approaches to project management

More **structural/program** approaches to project management

Behavioral ("soft") aspects of project management



Strategic and structural ("hard") aspects of project management

For success You need Management & Leadership

Management	Leadership
Planning and budgeting • establishing detailed steps and timetables for achieving needed results • allocating the resources necessary to make it happen **Organizing and staffing** • establishing some structure for accomplishing planned requirements • staffing that structure with individuals • delegating responsibility and authority for carrying out the plan • providing policies and procedures to help guide people • creating methods or systems to monitor implementation **Controlling and problem solving** • monitoring results • identifying deviations from plan • planning and organizing to solve these problems	**Establishing direction** developing a vision of the future - often the distant future - and strategies for producing the changes needed to achieve the vision **Aligning people** communicating direction in words and deeds to all those whose cooperation may be needed so as to influence the creation of teams and coalitions that understand the vision and strategies and that accept their validity **Motivating and inspiring** energizing people to overcome major political, bureaucratic, and resource barriers to change by satisfying basic, but often unfulfilled, human needs

Source: Kotter, P.: What Leaders Really Do, in Harvard Business Review, Vol. 56 (1990), No. 3 (May-June), pp. 63-71

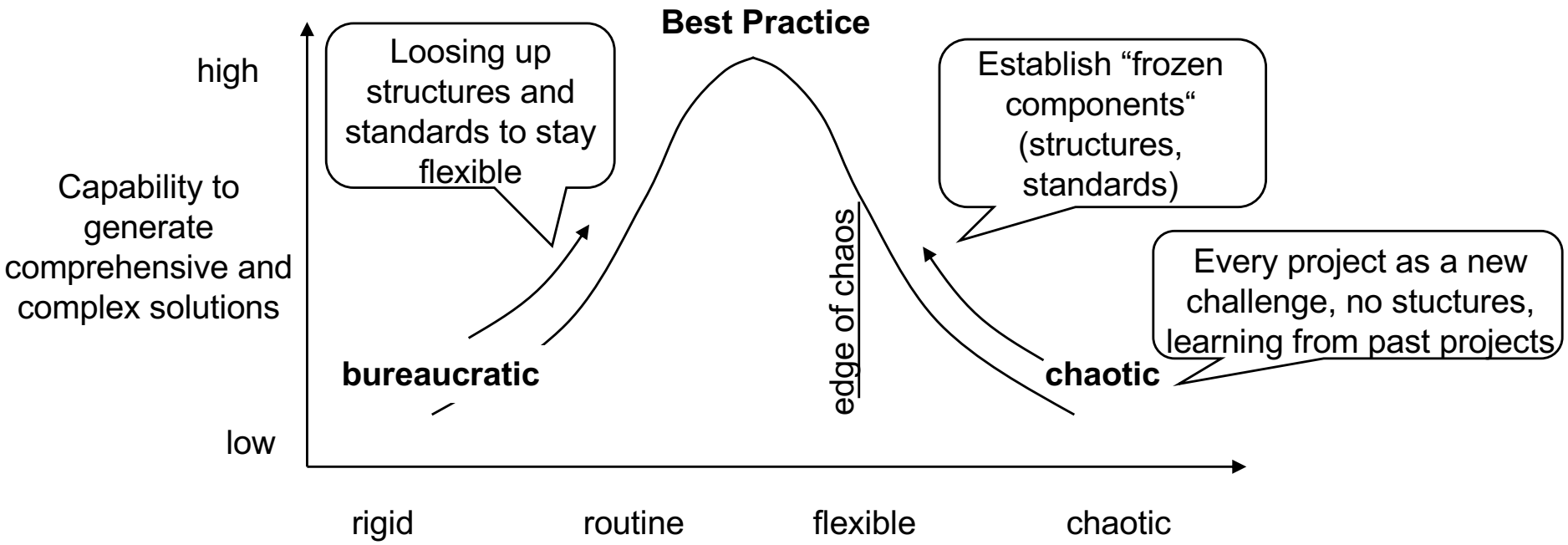
Management focuses on complexity, leadership on change

Management	Leadership
Planning and budgeting	Establishing direction
Organizing and staffing	Aligning people
Controlling and problem solving	Motivating and inspiring
Coping with ***complexity***	Coping with ***change***

Leadership complements management, it does not replace it.

Source: Kotter, P.: What Leaders Really Do, in Harvard Business Review, Vol. 56 (1990), No. 3 (May-June), pp. 63-71

The challenge between bureaucracy and chaos



Project Management Hierarchy

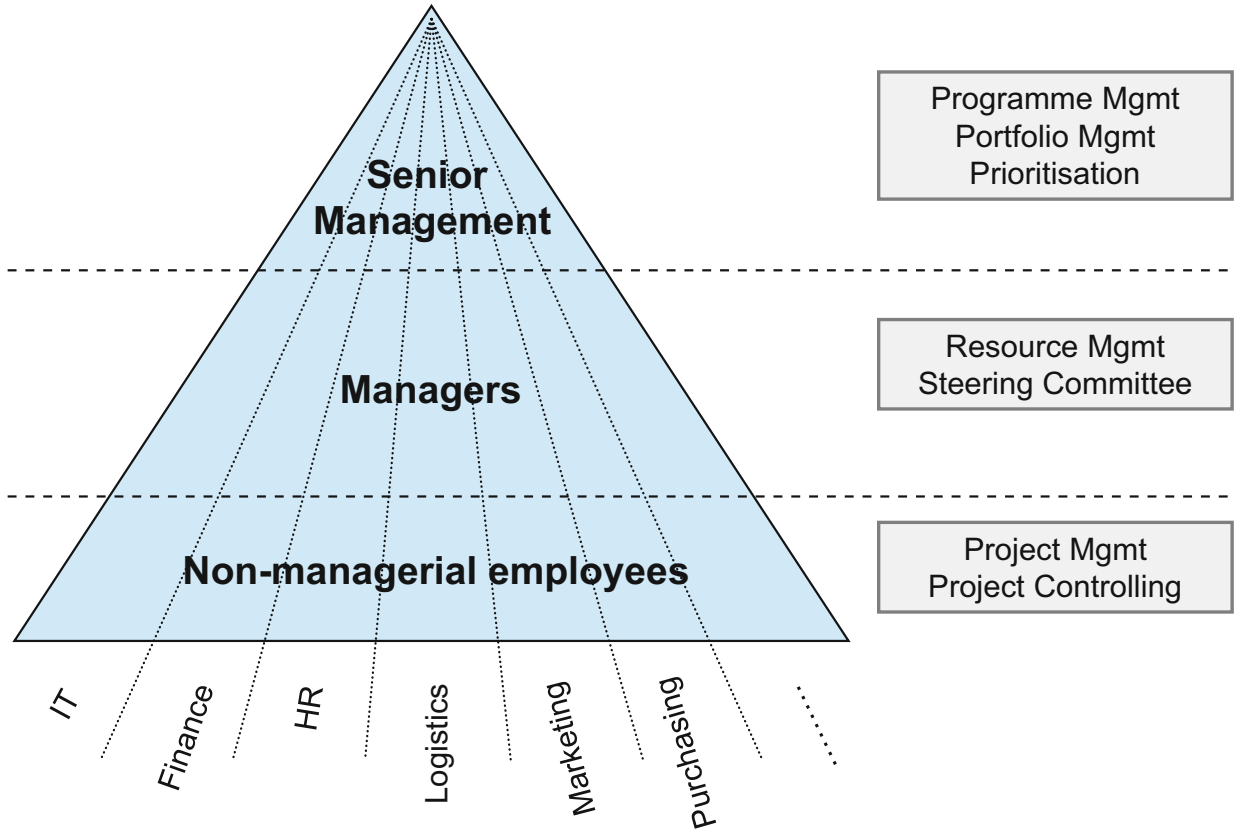
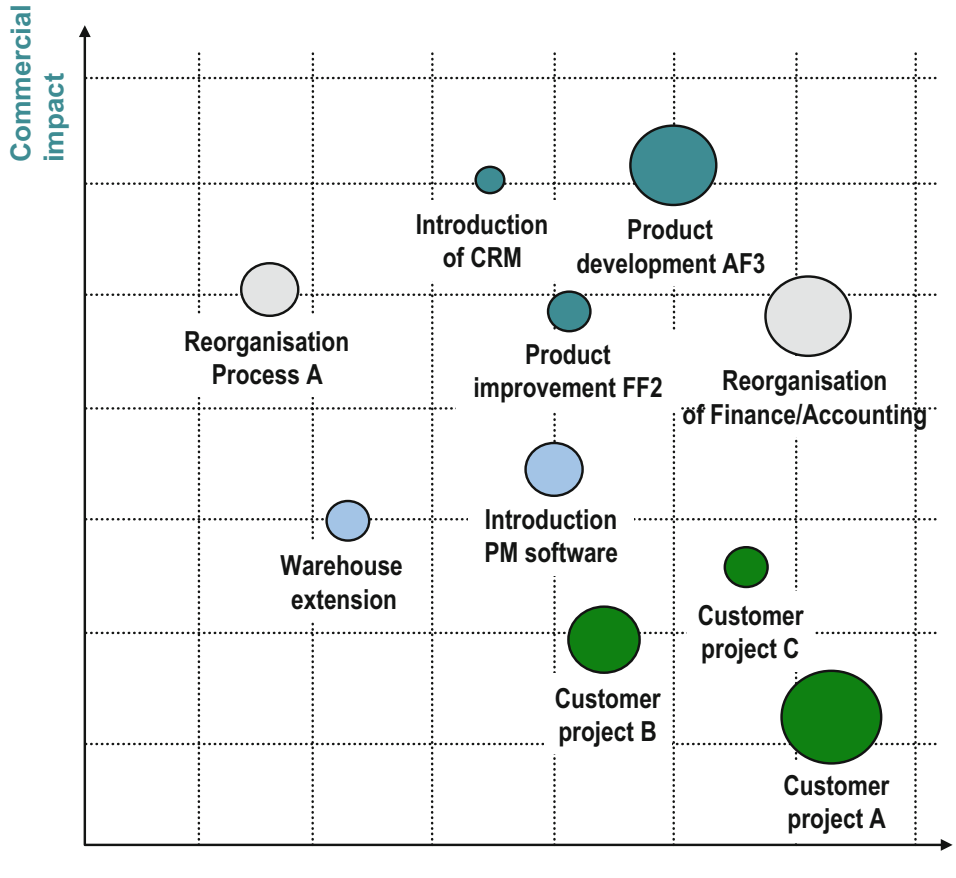


Fig. 3.1 Project management tasks in a company hierarchy

Source: Kuster et al, Project Management Handbook, p. 10

Project portfolio – Example



Key:

Colour: **Project category**
Size: **Project budget**

Source: Kuster et al, Project Management Handbook, p. 313

Project Organization – Preliminary Phase

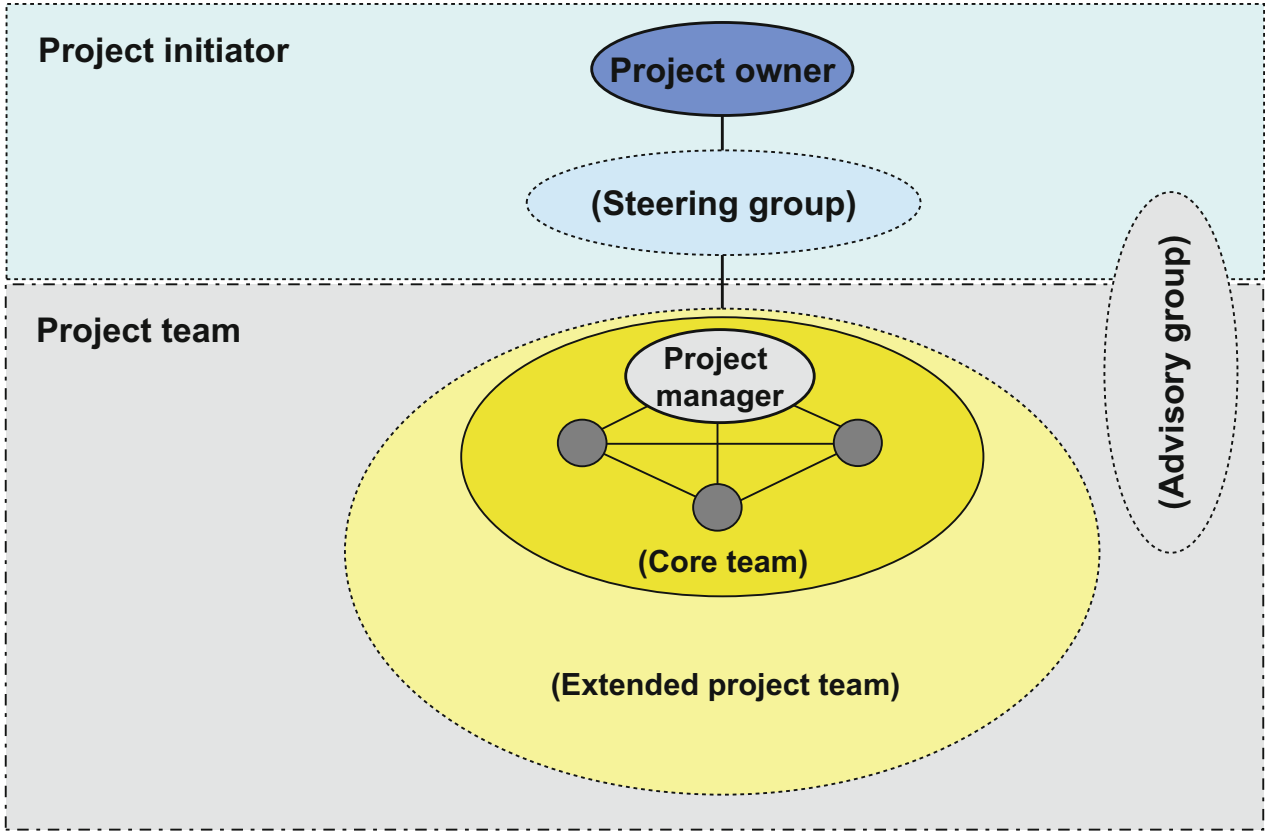


Fig. 10.2 An ideal project organisation for the preliminary study phase

Source: Kuster et al, Project Management Handbook, p. 55

Success factors of project organizations

- Clear **project agreement**: challenging goals and framework conditions or guidelines that define the scope for change.
- Clear decision-making authority and management **responsibility** by project managers.
- Project team made up of **interdisciplinary** representatives from different specialist areas and different departments.
- Actively **involved users and stakeholders**, in order to achieve maximum acceptance.
- A **positive working culture** that encourages communication, commitment and creativity.
- Good **links** back into the **core organisation**
- Availability of **resources**.
- **Methodical support** from the “project office”.

Link between line and project organization

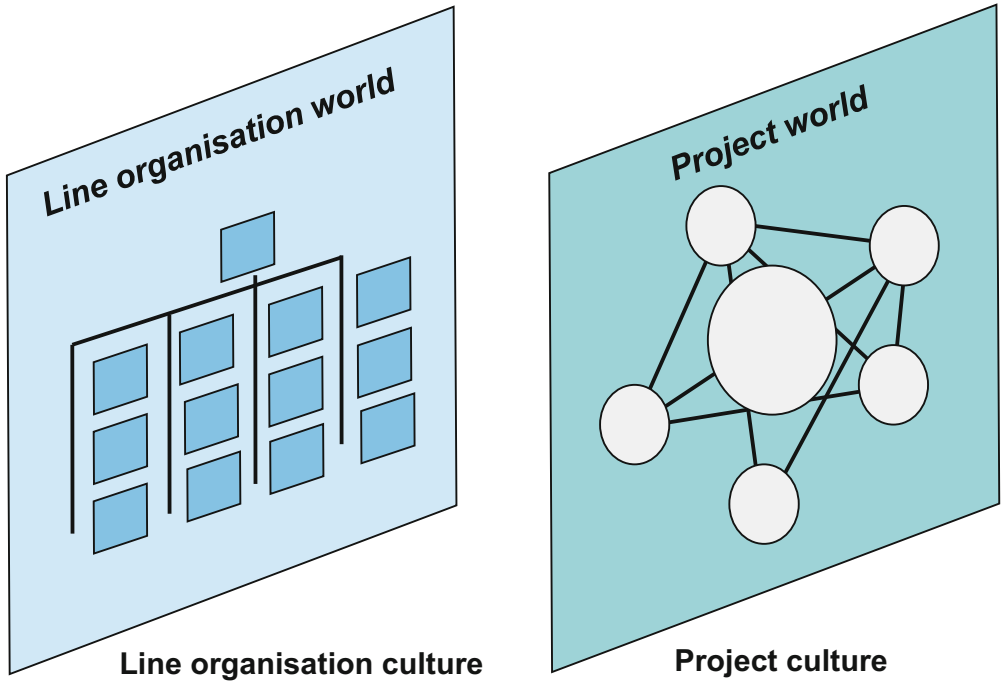


Fig. 15.1 Two worlds: The line organisation and the project environment

Source: Kuster et al, Project Management Handbook, p. 104

Roles and responsibilities in a project

Project owner Steering committee	What?	Decision-making authority Body responsible for initial decision, link between project and line
Project manager	How?	Process expertise
Project team (including ad hoc groups)	How?	Subject expertise

Fig. 15.2 Institutional project bodies and levels of authority

Source: Kuster et al, Project Management Handbook, p. 105

Types of project organizations – Coordination

Benefits

- Greater flexibility in use of personnel.
- Makes it easy to collect and share information about experiences across different projects.
- The organisation does not need changing.
- Responsibility for the project remains largely with the line organisation.

Drawbacks

- Nobody feels responsible for the project.
- Low reaction speed.

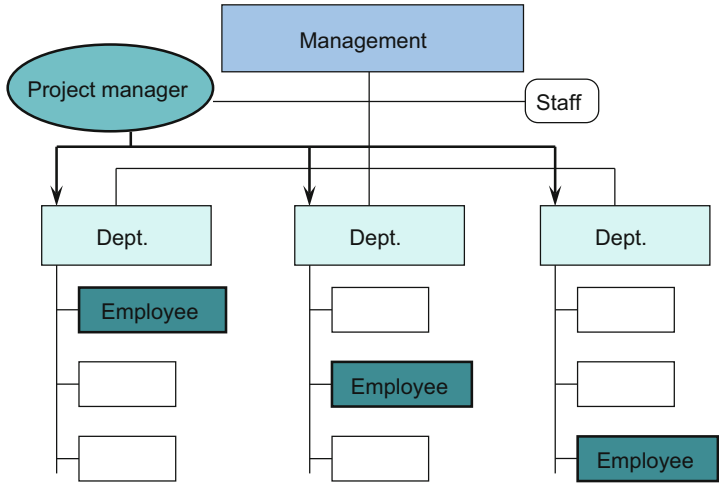


Fig. 15.5 Project coordination structure

Source: Kuster et al, Project Management Handbook, p. 111

Types of project organizations – Pure structure

Benefits

- Efficient for large projects
- Clear responsibility and decision-making authority
- Fast reaction
- High identification of project team
- Independence from line organisation

Drawbacks

- Limited flexibility of personnel
- Recruitment and reintegration of project team members

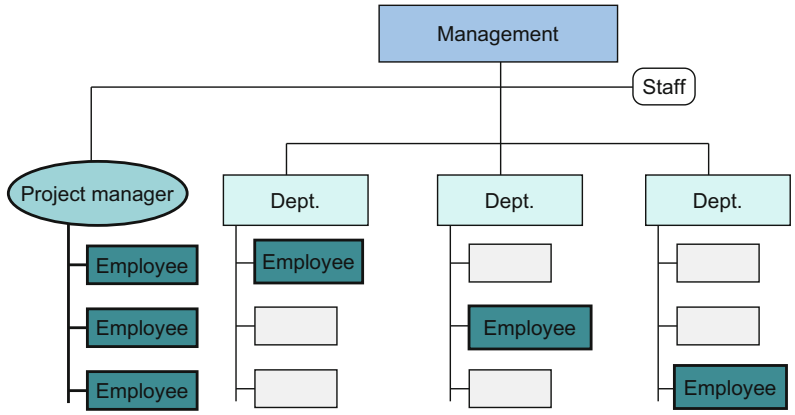


Fig. 15.6 Pure project organisational structure

Source: Kuster et al, Project Management Handbook, p. 112

Types of project organizations – Matrix

Benefits

- Project manager and team feel responsible
- Clear responsibility and decision-making authority of PM
- Flexible use of personnel
- Contact with the line organisation
- Holistic, interdisciplinary perspective

Drawbacks

- Risk of conflicts of authority between line and project manager.
- „servants of two masters”
- Needs intensive communication and information sharing.

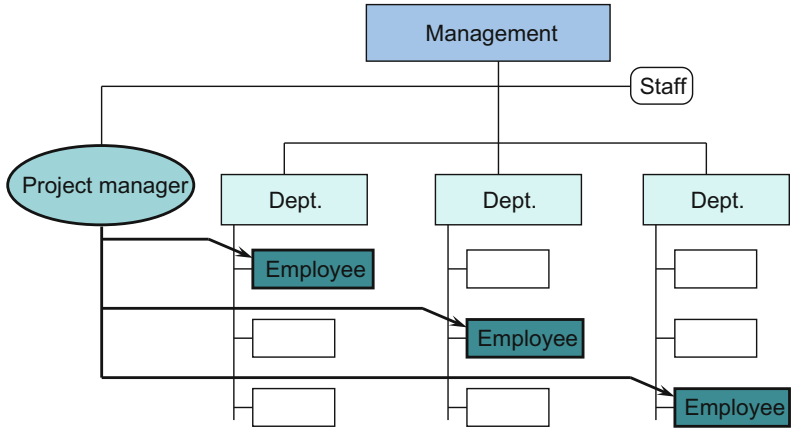


Fig. 15.7 Matrix organisational structure

Source: Kuster et al, Project Management Handbook, p. 113

Organisational chart

Phases / Activities \ Involved parties	Project owner	Project manager	Sub-project manager	Line manager	Other participants
Initialisation					
• Project order	D			A	
• Organisation / Areas of authority	D			A	
• Project manager	D			A	
Pre-study					
• Goals	D	A		C	
• Project structure		D	C		
• Planning (activities, deadlines costs)		D	C	C	
• Preparation of information		C, A	C		
Milestone decision	D	A			
Concept					
• Comparison of alternatives	D	A	C		

Key:
D = Decision (final)
A = Making Application (initial decision)
C = Consultation, having a say
P = preparation, drawing up, planning
I = Implementation
G = Giving approval (yes / no)

Fig. 15.9 Example of an organisational chart

Source: Kuster et al, Project Management Handbook, p. 117

Projects in a Multicultural Environment

Important issues to consider

- Attitude and conduct
- Cultural awareness
- Language and communication
- Leadership
- Negotiating
- Conflict resolution

Programme Management

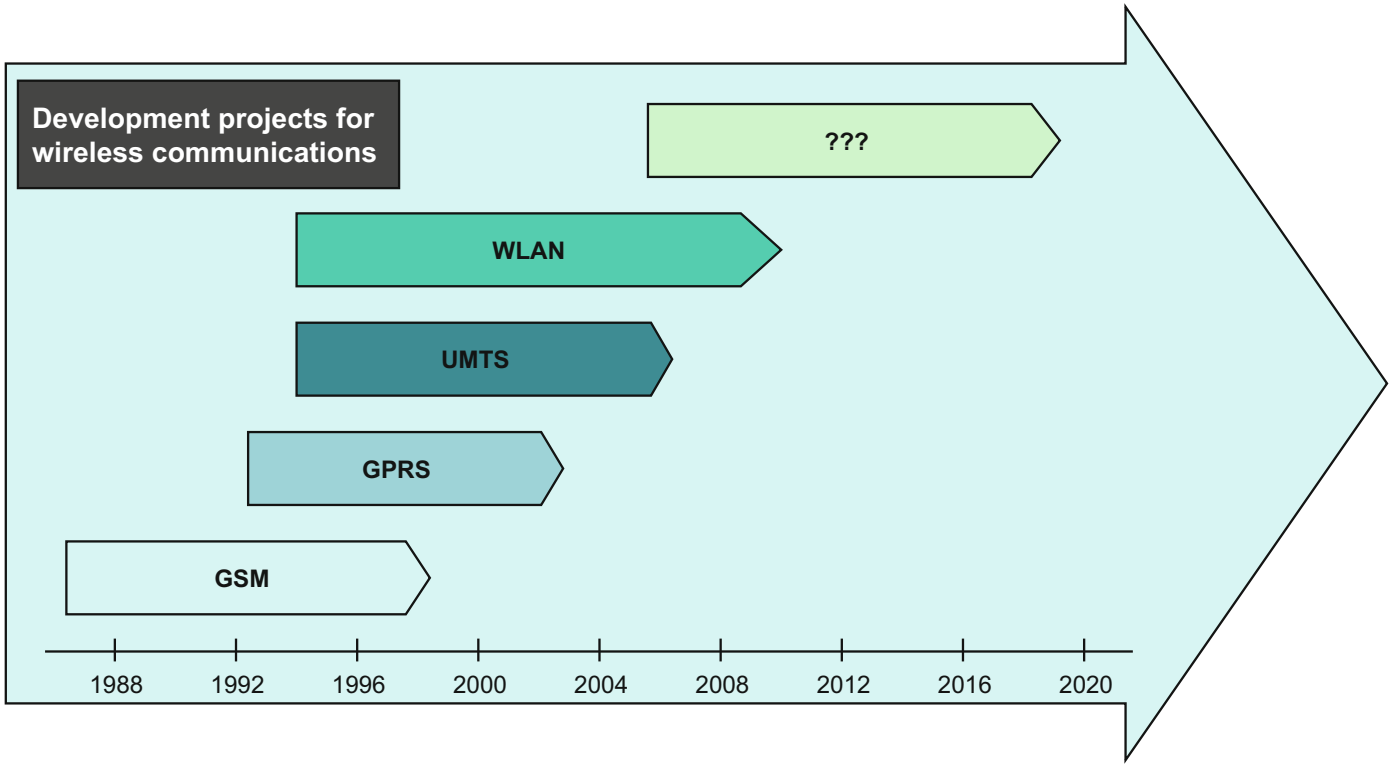


Fig. 3.2 Examples of a project programme

Source: Kuster et al, Project Management Handbook, p. 11

Starting points of projects

- **Proactive**: Looking or Searching for new ideas
  - Trends
  - New technologies
  - Improve based on lessons learned
  - Transfer from other industries

- **Reactive**:
  - Solve an existing problem
  - Follow market trends and competitors
  - Implement ideas suggested by employess

- **By accident**

Starting process

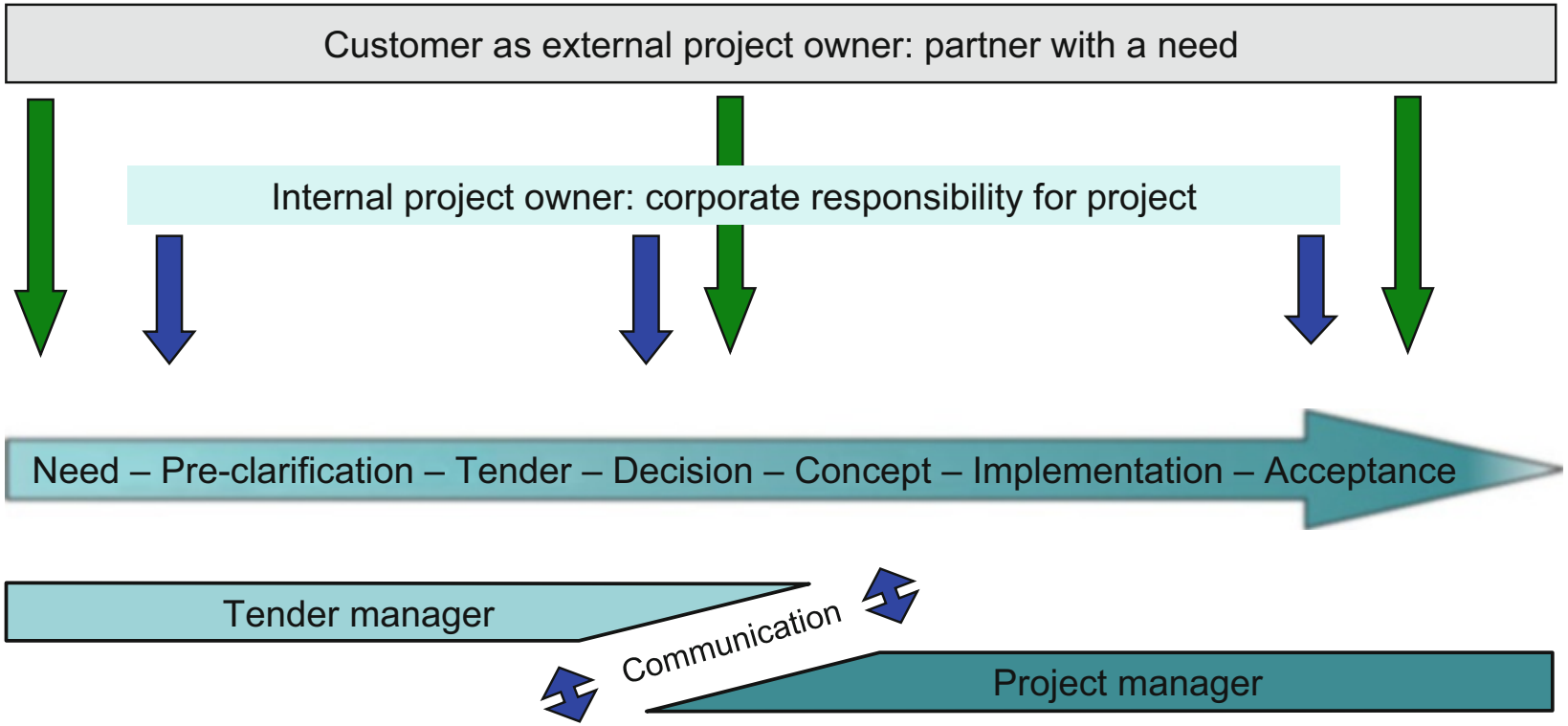
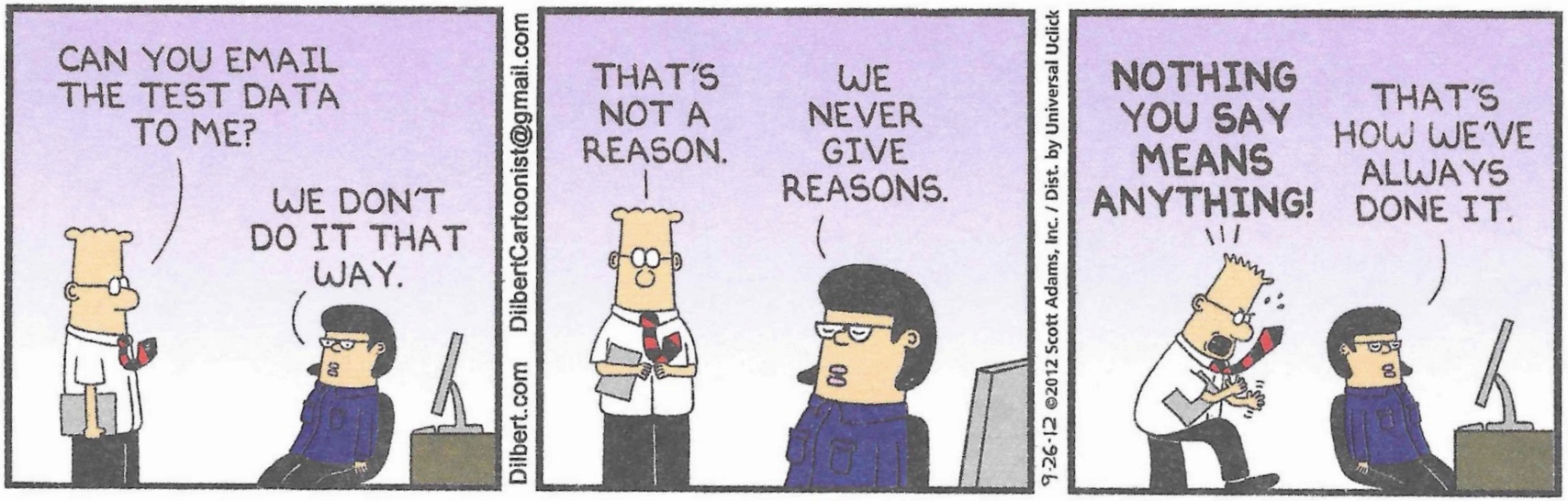


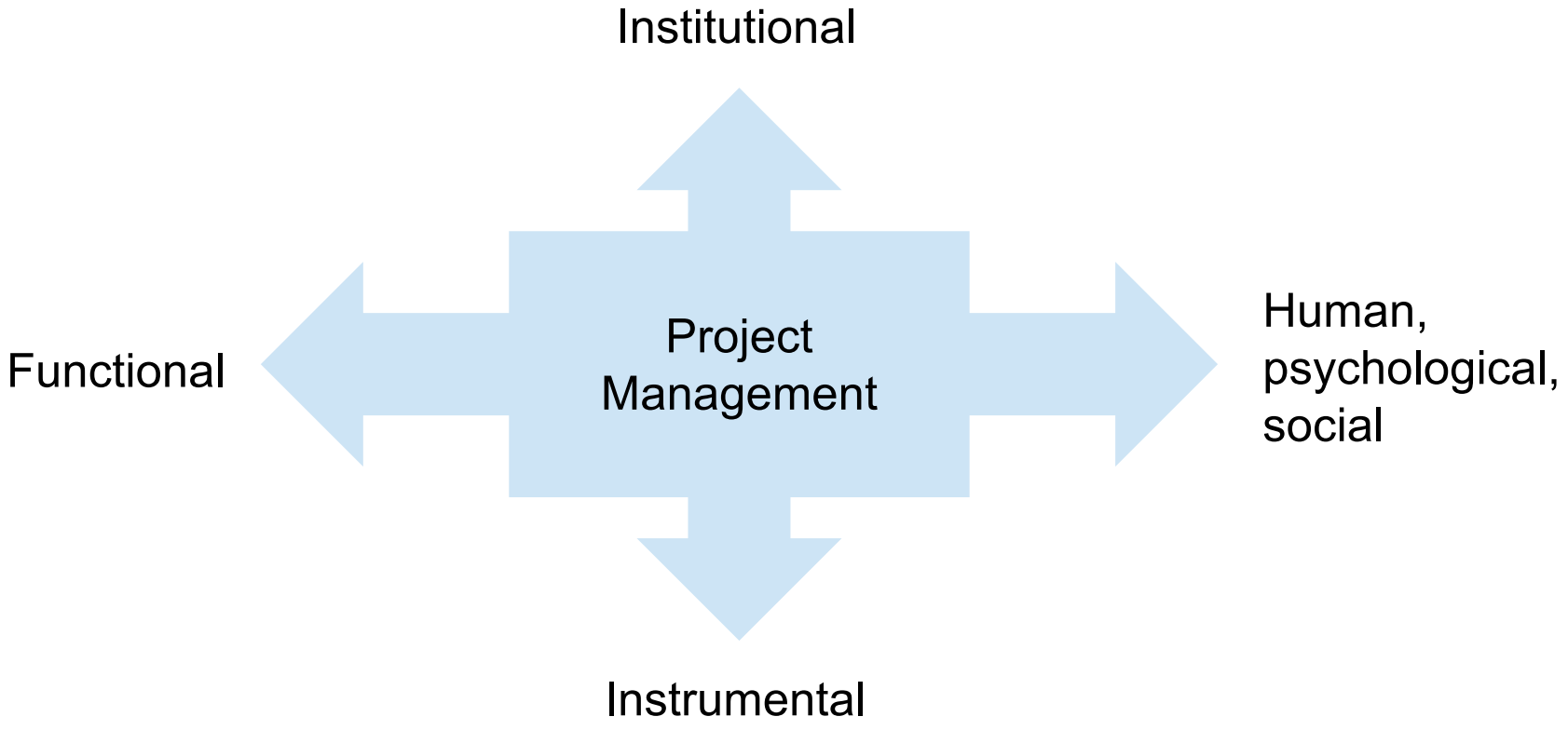
Fig. 14.1 Synchronising all of the functions involved in the customer project

Source: Kuster et al, Project Management Handbook, p. 97

A Good Start


CAN YOU EMAIL THE TEST DATA TO ME?
WE DON'T DO IT THAT WAY.
Dilbert.com DilbertCartoonist@gmail.com
THAT'S NOT A REASON.
WE NEVER GIVE REASONS.
9-26-12 ©2012 Scott Adams, Inc. / Dist. by Universal Uclick
NOTHING YOU SAY MEANS ANYTHING!
THAT'S HOW WE'VE ALWAYS DONE IT.

4 Dimensions in Project Management



Dimensions of Project Management I/II

- Functional Dimension
  - Initialisation: Getting the project going
  - Project work: Keeping the project going
  - Concluding the project
- Institutional dimension
  - Identify the project bodies
  - Specify roles and functions
  - Set up a project team
  - Identify the areas of responsibility, and agree who has authority

Dimensions of Project Management II/II

- Human, psychological and social dimension
  - Recruiting personnel, and checking their skills and qualifications
  - Leading the project team
  - Encouraging and supporting cooperation
  - Managing conflict
  - Shaping social processes
- Instrumental dimension
  - Information technology support (planning, communication, documentation, etc.)
  - Processes, established methods, project management handbook
  - Support tools, forms, templates

Project Context – Internal view

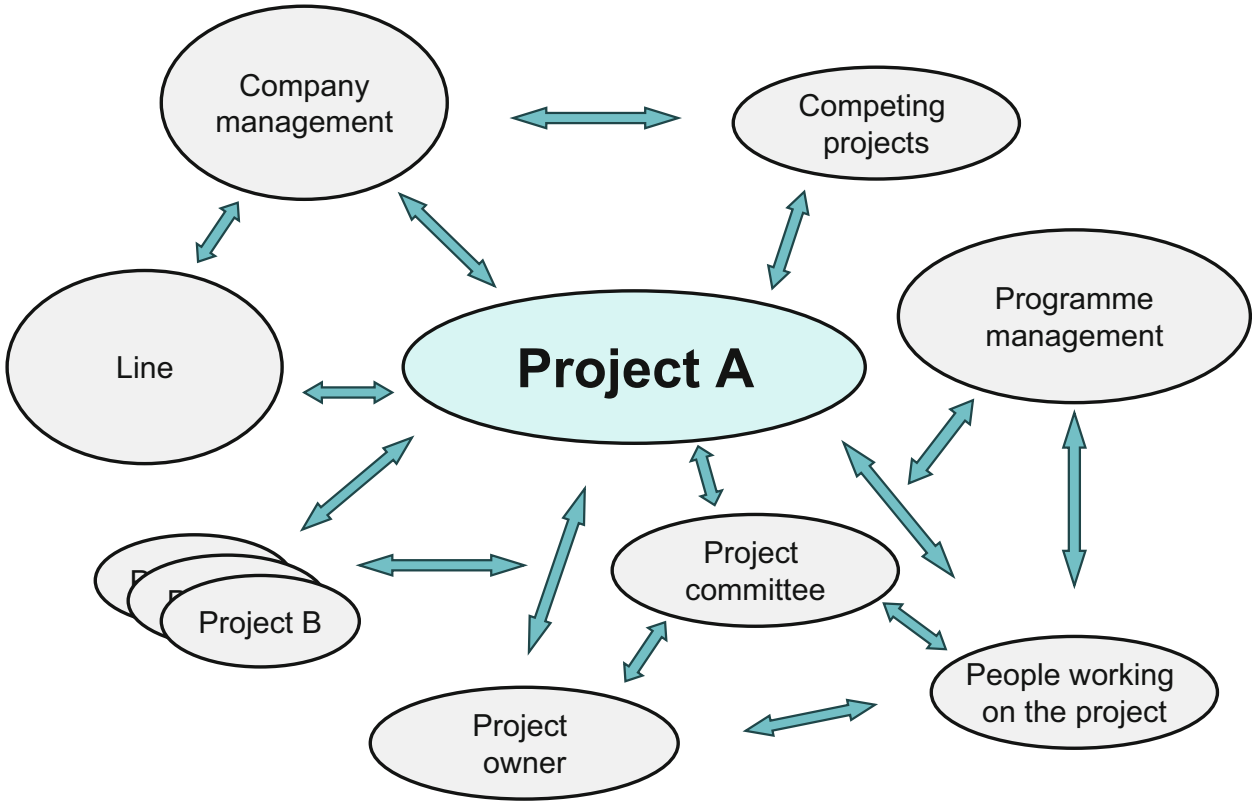


Fig. 4.1 A systemic view of a project

Source: Kuster et al, Project Management Handbook, p. 14

Project Context – Internal & external influences

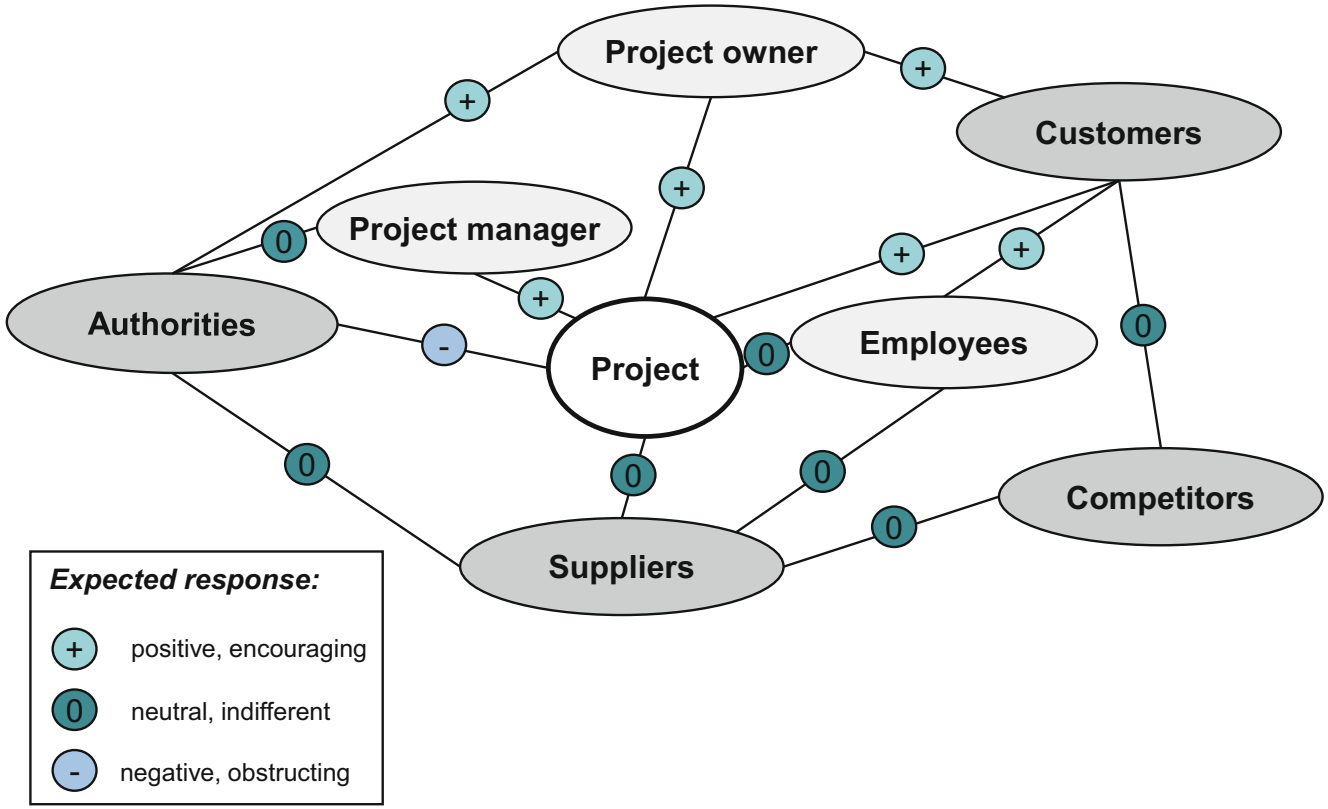


Fig. 9.1 Network of project influences

Source: Kuster et al, Project Management Handbook, p. 50

Stakeholder Management - Identify

- Who provides particularly important resources and who does not?
- Who can exert an influence over the project?
- Who is particularly affected by the project?
- Who can promote or obstruct the project success?
- Who needs the project results?
- Who must not be overlooked?

Customers as Stakeholders

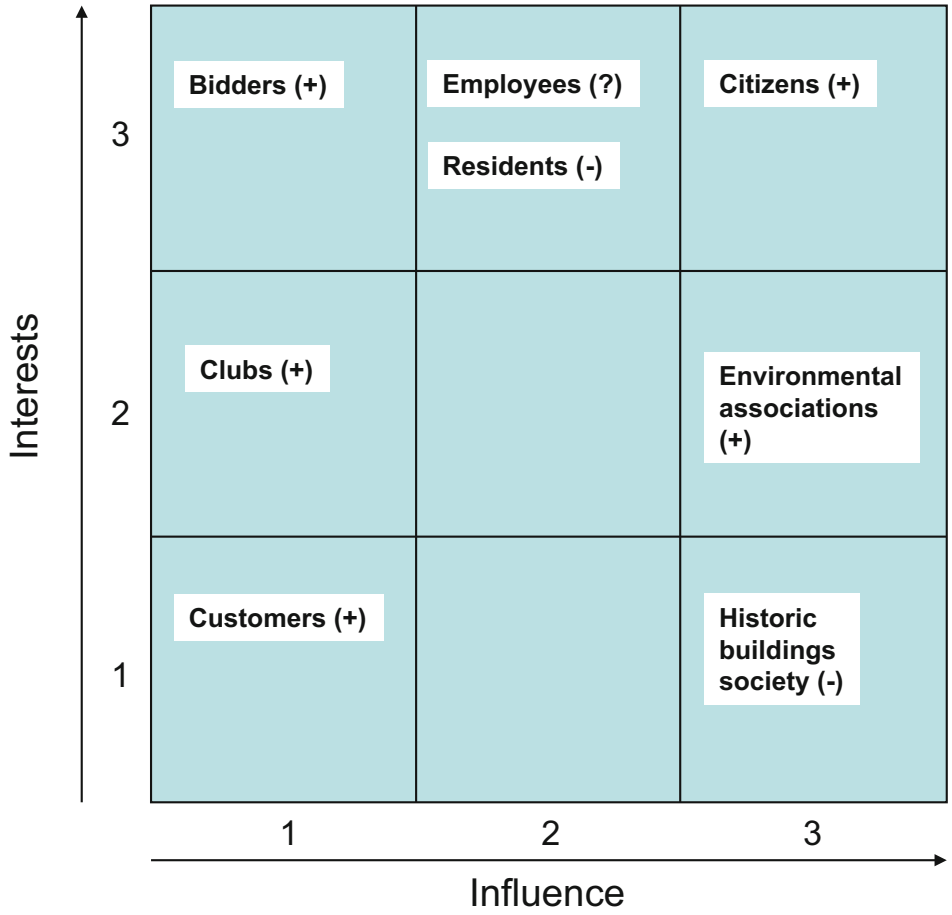
- Every project has a customer!

- External customers
  - Have a high impact on the project goals
  - Set the timeline, major milestones or deadline
  - Possible conflict between promised solution (from sales) at contract negotiation and internal project goals (resources, time, budget)

- Internal customers
  - Can be overruled by higher management
  - Should be treated as customers (nevertheless)
  - Goals, time and budget can be developed together

Stakeholder Management – Analyse & Evaluate

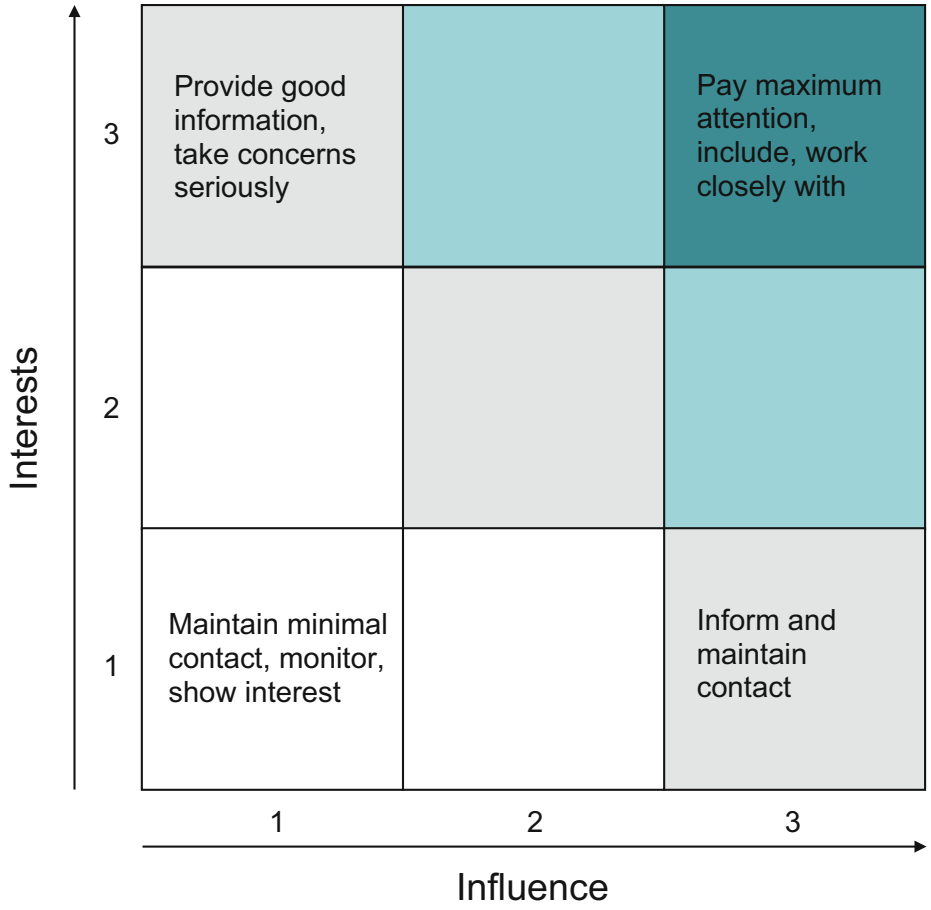
Fig. 19.4 Stakeholder analysis in matrix format



Source: Kuster et al, Project Management Handbook, p. 221

Stakeholder Managemet - Strategies

Fig. 19.5 Strategies for dealing with stakeholder groups



Source: Kuster et al, Project Management Handbook, p. 222

Stakeholder Management – Example with Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Key Stakeholder?	Name	Role on the Project	Organization	Location/Timezone	Offical Project Team Member?	Resource Manager?	Budget Owner?	Influencer and/or Technical Expert?	Deliverable Provider?	Deliverable Customer?	Final Release Approver?	Unoffical Release Approver?
2		Richard Feynman	Platform Architect	R&D	OR/PST				X	X			X
3		Whitfield Diffie	SW Engineer	PBG	DC/EST	X				X			
4		Thomas Edison	HW Engineer	PBG	DC/EST	X				X			
5		Alan Turing	Validation Engineer	Q&R	UK	X				X			
6	X	Edward Tufte	Operations Manager	Mfg	CH/MST					X	X		X
7		Martin Hellman	IT Rep	IT	MS/EST	X				X	X		
8	X	Neil Armstrong	Sponsor	COO	AU/CDT		X	X	X			X	
9		Melanie McBride	Project Manager	PBG	CH/MST	X			X	X			X
10	X	Steve Jobs	Customer	Corp Mktg	WA/PST		X	X	X				

Source: McBride, Managing Projects in the real world, p. 8

Problem, solution principles, variants, details

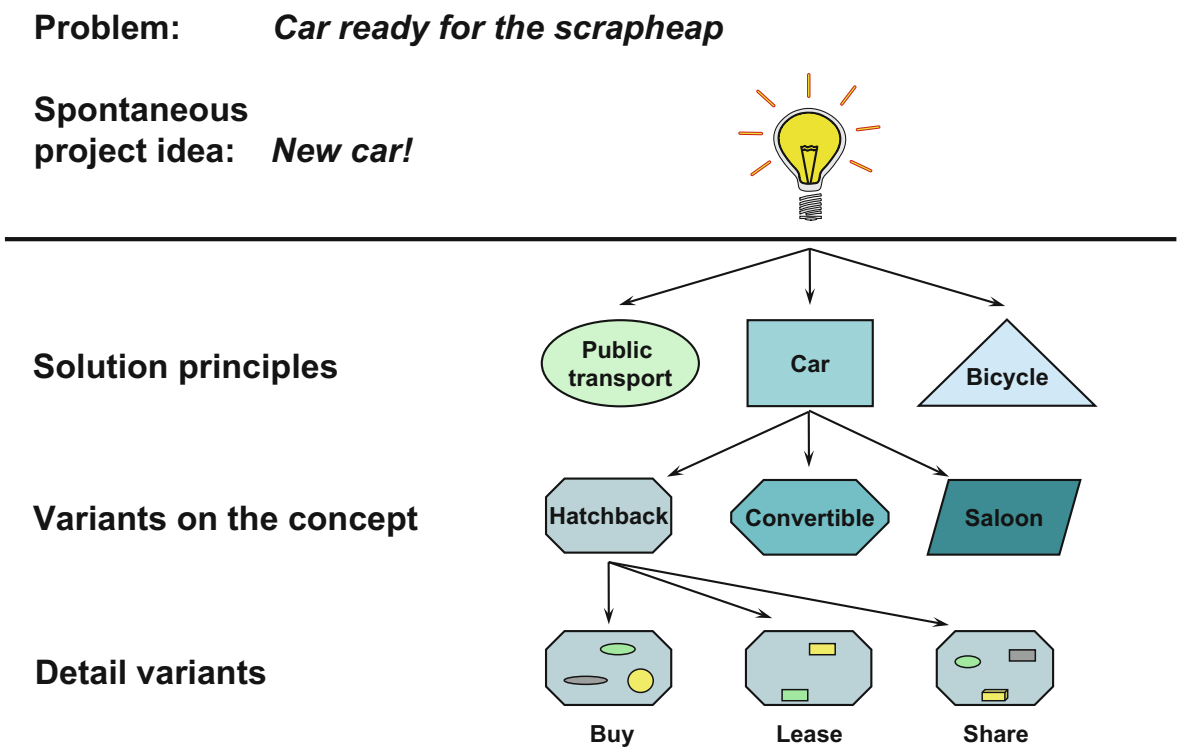


Fig. 4.3 Example of investigating alternatives at every stage

Source: Kuster et al, Project Management Handbook, p. 16

Project phases

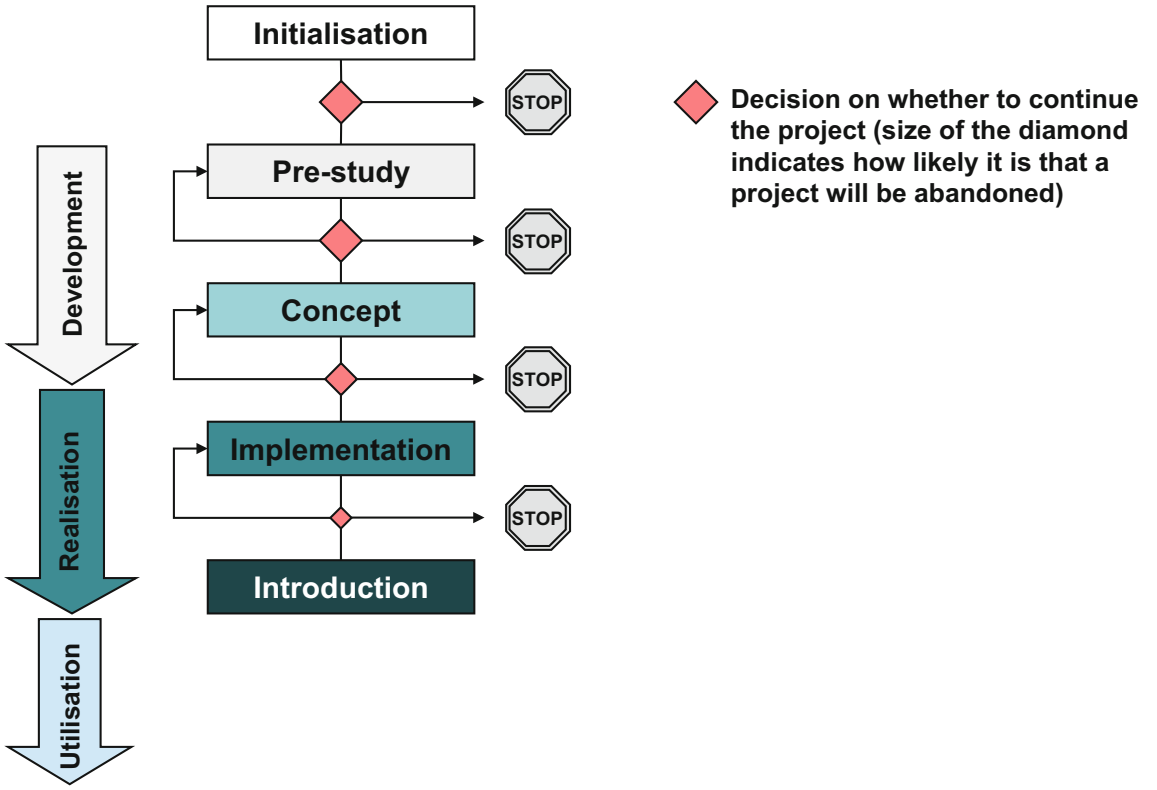


Fig. 5.1 The ideal phase concept

Source: Kuster et al, Project Management Handbook, p. 19

Project phases in different kinds of projects

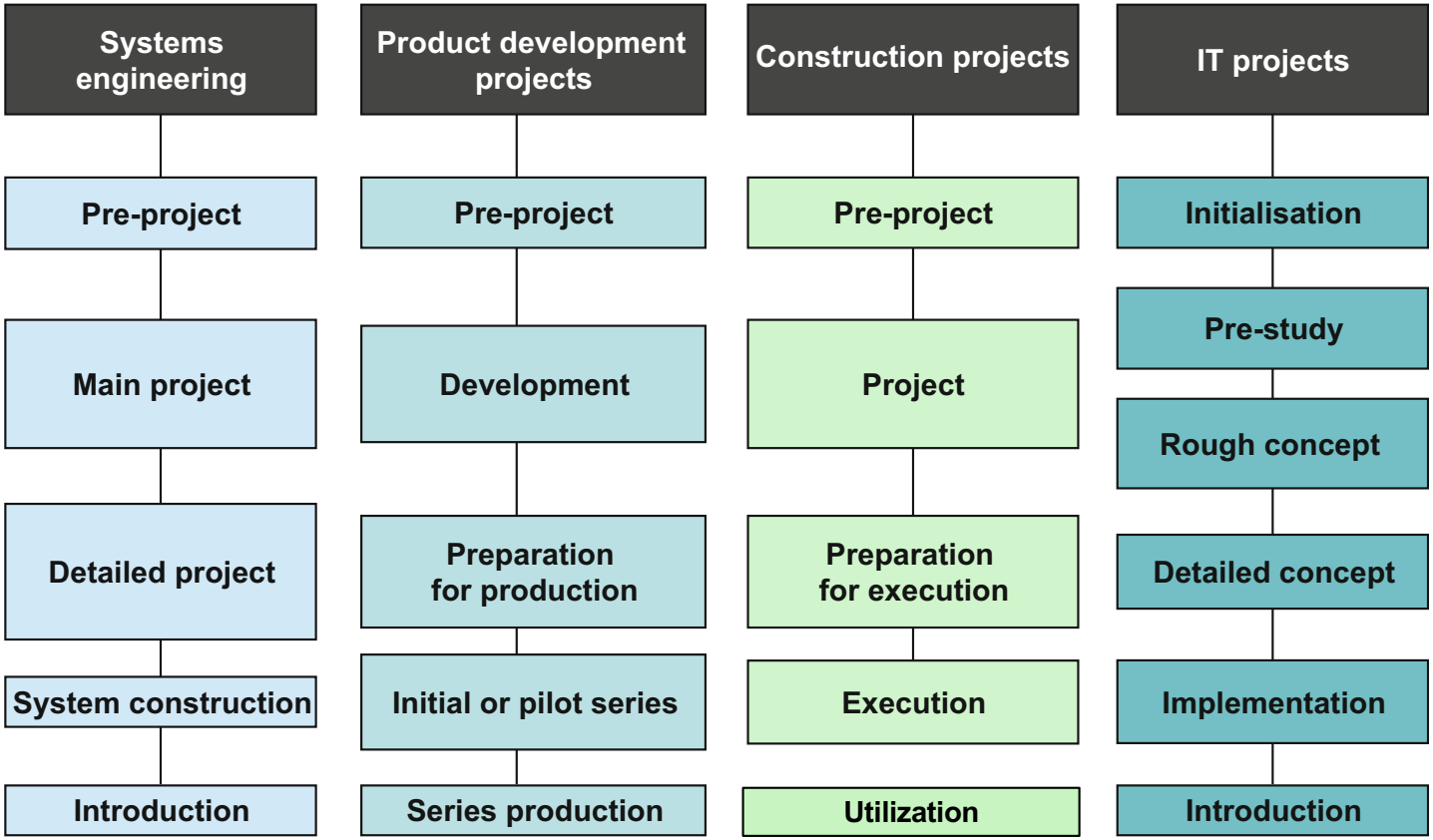


Fig. 5.2 Phase models and phase descriptions

Marginal adapted from: Kuster et al, Project Management Handbook, p. 21

Initialisation Phase – Overall goals

- Ensure alignment with Company Strategy
  - Does this initiative fit with the company's strategy?
  - Is it part of the core business?
  - Is this initiative essential? Does it have to be done?

- Prove Cost Effectiveness
  - What will this initiative cost? (Full cost calculation)
  - What are the short-term, medium-term and long-term benefits?

Classic triangular view on goals

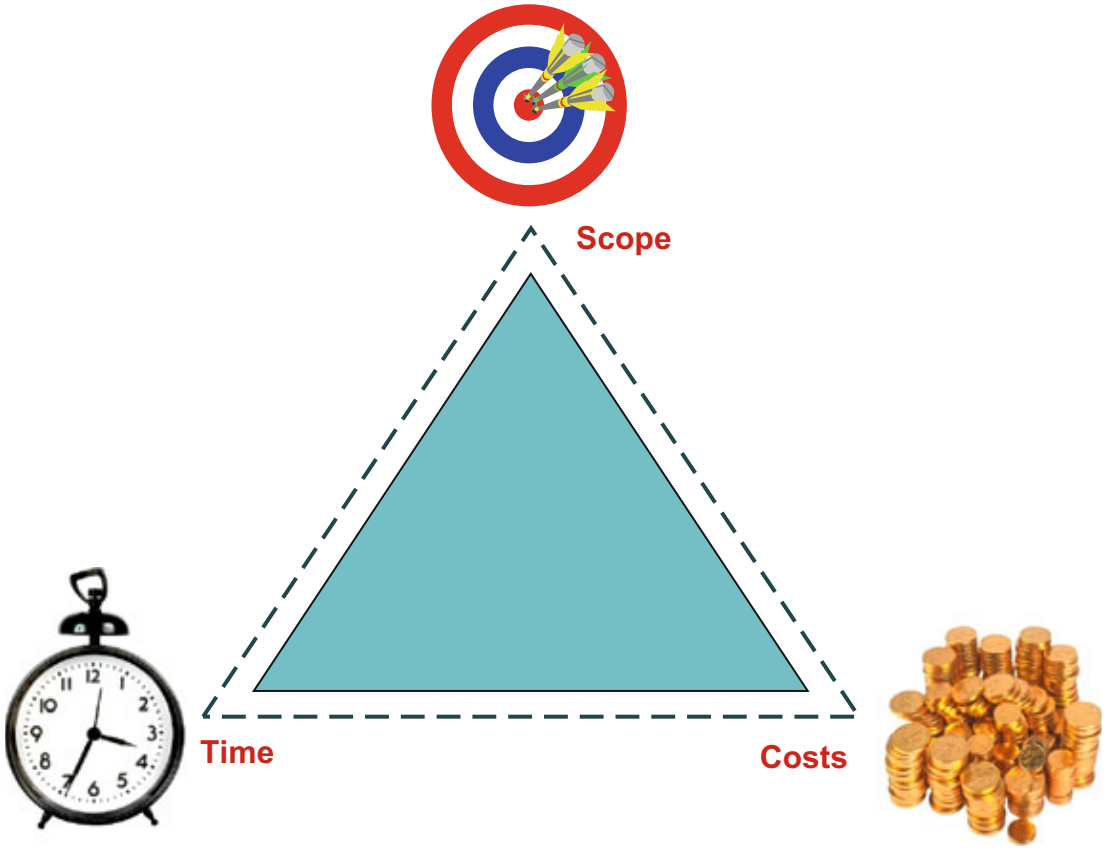


Fig. 16.2 Interdependence of goals, time and costs

Source: Kuster et al, Project Management Handbook, p. 125

Requirements for Project Goals

- **Project Goals Should Be**
  - Functions to aim for: What should be different when it is completed? How should it work?
  - Wishes, hopes and emotions: What additional benefits should it bring?
  - Effects to be achieved: What positive impacts will the project deliver?
  - Criteria that the human senses can perceive, and which feed into future solutions: Quality requirements for the product, service and process.
  - Always try to describe them positively: What should be, rather than what is not wanted.
- **Project Goals Should Not Be**
  - Measures or activities that lead to a solution.
  - Suggested solutions.

Project Goals – SMART Principle

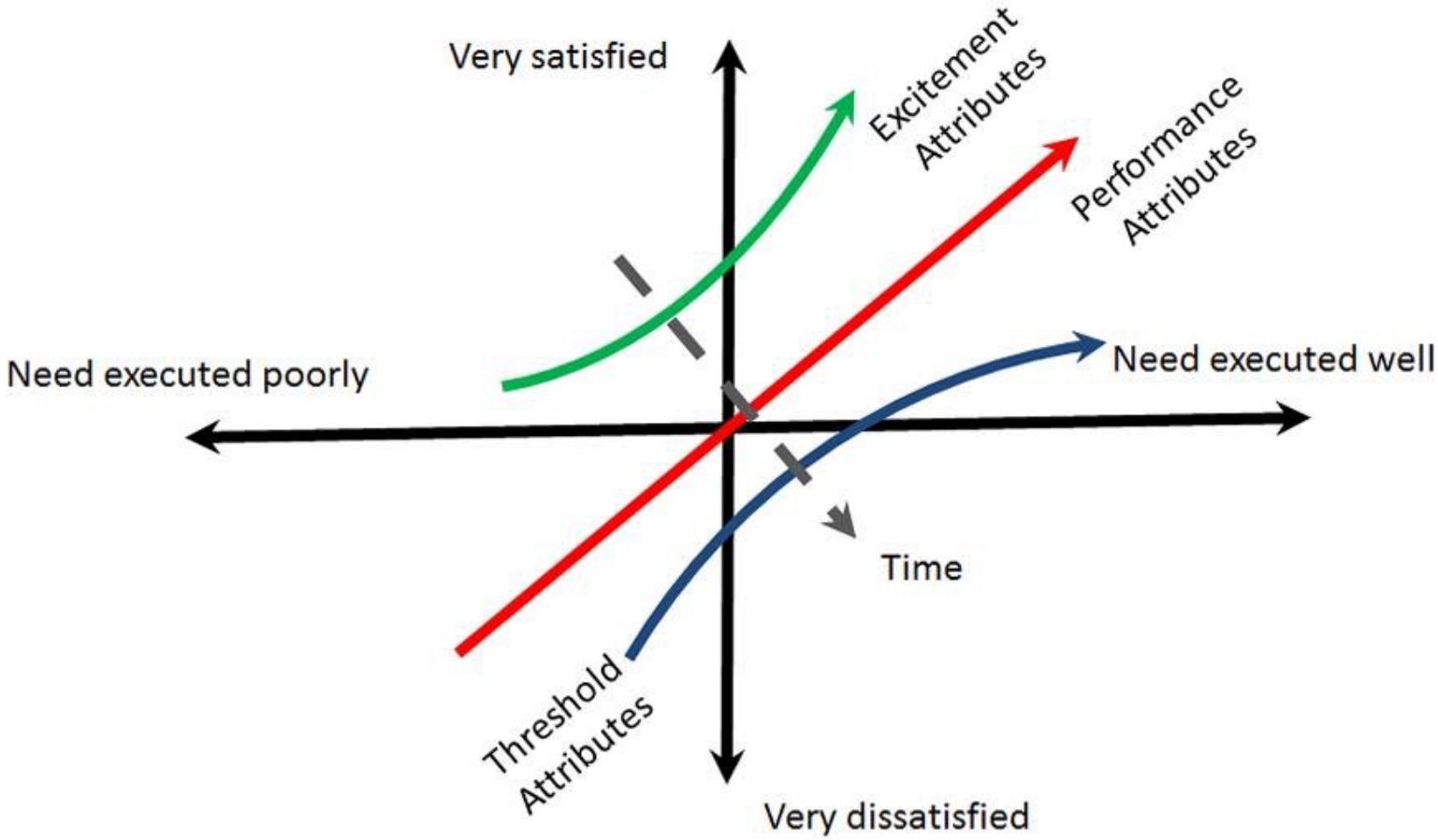
- **S**pecific
- **M**easurable
- **A**ttractive
- **R**ealistic
- **T**ime-bound

Requirements

- Requirements describe functions or aspects of quality that the future system or product should have
- Restrictions are limitations that have to be considered in the project

- Requirements should be
  - Understandable, clear and concise – even to a non-expert
  - have only 1 meaning – No interpretation necessary
  - Consistent and correct
  - Structured
  - Complete, evaluated and verified
  - Testable
  - Allow for tracing of changes

KANO-Model for Requirements

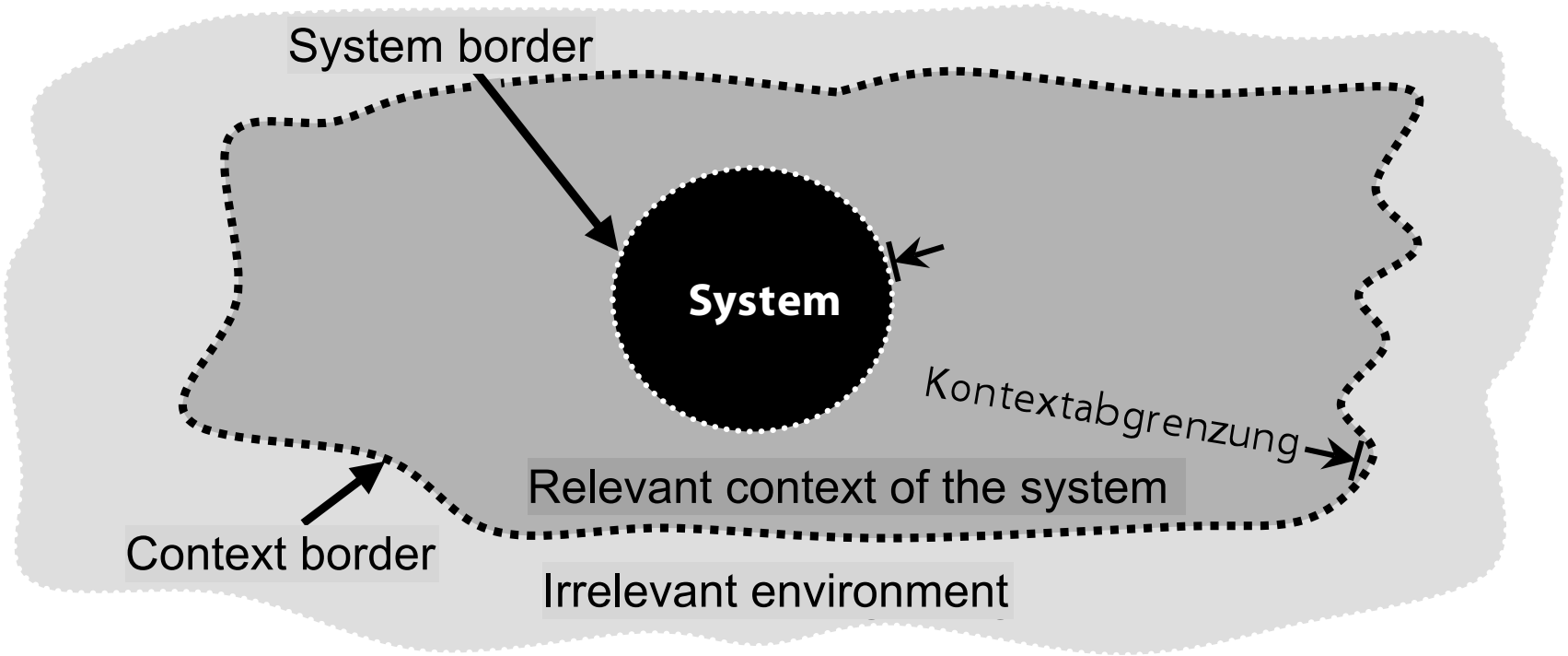


Source: http://www.pddnet.com/sites/pddnet.com/files/kano.jpg

It is not so easy to clearly understand what the customer/end user of a project really wants

How the customer explained it

Project Context



Source: Pohl, Rupp (Ed.): Basiswissen Requirements Engineering, p. 23

Finding the project name

- Find a word or acronym that
  - Gives everyone an idea of parts of the topic
  - Sounds interesting or cool
  - Can be easily pronounced (or not misspelled)

→ Finding the name can be part of a kick-off-meeting or as a part of project team building

Initialisation Phase – Project Agreement

- Starting point: the problem and the project goals
- Context: Area of action and boundaries: Identify system boundaries, delimit and analyse subsystems and partial systems, and identify any commonality
- Influences and dependencies: Identify influencing variables
- Framework conditions
- General parameters and concepts
- Expected results and deliverables
- Project costs and expected benefits
- Risks, and what happens if the project is not carried out
- Procedure and deadlines, milestone plan
- The project's priority
- Project organisation, available resources
- Information and communication

→ Project Agreement should be sigend by project owner and project manager, possibly by project controller

Project agreement – Example

Die Projektziele und -rahmenbedingungen sind in einem Projektdefinitionsblatt festgehalten.

Untersuchungsbereich:	**Datum:** 16.03.2011

Ausgangssituation/ Problemstellung

Nach großen Problemen während der Anlaufphase wurden seit August 2010 Maßnahmen zur operativen Stabilisierung eingeleitet, die nun in eine Optimierung der kompletten Abläufe münden muss. Ziel ist es in 2011 die hohen operativen Verluste durch Mengenzuwächse und Produktivitätserhöhungen zu halbieren. Das Lean-Projekt soll hierzu einen wichtigen Beitrag leisten.

Abgrenzung des Untersuchungsbereichs:

Durch die Notwendigkeit einer Optimierung und unmittelbaren Verzahnung der Bereiche müssen alle physischen und dokumentarischen Abläufe im Rahmen der Diagnosephase des Lean-Projektes untersucht werden.
Die Umsetzung von Maßnahmen erfolgt für den Wertschöpfungsprozess im Export-Geschäft, für die anderen Bereiche und Schnittstellen werden Maßnahmen empfohlen.

Quantitative Ziele (zum Ende der Stabilisierung):

- **Erhöhung der Jahresflächenproduktivität Export/Import um 15%** von **Ø X t/m²** auf **X t/m²**..
- **Erhöhung der Personalproduktivität Export um 30%**

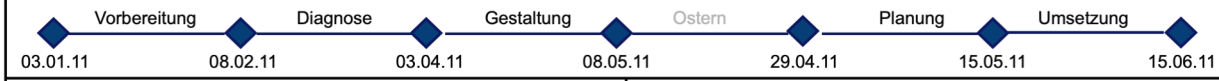
Projektteam	**Kapazität**
• JS (Projektleiter)	3 Tage/ Wo
• ND (LMO)	3 Tage/ Wo
• HL (Berater)	3 Tage/ Wo
• MA 1	5 Tage/ Wo (4)
• MA 2	3 Tage/ Wo (2)
• MA 3	3 Tage/ Wo (1)
• MA 4	3 Tage/ Wo (2)

(Die Zahlen in Klammern geben die durchschnittliche Besetzung während der Diagnose an.)

Qualitative Ziele

- Optimierung der Dokumentations- und Handlingprozesse
- Einführung eines Leistungsdialogs im Handling-Bereich
- Umsetzung 5S im Handling-Bereich
- Entwicklung von Qualitätskennzahlen zur Messung
  a) der On-Time-Bereitstellung der Cargo beim GHA
  b) der Irreg-Situation

Projektphasen und Meilensteine



Freigabe:			**Zur Kenntnis:**
Auftraggeber:	Dr. J.-W. B M M E	Projektleiter: JS Stellvertretung: AS	Betriebsrat:

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Initialisation Phase - Outcomes

- Cost-benefit analysis with a meaningful cost structure
- A market study for development projects: market potential, benchmarking
- A rough risk assessment: SWOT analysis and context analysis
- Decision about carrying out the project
- Establish the project's priority level
- Planned and clearly specified controlling intervals
- Next controlling measures specified: milestone meeting, review

Feasibilty Study

Pre-Study or Feasibility Study

Feasibility Study should analyse

- If the solution relates to the cause of the problem or just a symptom
- relationships and mechanisms that are involved in the problem
- delimiting the problem and the environment
- Pressure and need to implement a new solution
- Basic requirements of the solution
- Alternative solutions
- Associated risks

A feasibility should has as an outcome

- Identify the most promising solution
- Verify that it is feasible
- Recommended Timeframe and starting point for a project
- A rough Business Case

Project decisions and costs

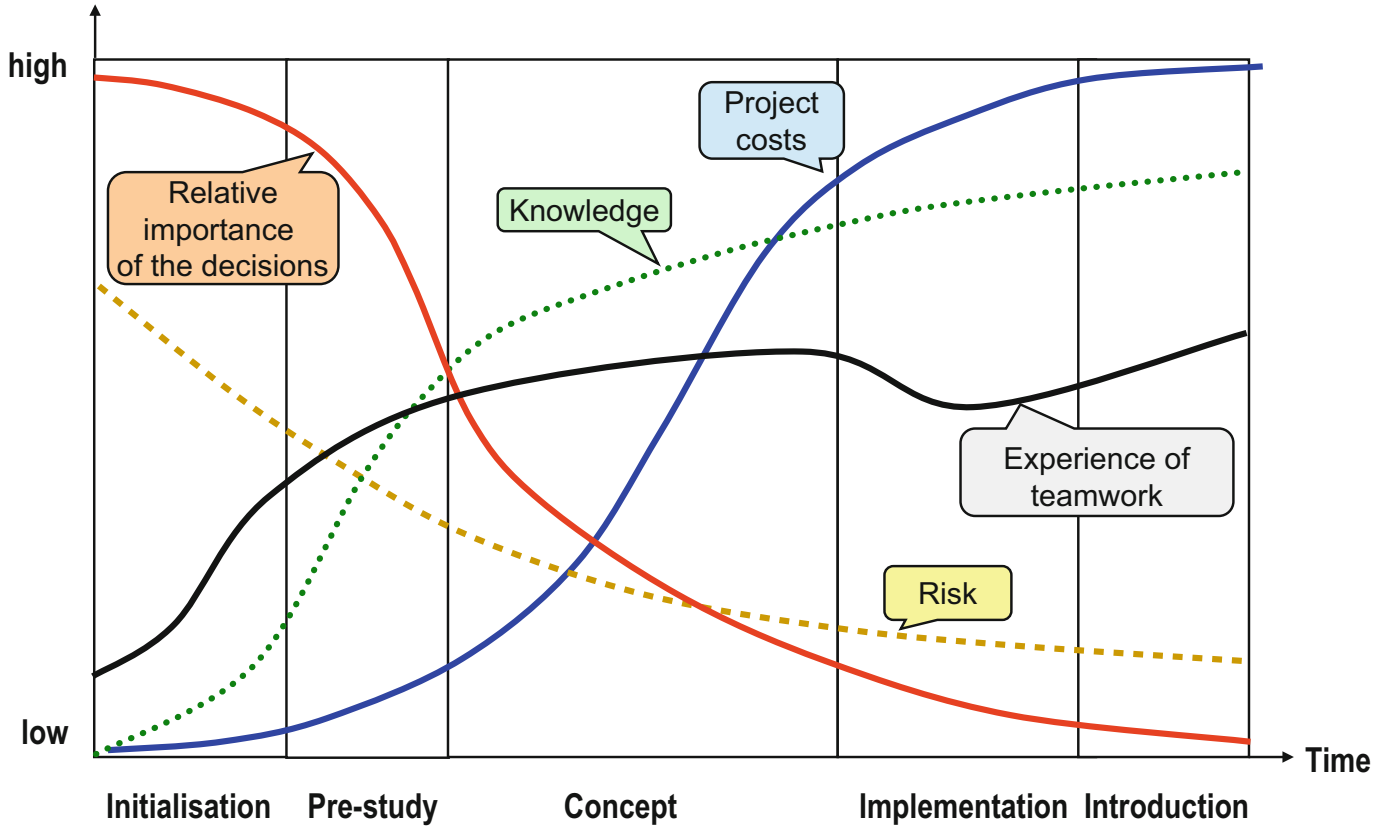


Fig. 5.3 The impact of decisions, knowledge and cooperation

Source: Kuster et al, Project Management Handbook, p. 23

Preliminary Phase – Rough planning

- Divide Project into **sub-projects** (if necessary)
- Define **work packages** (and their boundaries)
- Decide upon **responsibilities** for those work packages
- Build a plan with **milestones** and **dependencies** between work packages
- Set up information and **communication plan**

Purpose of planning – or: Hope Is Not a Strategy

- Check that specifications are **realistic**
  (overall time, cost, quality)
- **Structure** the problem into tasks that can be handled
- Assign **responsibilities**
- Identify **subject experts** needed (and their availability)
- Recognise any **bottlenecks** or conflicts with respect to resources
- Ensure that everyone involved knows who has to do or deliver what and when.
- Provide a **target figure** for the purposes of checking the project's actual status (compared to the planned status).

Milestones

- Accept the project status
- Close off a project phase
- Continue or abandon the project
- Start the next project phase or work package
- Identify any key changes in the goals
- Make key changes to the way the project is run
- Introduce any additional measures (e.g. information sessions) to suit the project dynamics
- Sort out major staffing issues such as additional resources, redeployments, changes to roles, setting up new teams
- Authorise additional investment or project loans

Example: Phases and Milestones

Phase	Activities	Results
1. Initialisation	- Clarify roughly what it is about (content) - Which organisational units are involved	- Rough description of the problem - Rough definition of the goals - Application for project to Projects staffing unit
♦	**1. Milestone - Decision**	**- Decision on project or mandate** **- Initiate project start**
2. Pre-study	- Draw up project plan (structure + workflow) - Devise + clarify project mandate - Communication concept	- Procedural concept (workflow planning + project org.) - Project order - Application for a project committee
♦	**2. Milestone - Decision**	**- Approval of the project order** **- Agreement on the schedule**
3. Rough concept	- Devise overall concept for the alternative solutions with variants - Check cost effectiveness	- Present overall concept - Demonstrate & assess possible approaches (variants) - Application for a project committee
♦	**3. Milestone - Decision**	**- Approval of the project status** **- Select variants**
4. Detailed concept	- Flesh out solutions that are ready for implementation (from variants) - Draw up detailed cost effectiveness review - Plan implementation, introduction (including training), and subsequent support / service	- Plan and draw up detailed project solution - Detailed plans - Application for a steering committee
♦	**4. Milestone - Decision**	**- Approval for implementation**
5. Implementation	- Construct, test and introduce system - Training - Establish service organisation	- System introduced - Training arranged and provided
♦	**5. Milestone - Decision**	**- Acceptance of the system** **- Approve project close**
6. Introduction	- Hand over project to the line	- Project report - Project organisation broken up
♦	**6. Milestone - Decision**	**- Project manager discharged** **- Project ended**

Fig. 5.4 Example of a phase model with activities and results

Source: Kuster et al, Project Management Handbook, p. 27

Information and communication plan

Receiver	WHO Person responsible for reporting	WHAT Subject	WHERE Location Medium	HOW Format	WHEN Deadline, frequency
Project owner	Project manager	Decision about further course of action	Board meeting	Presentation	End of pre-project
Steering committee					
Project manager					
Project team					
User					

Fig. 10.6 Example of an information and communication plan

Source: Kuster et al, Project Management Handbook, p. 62

Project planning: 1st Top-down, then bottom-up

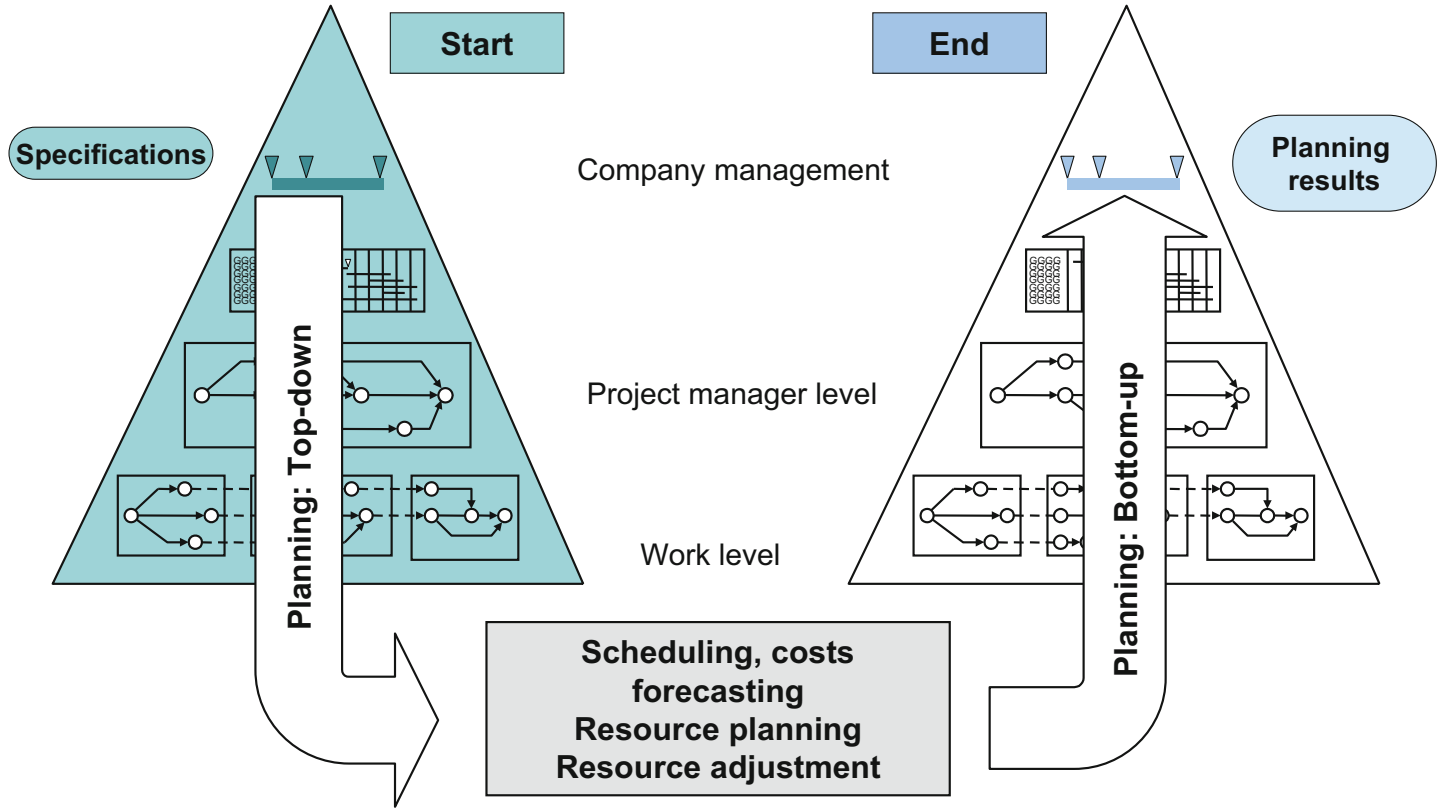


Fig. 16.24 Top-down planning and bottom-up consolidation

Source: Kuster et al, Project Management Handbook, p. 149

Work breakdown structure (WBS)

Object-oriented WBS

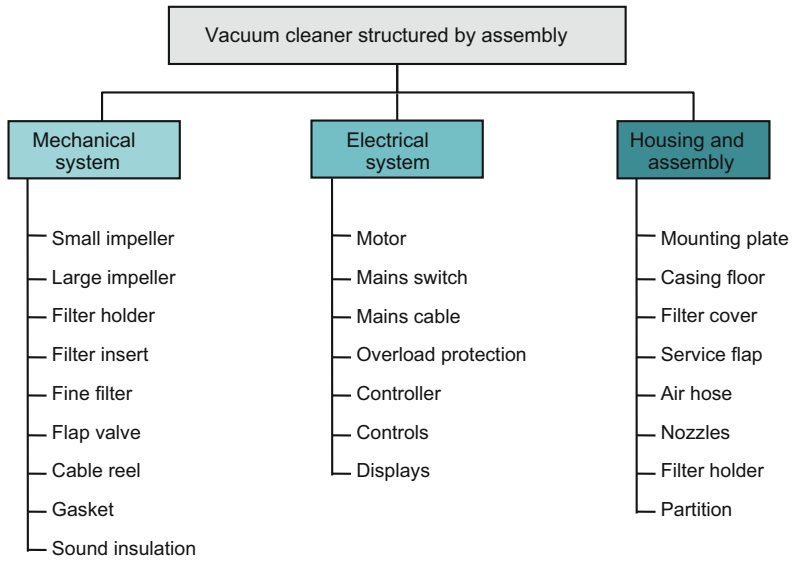


Fig. 16.7 Example of an object-oriented PSP structure

Produce-oriented WBS

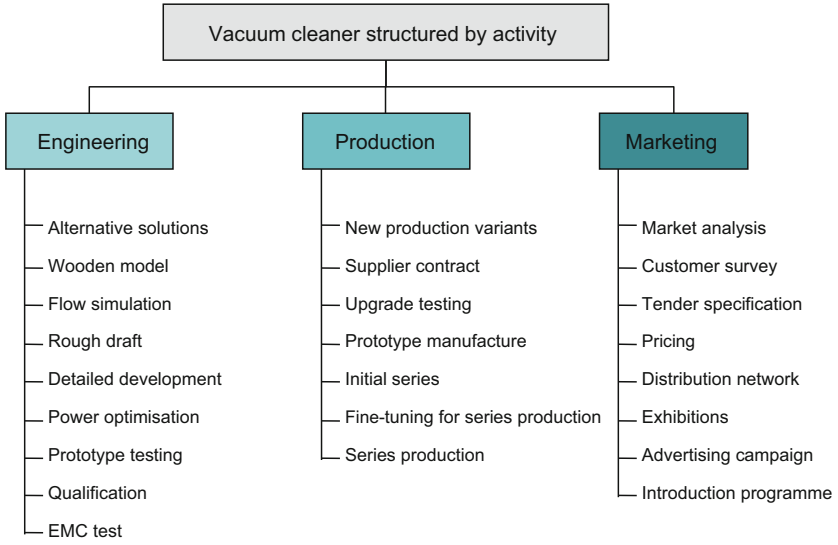
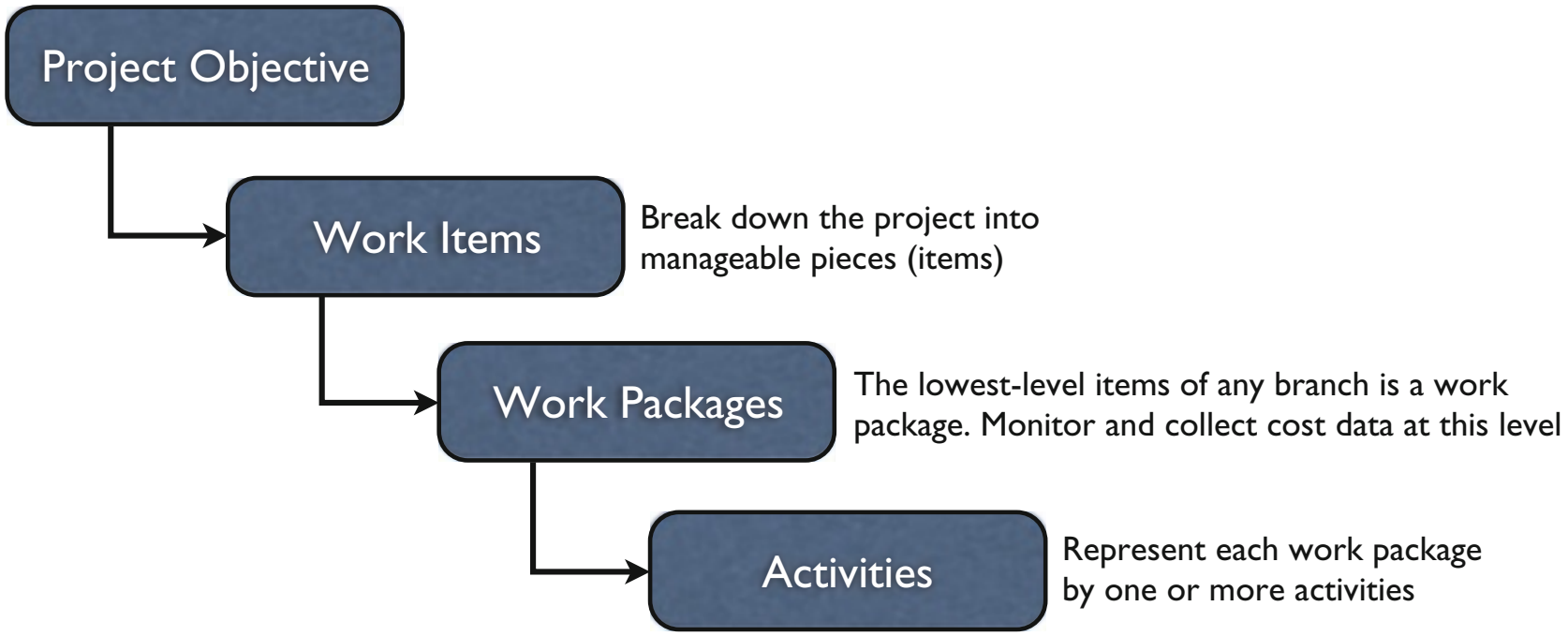


Fig. 16.8 Example of a procedure-oriented PSP structure

Source: Kuster et al, Project Management Handbook, p. 131

4 levels of a WBS



Source: Vanhoucke Project Management with Dynamic Scheduling, p. 12

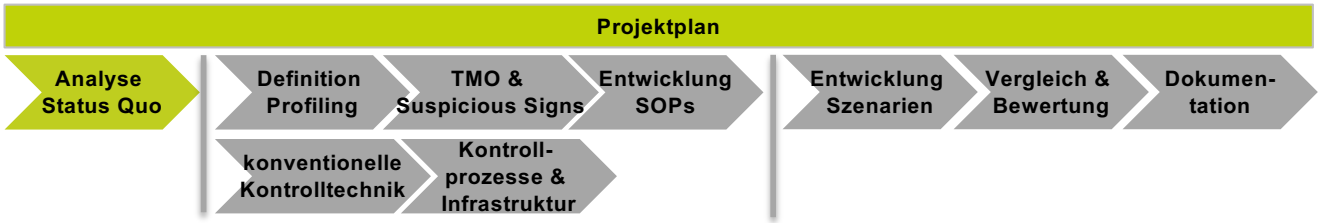
A checklist for a Work Breakdown Structure

	YES	NO
▪ The WBS is comprehensive (nothing is missing).	☐	☐
▪ The WBS is consistent, all activities are clearly separated	☐	☐
▪ The WBS is logical and others can understand it.	☐	☐
▪ Each activity has a responsible person assigned to it.	☐	☐
▪ For each activity the results are clearly specified.	☐	☐
▪ For each activity all prerequisites are defined.	☐	☐
▪ When setting up the WBS the project team members were involved and their suggestions considered.	☐	☐

Work Package Description

Activities	Deliverables	Resources	Status
• Gründe und Ziele (1-2 Seiten) • Regularien & Verfahren (EU-VO; Bpol-Prozesse: max. 5 Seiten) • Informationsquellen (Zolldaten, ESUMA) 1 Seite • Beteiligte & Verantwortlichkeiten (mit EU-Benchmark) 1-2 Seiten • Ist-Prozesse 2-3 Seiten • Transferfrachtvolumen 1 Seite / 1 Tabelle	▪ Tabelle Rechtliche Grundlagen (Regularien & Verfahren) ▪ Tabelle Daten (verfügbare Informationen & Quellen) ▪ Fact Sheet Flughafen Frankfurt (Transferfracht)	▪ EBS (Lead): 50 h ▪ Fraport AG: 25 h ▪ FRA-UAS: 15 h ▪ LCAG: 35 h	

Input from WP	Output to WP	Start	End	Effort
▪ Datensammlung aller Partner	▪ Alle weiteren AP	**M1**	**M2**	**125 h**



GANTT-Chart

Activities and deadlines Date:

No.	Activities / Measure / Event	Resp-onsible	Pre-conditions	Effort in weeks	Duration in weeks
1	**Project**				
2	***Phase 1***				
3	Activity A	MM	-		6
4	Activity B	MM	3		1
5	Activity D	PP	-		2
6	Activity E	PP	5		3
7	Activity C	MM	3;6		2
8	Activity F	TT	7		3
9	Activity G	MM	8		1
10	Milestone Preparation	PL	4;9		1
11	Milestone Decision	AG	10		0
12	***Phase 2***				
13	Work package H	MM			
14	:				

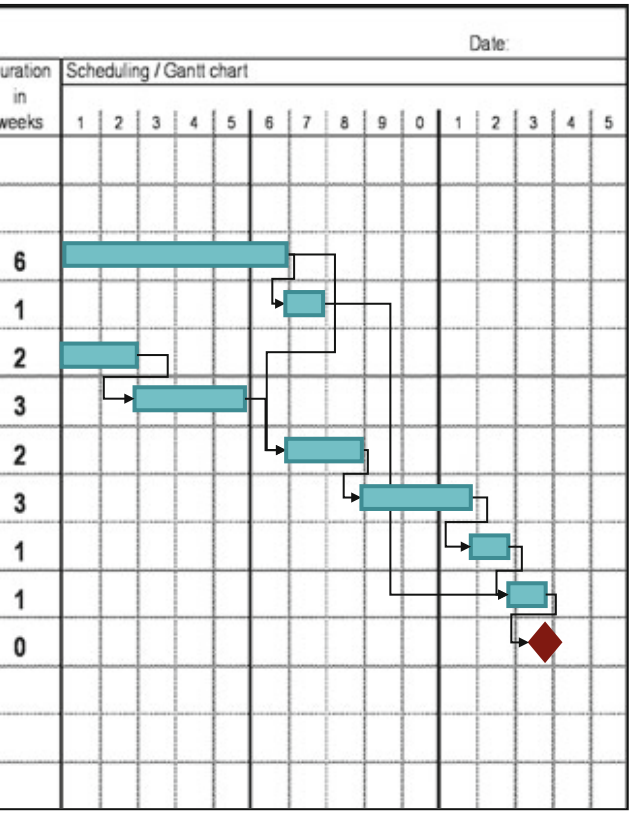
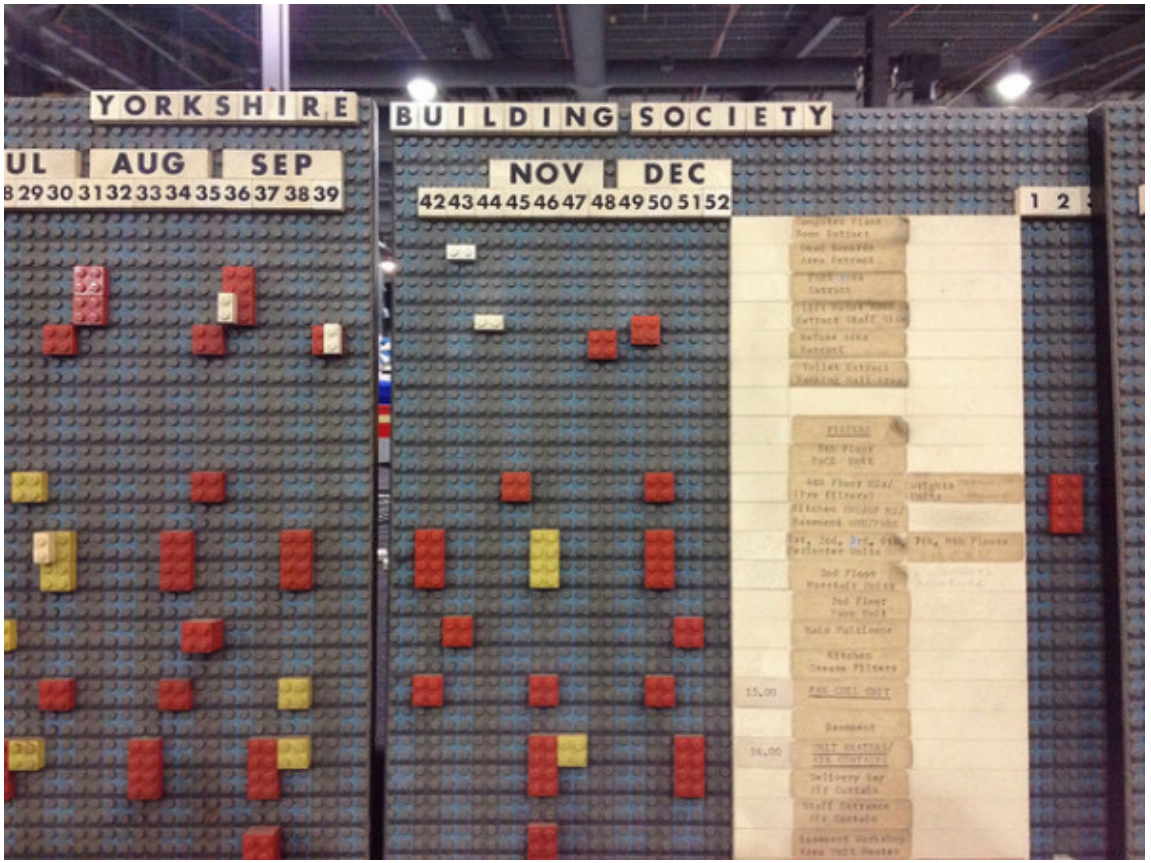


Fig. 16.13 List of activities

Source: Kuster et al, Project Management Handbook, p. 136

Sometimes “easy does it” – a LEGO Gantt chart



Scheduling

- Forward scheduling:
  Starting with the first activities and the start date

- Backward scheduling:
  Starting from the last activities and the finish date

- Important things to consider:
  - Buffers
  - Company vacation or Holidays (esp. complex in international projects)

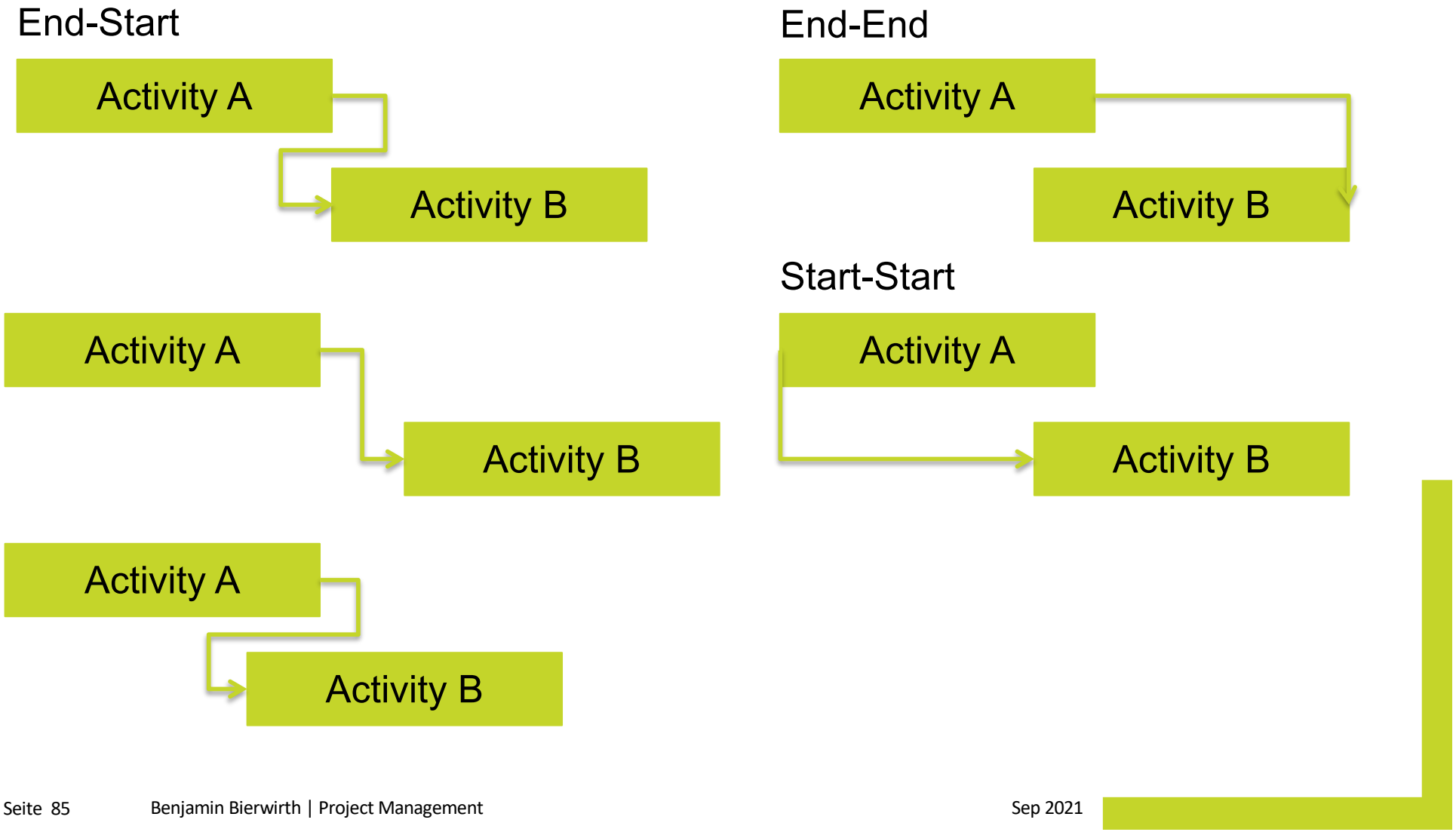
- Avoid the garbage-in-garbage-out-dilemma by planning in to much detail!

Scheduling – Step-by-step

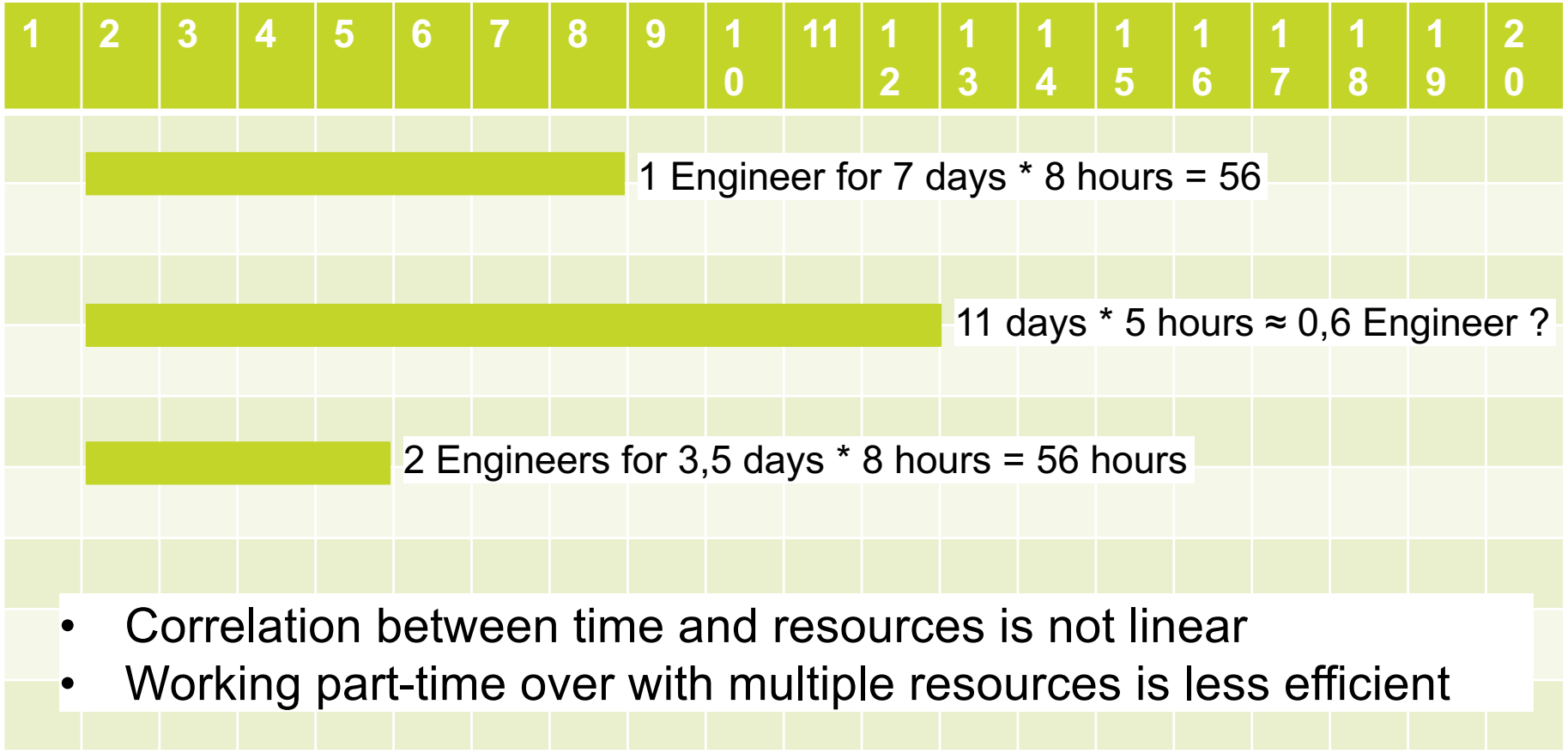
- Build up a task list
- Define the start and end milestones (without dates!)
- Connect the tasks with their predecessors
- Estimate the workload
- Apply resources to every task
- Add milestones in between
- Add the start or end date
- Check all task dates with Your project deadlines

- Optimize!
- ... And implement some hidden buffers...

Dependencies between activities



Correlation between activity length and use of resources



- Correlation between time and resources is not linear
- Working part-time over with multiple resources is less efficient

Simultaneous activities

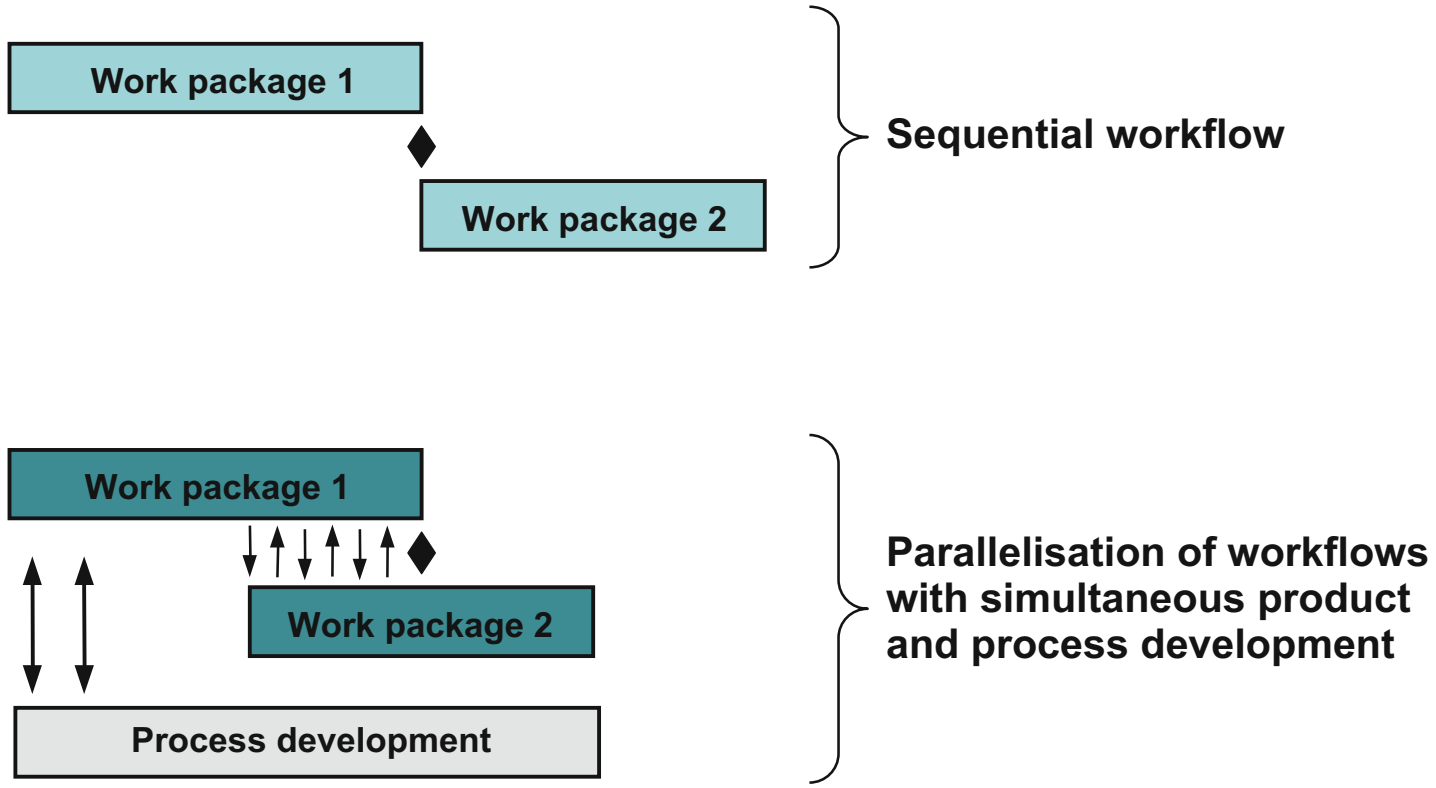
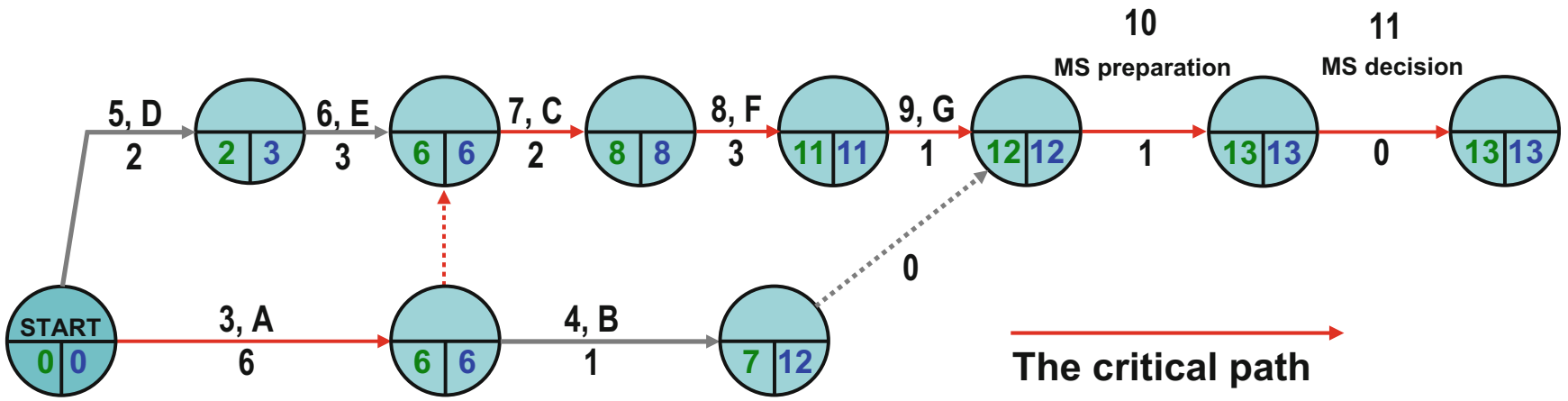
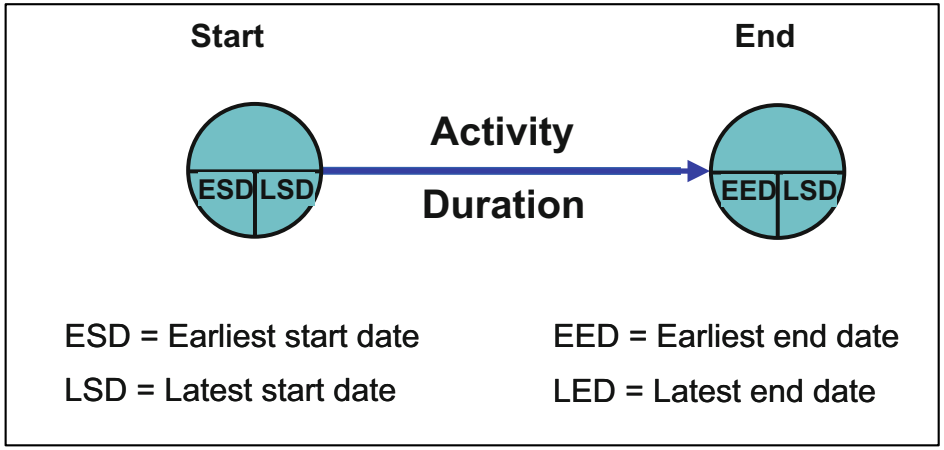


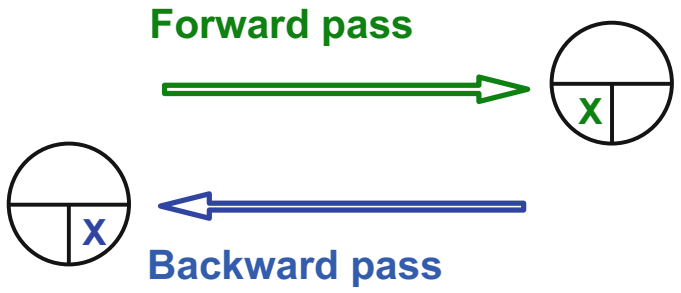
Fig. 16.29 Parallelisation of activities

Source: Kuster et al, Project Management Handbook, p. 158

Critical Path Method







Source: Kuster et al, Project Management Handbook, p. 370

Resource histogram

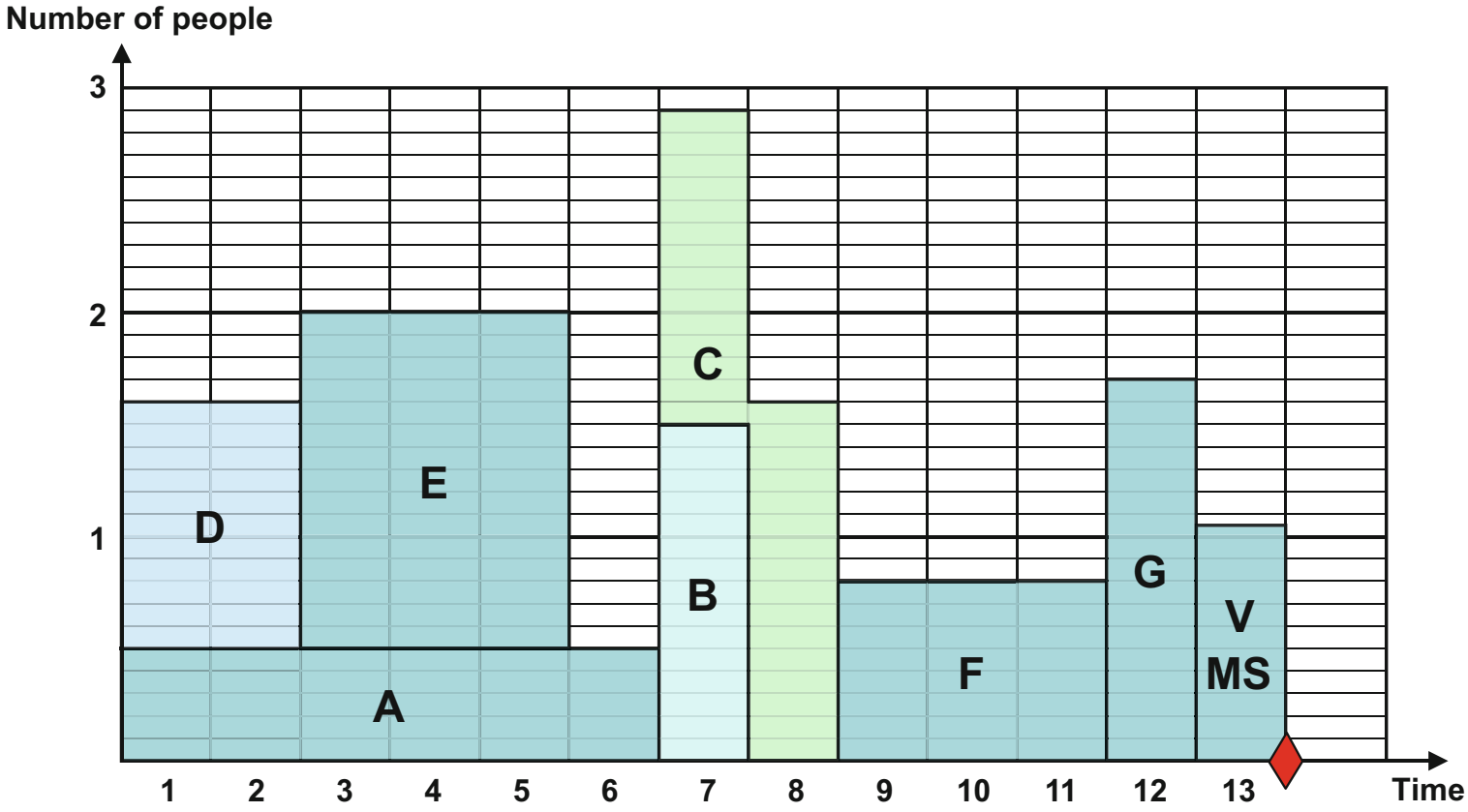


Fig. 16.15 Resource histogram for a project

Source: Kuster et al, Project Management Handbook, p. 139

Resource usage graph

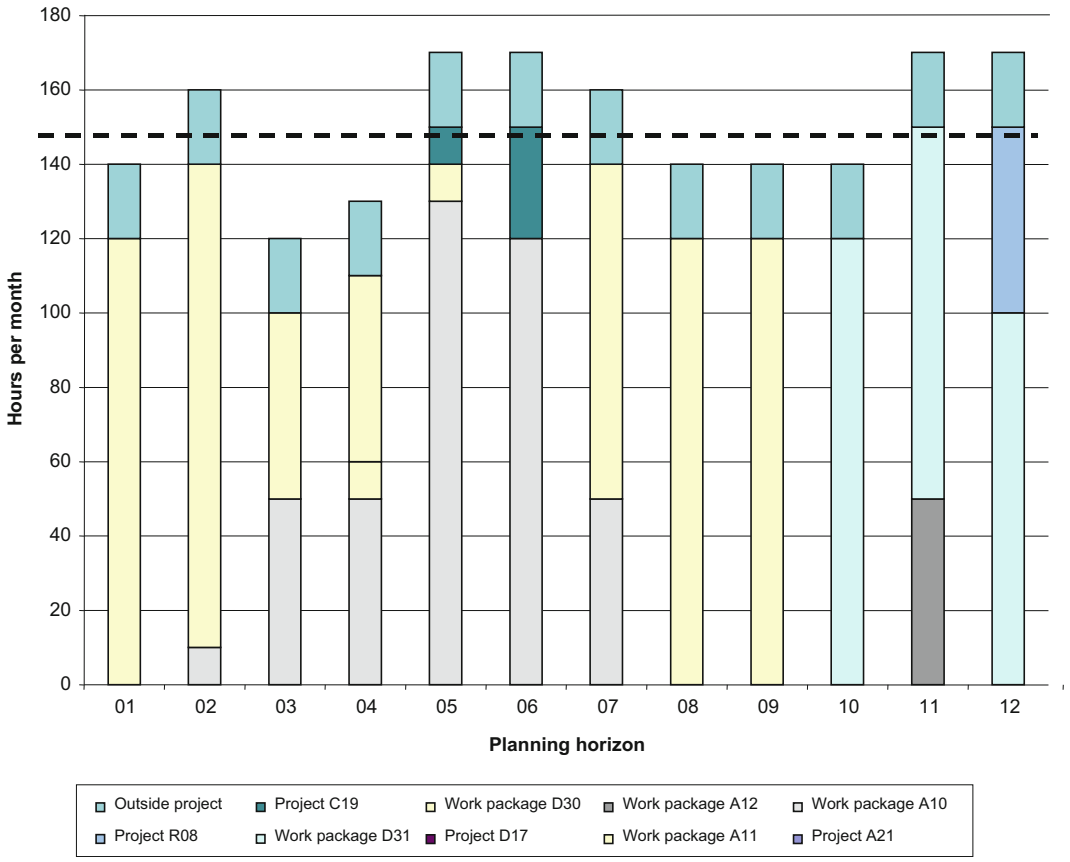


Fig. 16.19 Example of a resource usage graph

Source: Kuster et al, Project Management Handbook, p. 143

Cost curve (deducted from resource graph

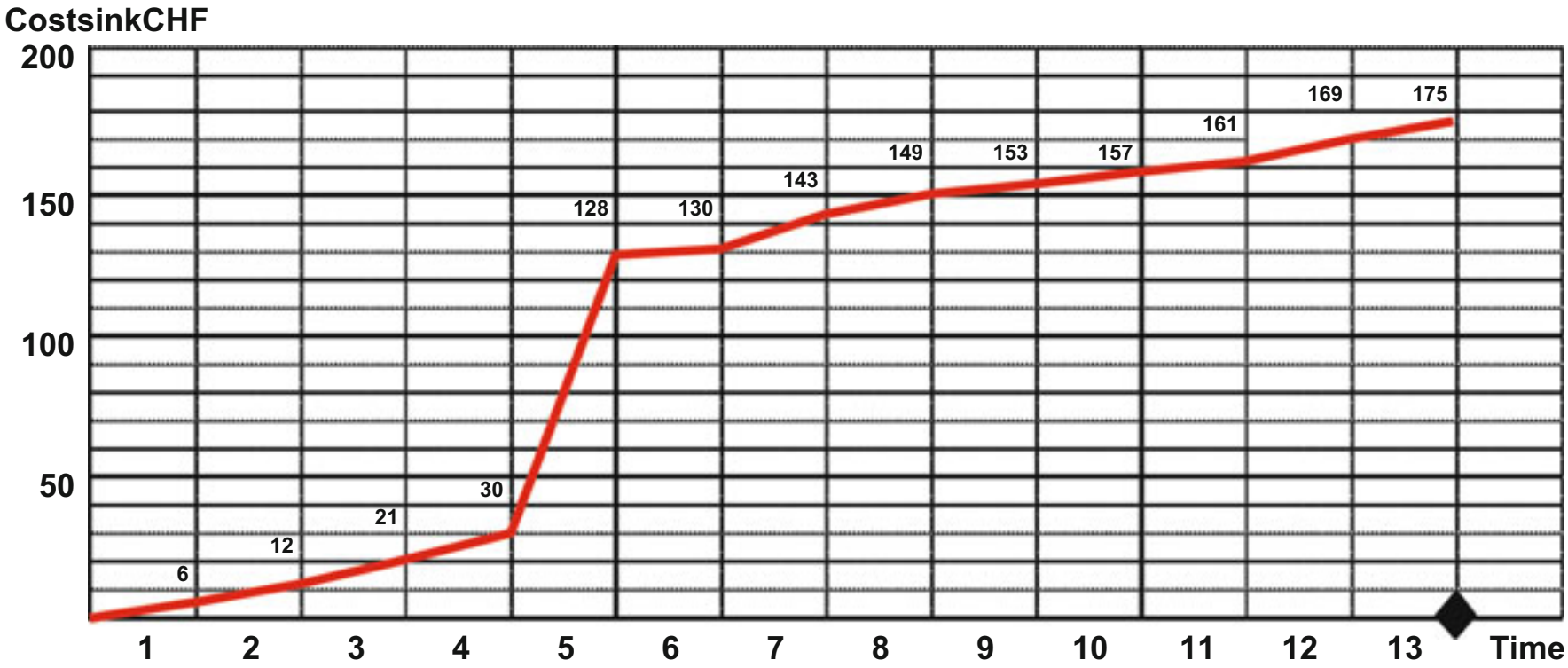


Fig. 16.22 Cost curve

Source: Kuster et al, Project Management Handbook, p. 146

Effort Estimation

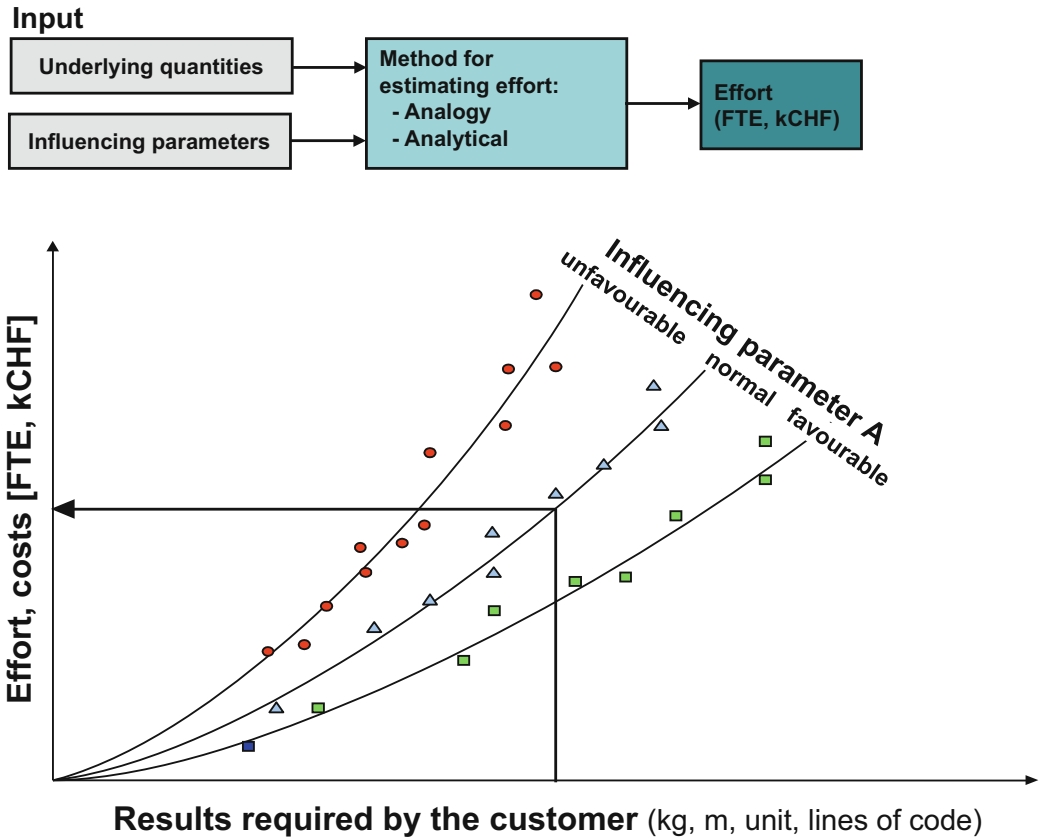


Fig. 16.28 Effort estimation with empirical values or key data

Source: Kuster et al, Project Management Handbook, p. 155

Break-Even-Analysis

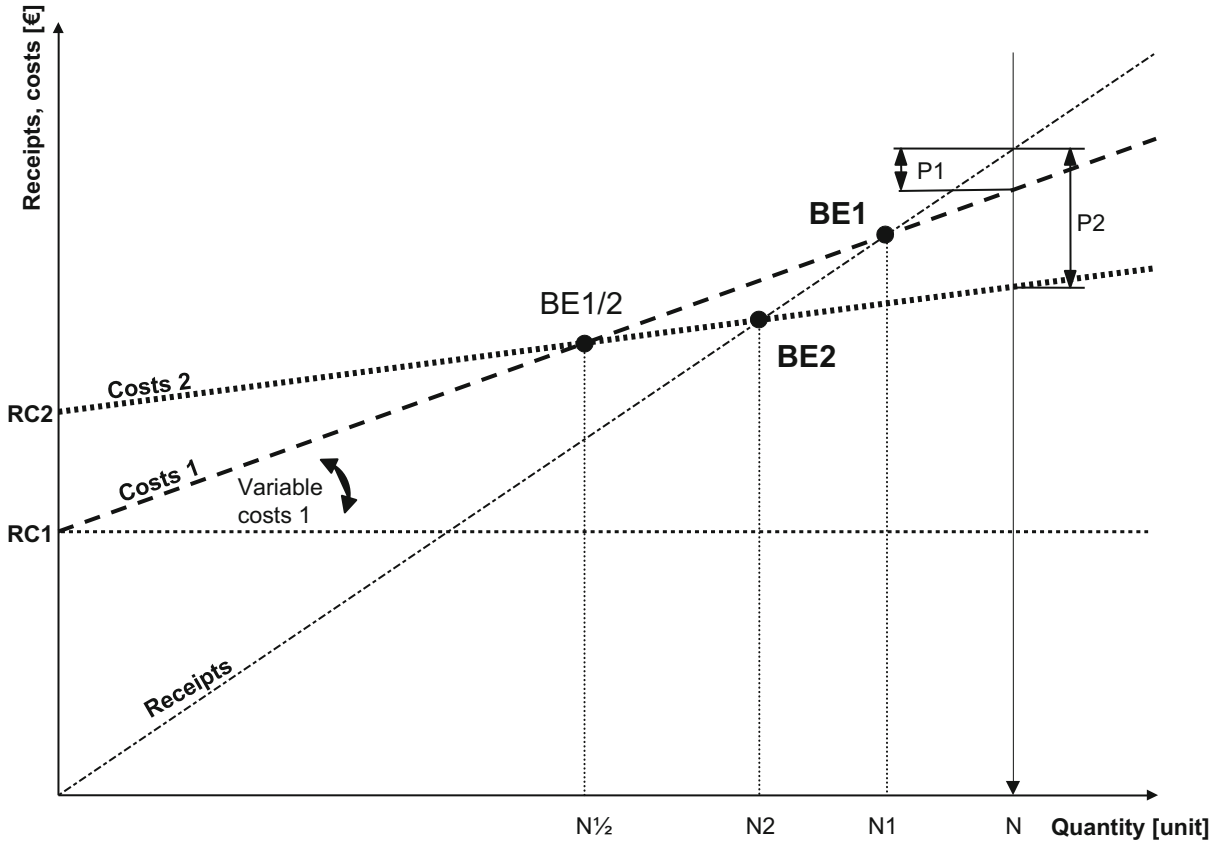


Fig. 16.30 Break-even analysis

Source: Kuster et al, Project Management Handbook, p. 160

Aspects of project controlling

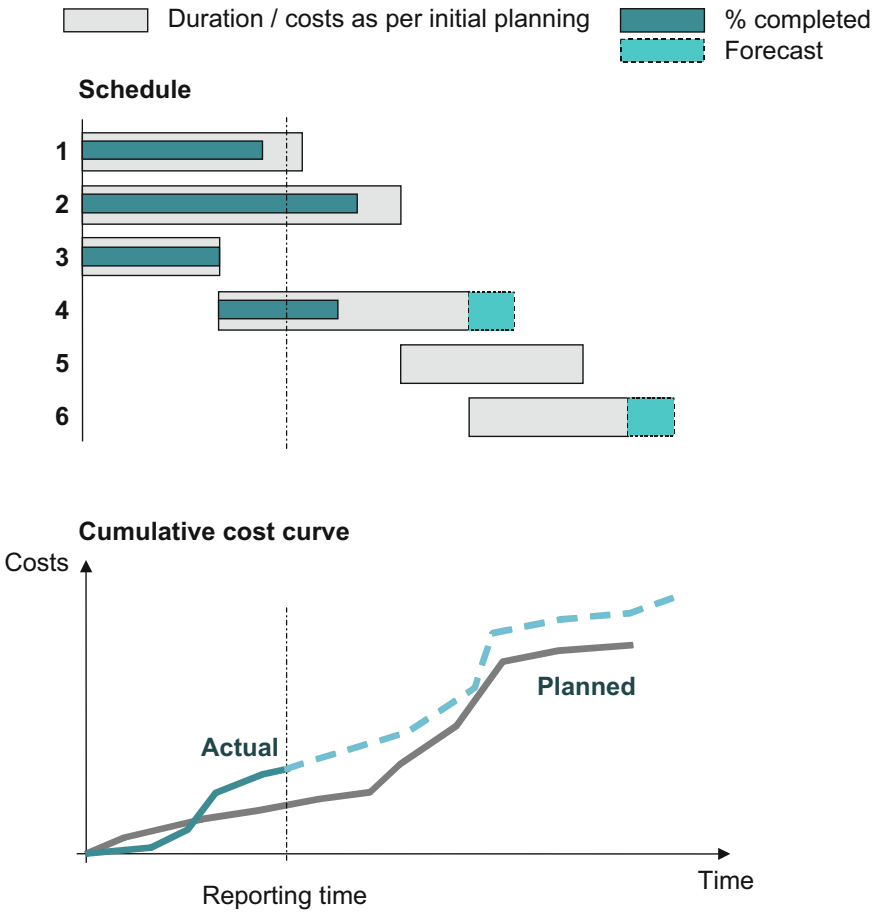
Project monitoring	Continuous monitoring that the goals are being met in terms of schedule, costs and quality.
Project assessment	At regular intervals, but at the very least at the end of each project phase, the project should be evaluated against predefined criteria, and the anticipated risks should be reassessed.
Project reporting	Reporting includes documentation and communication of the results achieved by the project to the relevant offices and decision-makers.
Project steering	Corrective measures should be drawn up on the basis of the results identified during project controlling.
Changes to the project	Document changes to the ongoing project (requirements, technology, market, etc.), and formulate and implement appropriate measures.

Fig. 17.1 Aspects of project controlling

Source: Kuster et al, Project Management Handbook, p. 166

Controlling of project status

Fig. 17.2 Assessing the status of the project and cost controlling



Source: Kuster et al, Project Management Handbook, p. 167

Project Status: Cost and Time

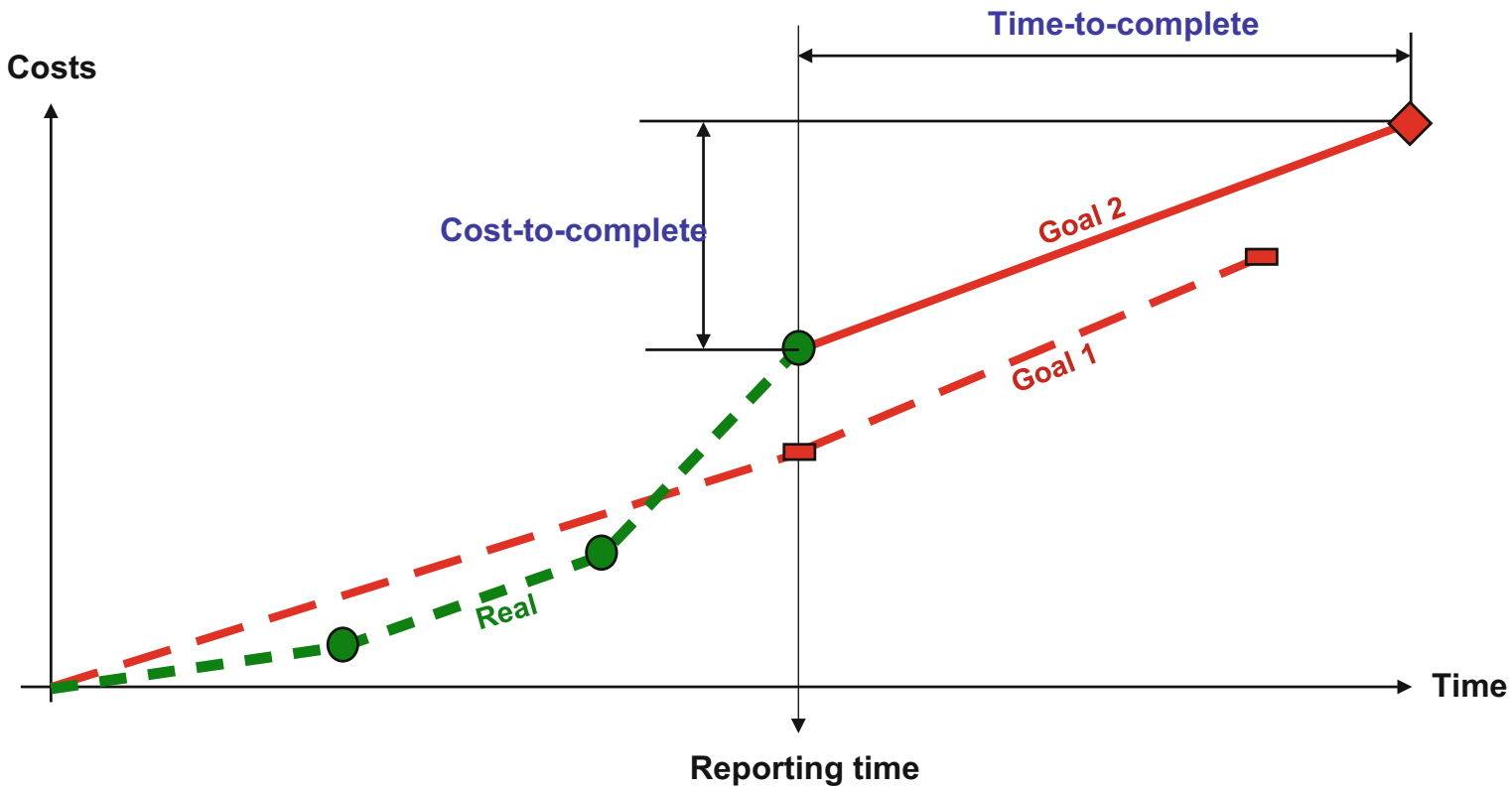


Fig. 17.3 Time-to-complete and cost-to-complete

Source: Kuster et al, Project Management Handbook, p. 168

Project Status: 90% Syndrom

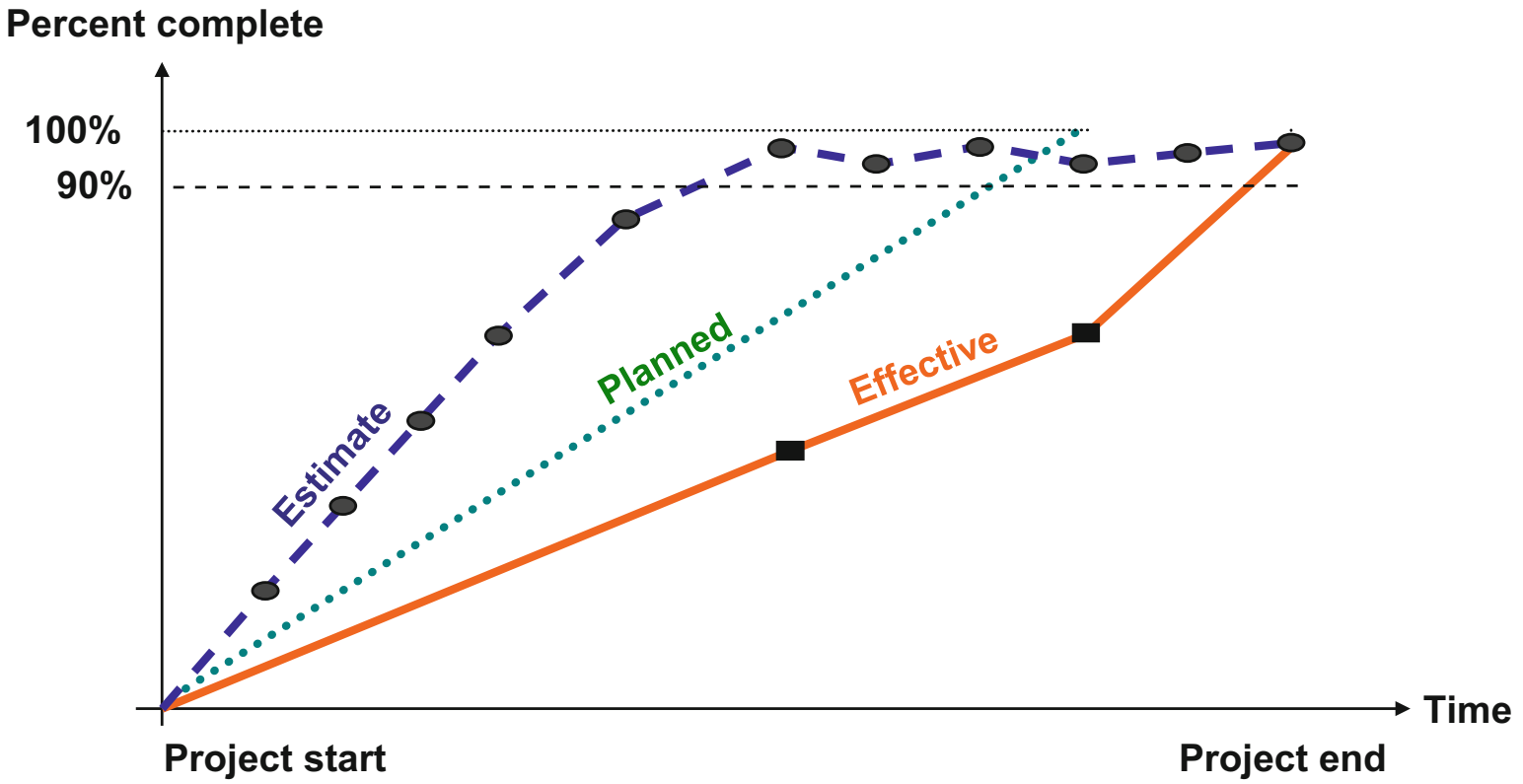
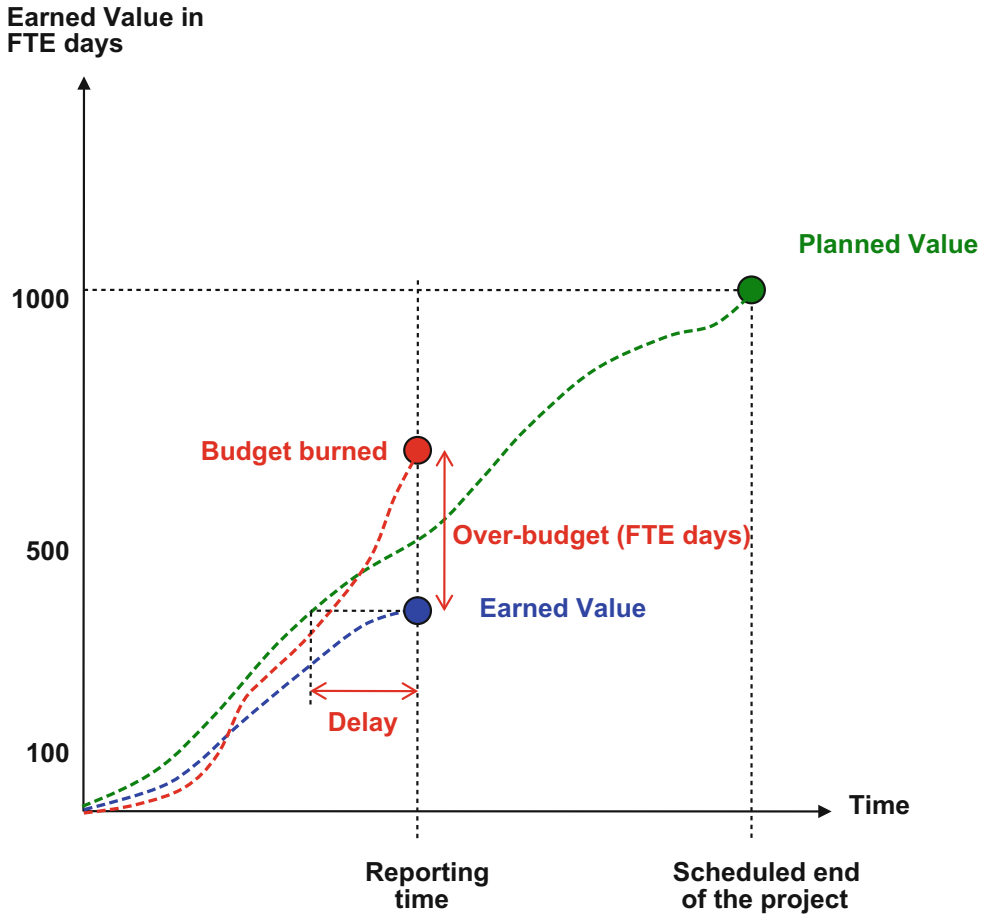


Fig. 17.10 The 90 % syndrome

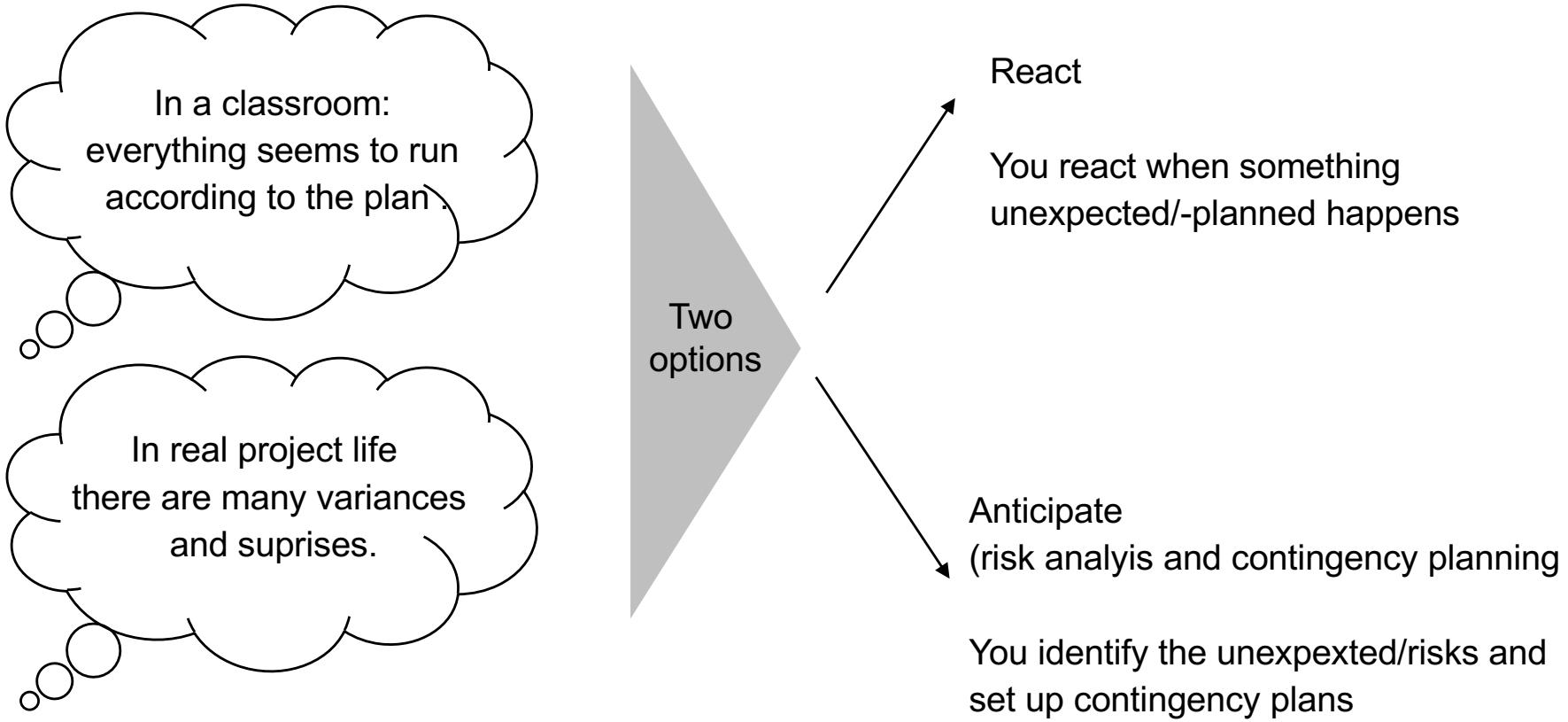
Source: Kuster et al, Project Management Handbook, p. 177

Project Status: Earned Value Analysis



Source: Kuster et al, Project Management Handbook, p. 357

Two options to deal with risks and the unexpected …



Project Risk Management

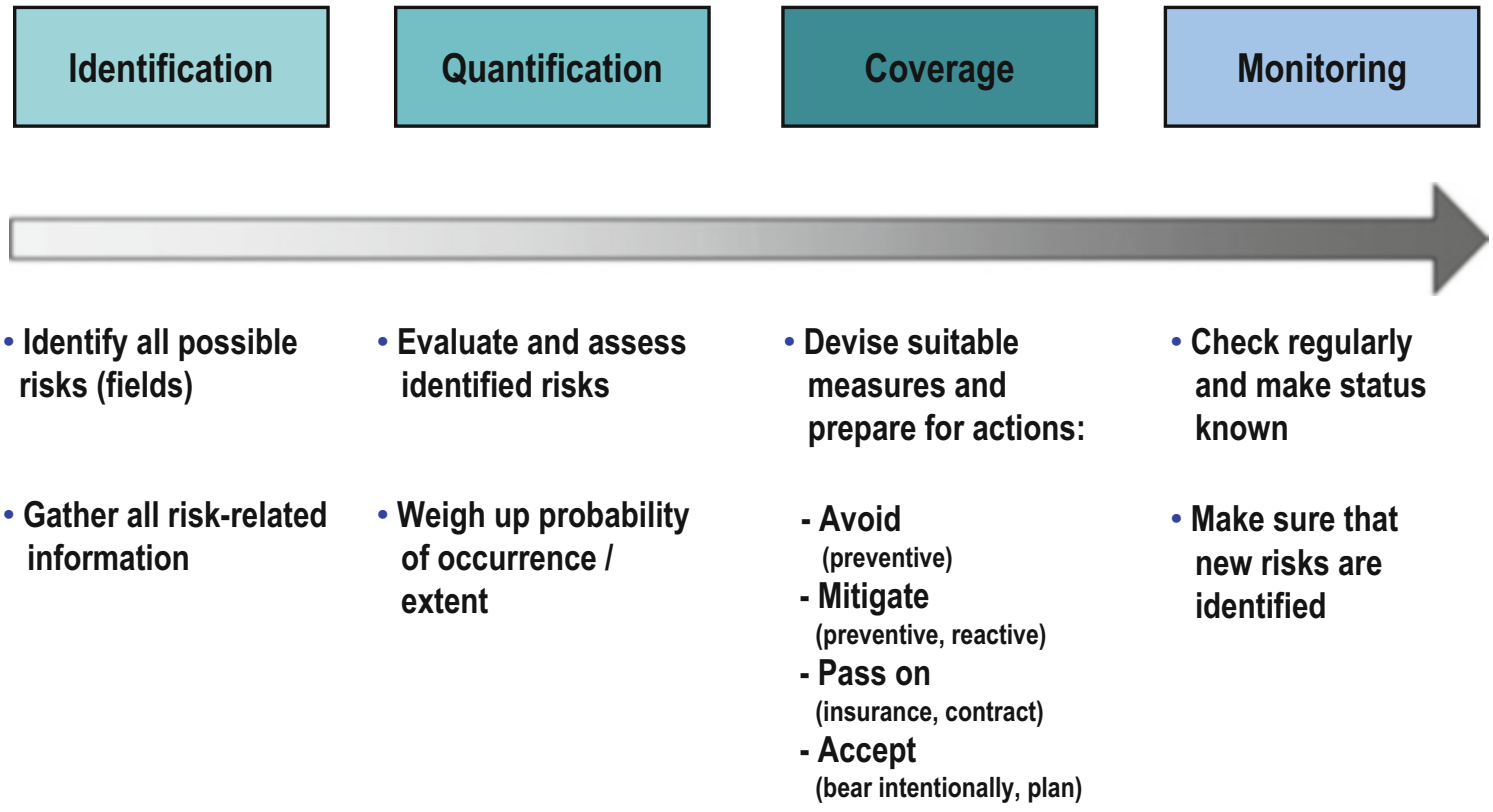


Fig. 17.5 The risk process

Source: Kuster et al, Project Management Handbook, p. 171

Project Risk Management: Risk Matrix

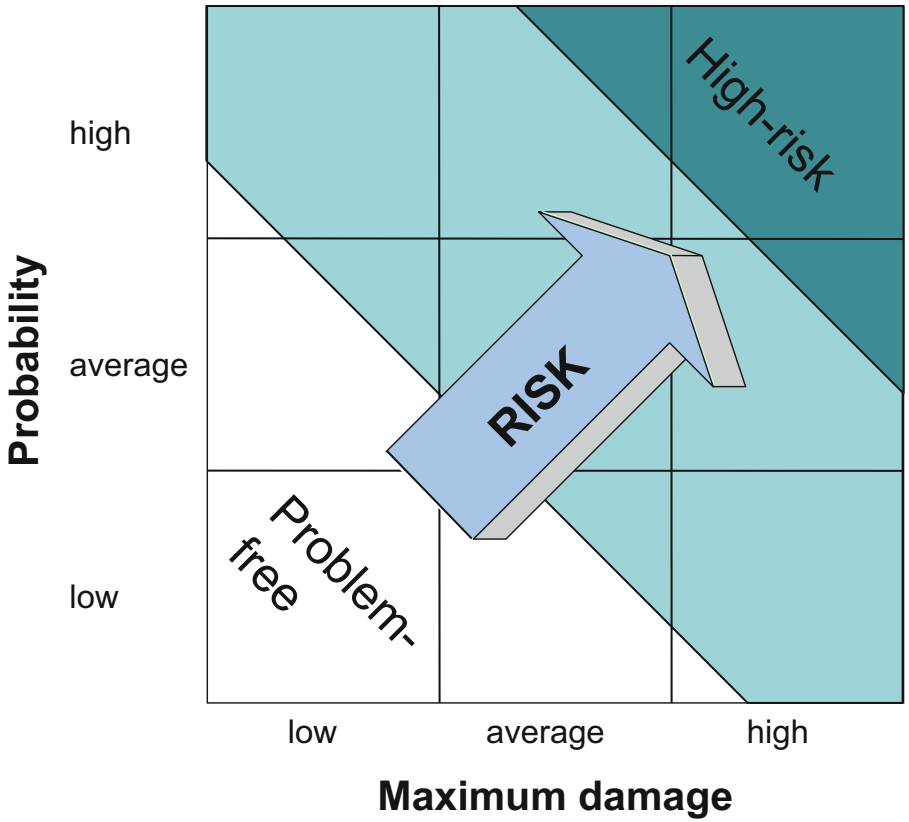


Fig. 17.6 Identifying the extent of risks

Source: Kuster et al, Project Management Handbook, p. 172

Project Risk Management: Example

Risks	Assessment before measure			Actions		Assessment after measure			Decision
	P	S				P	S		
Project owner's changed goals	7	6	42	Clearly word orders	Establish changeover procedure	3	5	15	yes
Supplier failure	3	9	27	Contractual coverage	Include alternative suppliers	2	5	10	Prevent-ive only

Key: P = Probability of occurrence
S = Scope of consequences

Fig. 17.7 Example of a risk assessment

Source: Kuster et al, Project Management Handbook, p. 173

FMEA

Failure Modes and Effects Analysis (FMEA)

Threshold for risk priority number: 250

Subject: New bone implant AD45a | Created by: WE | Initials: WE, dd.mm.yy | Approved by: TR, dd.mm.yy

				Current status							Improved status			
System, process	Potential fault	Potential conseq. of the fault	Potential causes of the fault	W	T	E	RPZ	Recomm-ended action	Respon-sible, date	Action taken	P	T	E	RPZ
Bone implant	Surface not adhering	Medication >1 year	Careless surface treatment	8	2	8	128							
	Shaft breaks under load	New OPS required	Cavities in the shaft	8	9	6	**432**	100% X-ray US	WE mm.yy	Equipment in prod. process	8	9	1	**72**
	Cartilage attaches	Endoscopy every 3 yrs	Surface roughness in places	4	6	2	48							

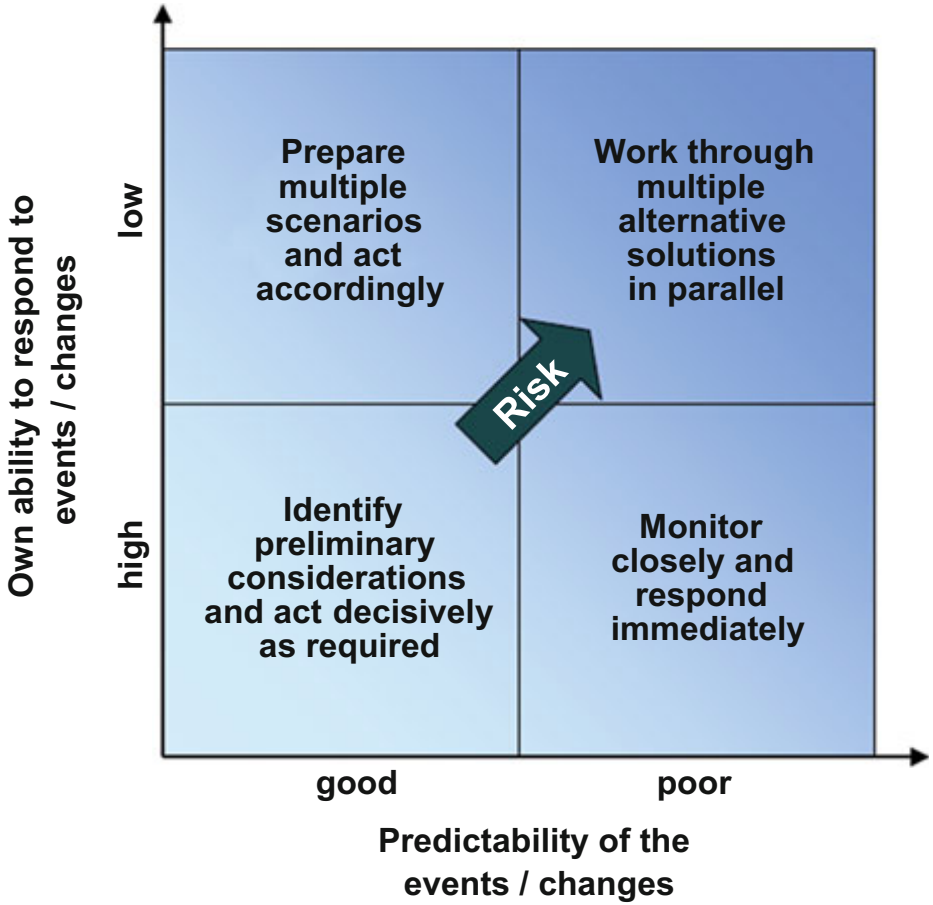
Key: W = Probability of occurrence
T = Scope of consequences
E = Likelihood that the failure will be detected by the company

RPZ = W x T x E

Source: Kuster et al, Project Management Handbook, p. 418

Project Risk Management: Strategies

Fig. 17.8 Risk management strategies



Source: Kuster et al, Project Management Handbook, p. 174

Changes to a project

- Happens almost always!

- **Configuration Management**:
  If a product/process is developed over a lifecycle and has several versions
  → ensure consistency!

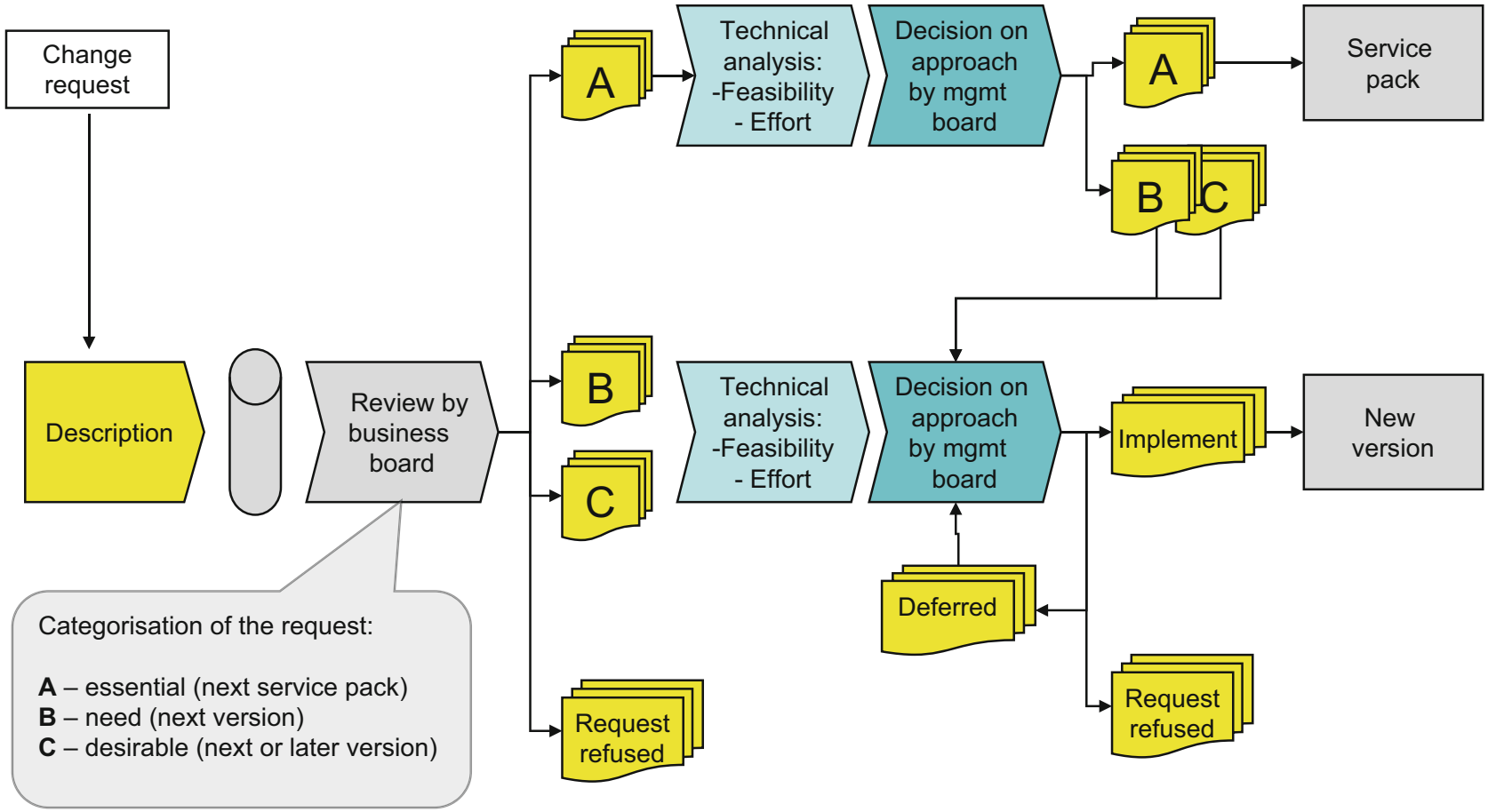
- **Change Request Mangement**
  A stakeholder changes his mind about requirements to the project

- **Claim Management**
  Claim additional costs caused by a change request

Contents of a accepted change request

- Type of change
- Reasons for the change request
- Work packages affected by the change
- The impact on project costs, duration and other parts of the project
- The effect of turning down a change request
- The impact on safety, new risks
- Links to earlier change requests that are now making themselves felt
- Body responsible for taking the decision
- Customer approval
- Placing of order (from design change request to design change order)

Change Request Process



Source: Kuster et al, Project Management Handbook, p. 350

Project Management Portal

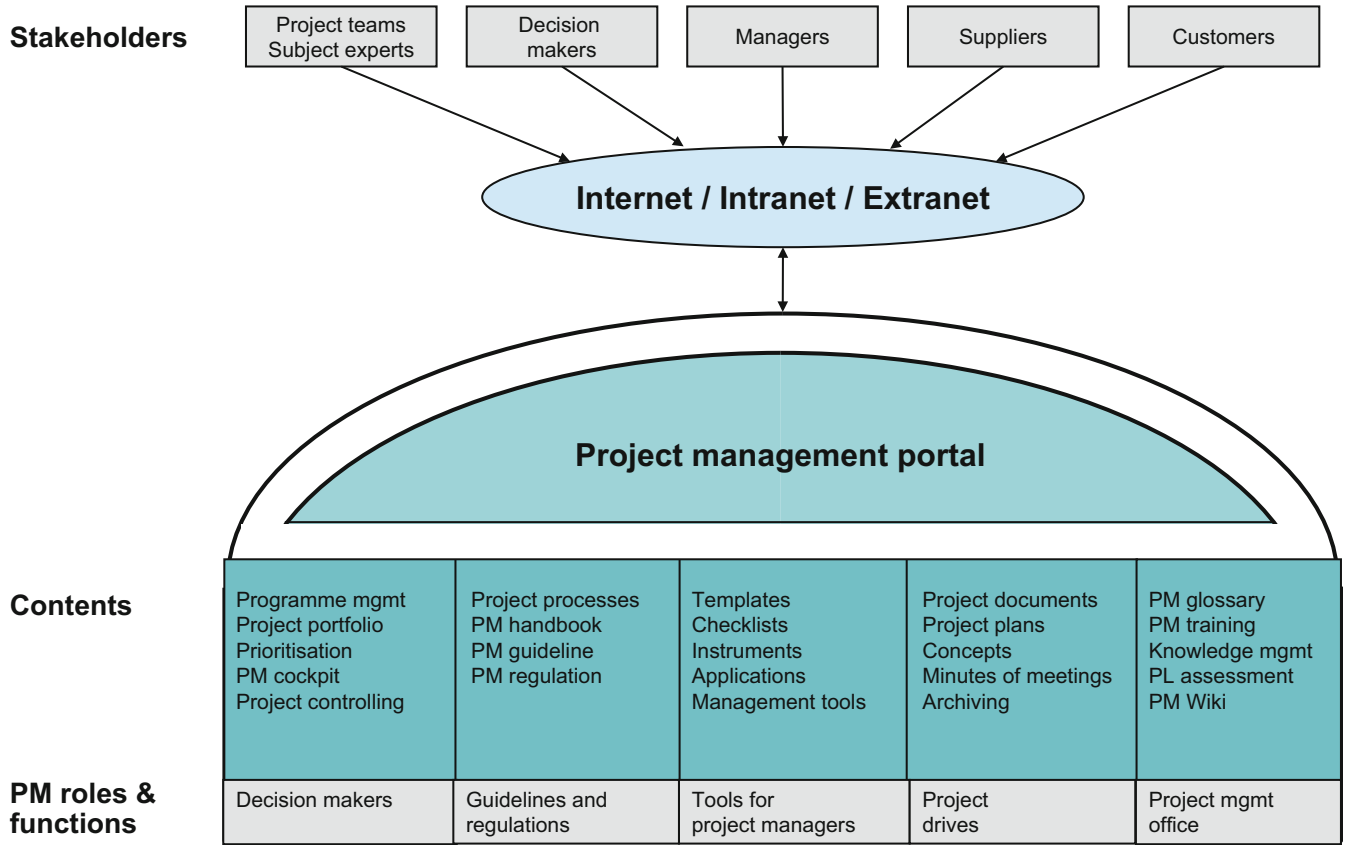


Fig. 18.8 Structure of a project management portal

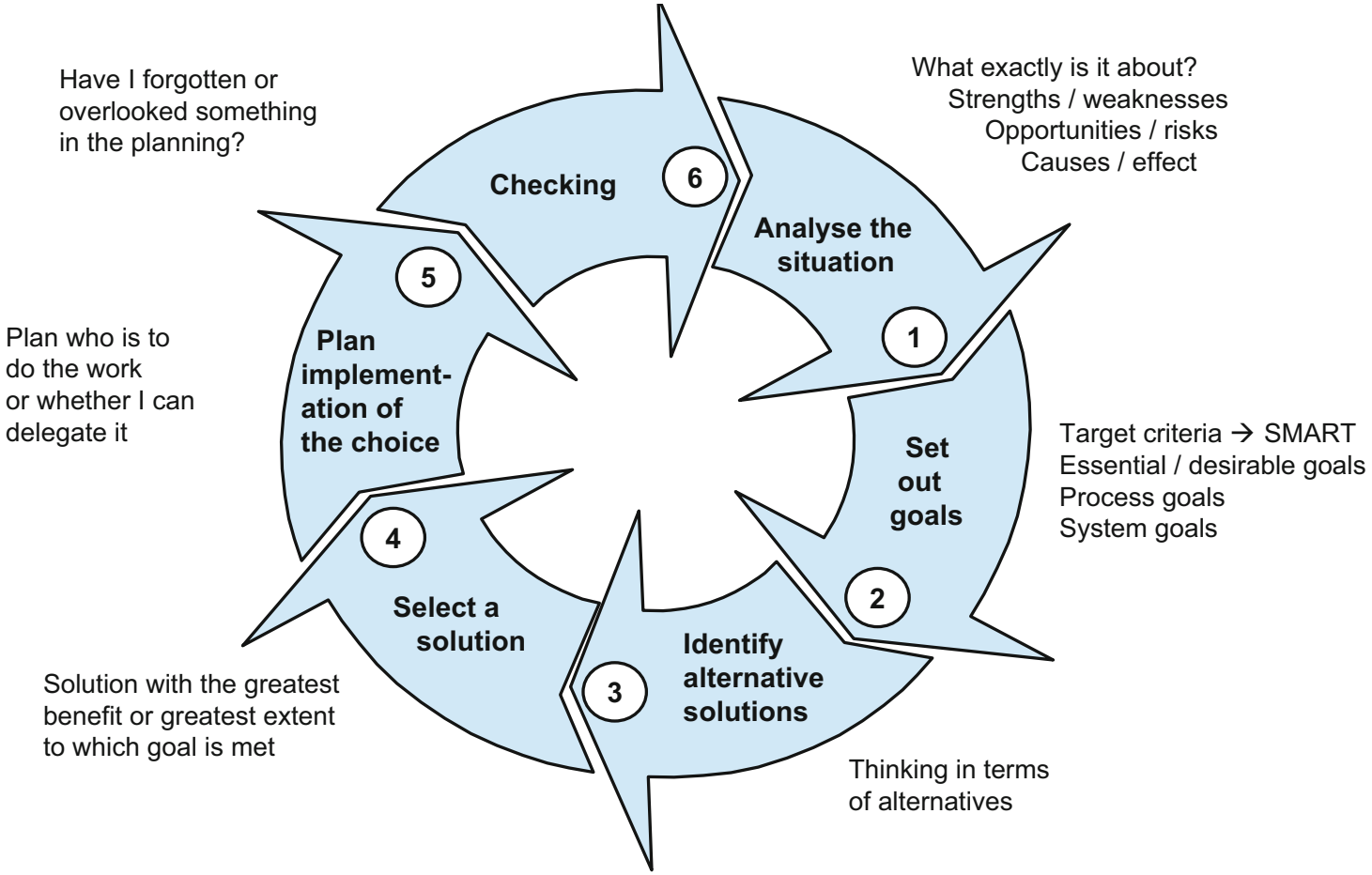
Source: Kuster et al, Project Management Handbook, p. 202

Concept phase

- Create a framework plan (milestone plan, master plan) for the next phases
- Indicate opportunities for savings (parallelisation of activities)
- Define the sub-projects
- Formulate investment decisions

- Developing individual solution concepts and making decisions about the structure of the different options
- Plan the successor organisations and maintenance organisations
- Develop training and familiarisation plans
- Define an approach for Change Request Management

Problem-solving circle



Source: Kuster et al, Project Management Handbook, p. 387

Other problem solving approaches

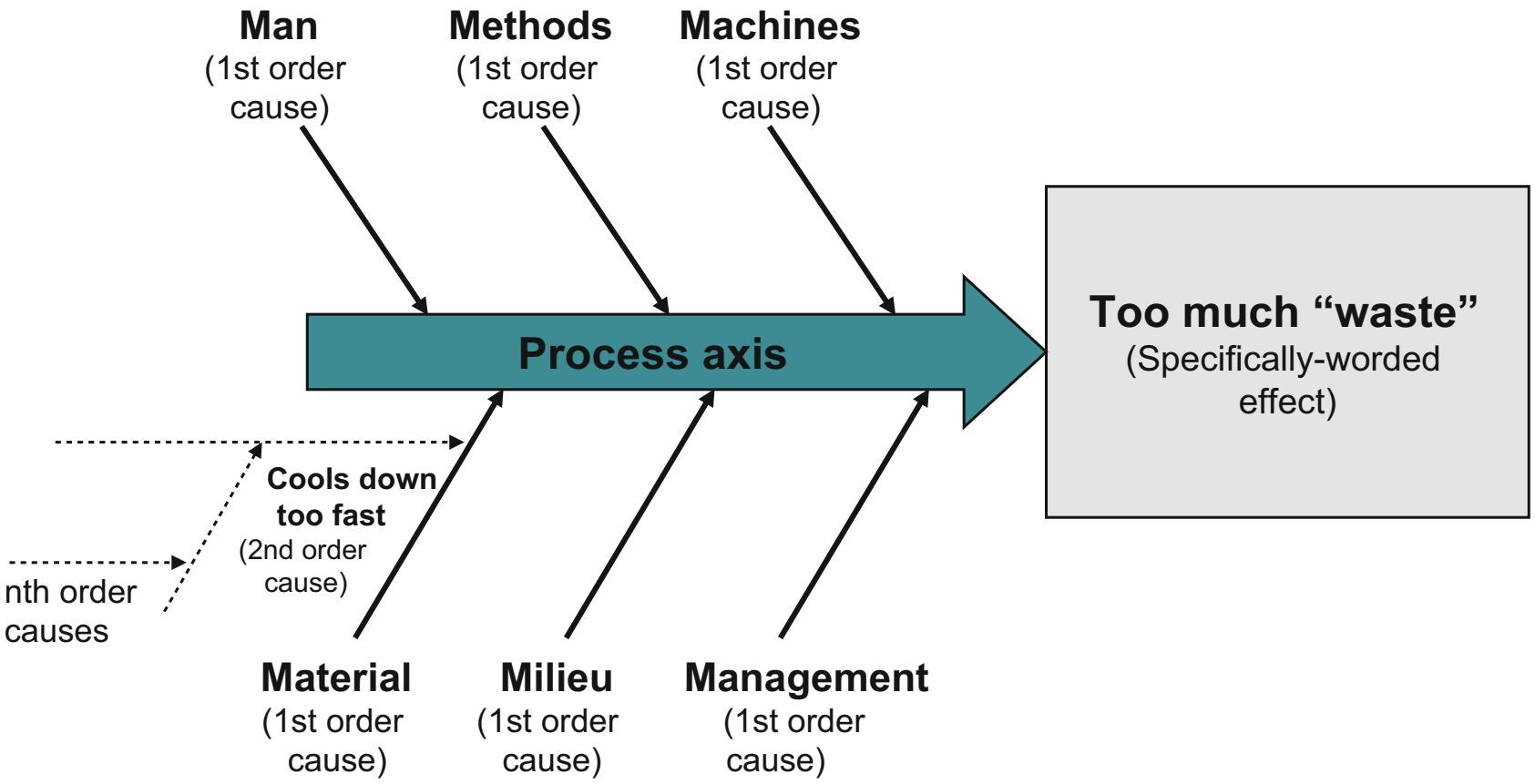
Problem-solving cycle Goals, solutions, choices	**Kepner-Tregoe** Problem-solving and decision-making	**Deming circle** (PDCA cycle), Shewhart cycle, continuous improvement process	**Lean / Six Sigma (DMAIC, DMAEC)** Improving and optimising business processes
Situation analysis: What is it? What is missing? **Define the goals:** What should they be? How do we know that? **Alternative solutions:** What is possible? What else? **Selection and decision:** What is ideal? What impresses? What are the risks? Which alternative shall we choose? **Implementation and control:** Who is doing what? By when? Goal achieved?	**Situation appraisal:** Determine the overall situation **Problem analysis:** Define the problem and its boundaries **Decision analysis:** Identify goals, assess the different alternative solutions **Potential problem analysis:** Scrutinise against potential problems and take actions to minimise the risk	**Plan**: Analyse the current situation, and identify improvement potential **Do**: Try out, test, practical optimisation in small framework **Check**: Check and approve the results **Act:** Introduce as a standard on a broad front, regular checks (audits) for compliance	**Define**: What customer needs should the process meet? **Measure**: The process's key characteristics **Analyse**: Identify the causes of the deviation from the defined goals **Improve**, **Execute**: Find solutions for the identified problems, specify assessment criteria **Control**: Introduce and monitor improvements and new processes

Source: Kuster et al, Project Management Handbook, p. 391

Tools and Methods

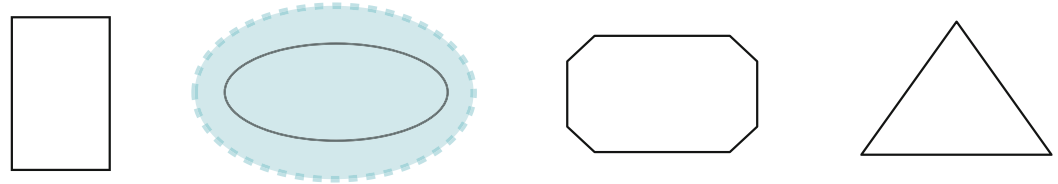
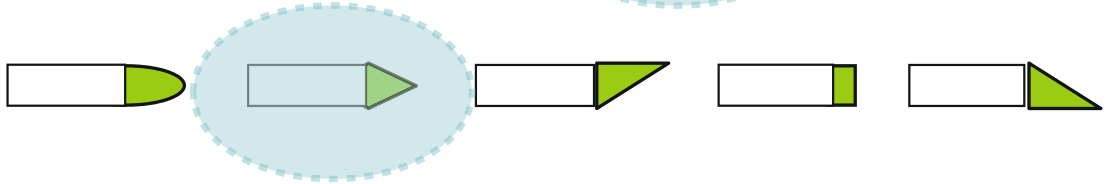
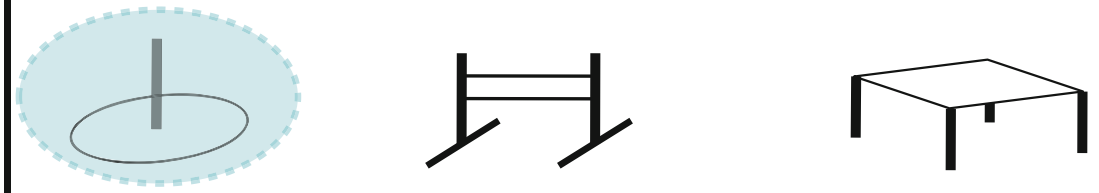
- Benchmarking
- Empirical data collection
  - Questionaires
  - Delphi-Method
- Analytical data collection
  - MTM: Methods Time Measurement
- Analyses
  - SWOT
  - Cause-Effect (Fishbone)
  - Morphological box
- Creativity Techniques
  - Brainstorming / Brainwriting / Method 6-3-5
  - Analogy: Bionics and Synectics

Fishbone diagram



Source: Kuster et al, Project Management Handbook, p. 399

Morphological box

Sub-problems (Properties)	**Solutions** (Characteristics of the sub-problems)
Shape of the table top	
Material	**Wood** **Metal** **Stone** **Glass**
Edge shape	
Support design	

Source: Kuster et al, Project Management Handbook, p. 419

Value-benefit Analysis

Criteria / detailed goals		**Variant 1**		**Variant 2**		**Variant 3**	
Essential criteria			Fulfilled		Fulfilled		Fulfilled
Optimisation criteria	Weighting W	Score S	W x S	Score S	W x S	Score S	W x S
Overall utility value							

Source: Kuster et al, Project Management Handbook, p. 421

Blocks to creativity

- **Physical and environmental blocks**
  - Surroundings
  - Sensitivity
- **Sociological blocks**
  - Cultural
  - Group work
  - Management, politics
- **Pychological blocks**
  - Closed thinking and intellectual rigidity
  - Cognitive dissonance
  - Motivation

Moderation – Required skills of the moderator

- Neutrality
- Sensitivity to social issues
- Verbal skills
- Technical knowledge with respect to the topic and working methods
- Acceptance by the participants

Phases of moderator meetings and workshops

1. Recording
   - Bringing together all aspects of the topic
   - Making them audible and visible
   - Allowing and encouraging a broad approach to the subject matter
2. Condensing
   - Developing the central topic with the group
   - Channelling the subject matter
3. Firming Up
   - Making sure that alternative solutions are considered
   - Initiating specific steps for implementation

Rules for a moderated meeting

- “Asking not stating”
- Moderator has a positive attitude towards people
- Working with the group, rather than fighting it
- “Social” disruptions have priority
- Distinguish between “perception”, “suspicion” and “evaluation”
- “I” messages, rather than “one/people” expressions
- Note body language and look out for and investigate “non-verbal” signals
- Do not evaluate or judge
- Avoid being defensive or self-justificatory
- Do not discuss the methods
- Analyse conversational practices
- Observe or even specify the seating arrangements

Use of flipchart, metaplan-cards or whiteboard

Flipchart

- For standardized workshops prepare flipcharts in advance, esp. larger drawings
- Use several colours
- Write clear and big enough so everyone can read
- Explain what You‘re doing while writing

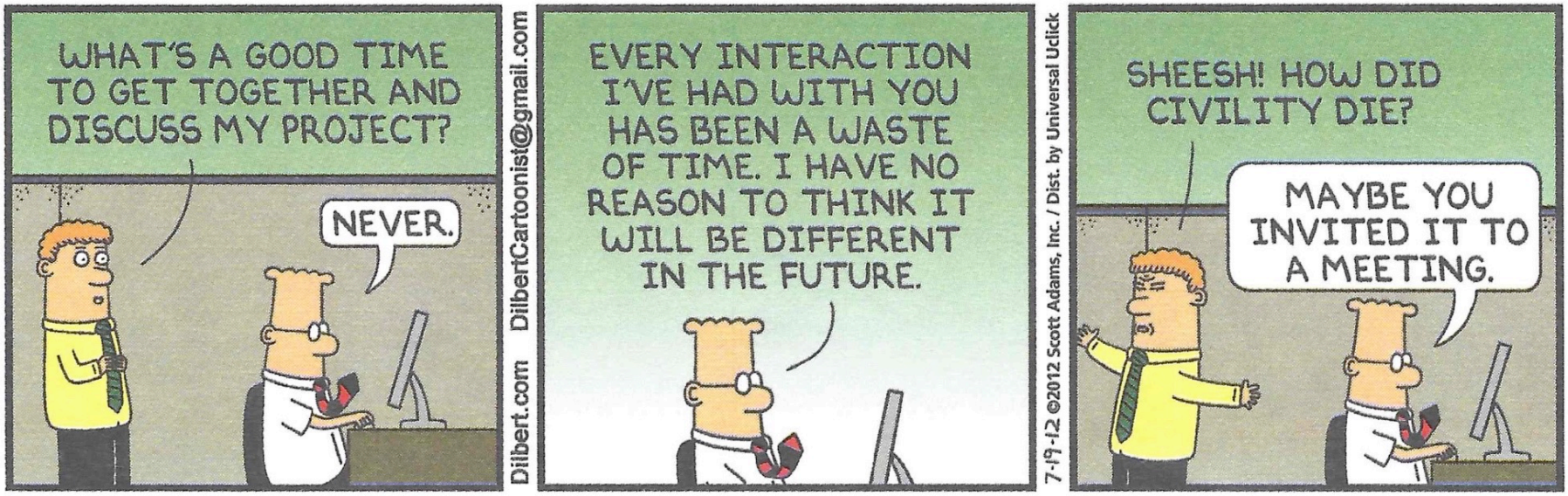
Metaplan cards

- Collecting ideas /Brainstorming
- Clustering of ideas (afterwards)

Whiteboard

- Developing „pictures“ together – draw & wipe

Meeting – Planning issues



Meeting - Preparation

- Define clear topic
- Select participants
- Provide necessary documents for preparation
- Define the aims of the meeting (information, discussion, decision)
- Setup the agenda
- Define time, duration and location

→ Discuss and agree with most important project partners!

Meeting – Contents

- Welcome Introduction / Topic Introductions
- Goals of the meeting
- Procedure or structure of the meeting
- Meeting rules
- Minutes (agree upon last one and select minutes taker)
- Boundaries
- Content
- Conclusion or decision
- Summary
- Next meeting
- Thanks and close-off

Meeting facilitation

- Situational awareness is key
- Pay attention to the team dynamics
- keep the discussion on any one topic to around 10 minutes max
- Be ruthless in keeping the meeting on track.

Meetings – Qualified Input

Virtual meetings

- Always greet each person on the conference call.
- Smile when you speak ... if you want to convey a positive message.
- Address the participants directly
- Practice speaking in different volumes to enhance the message.
- Change the cadence or pace of your words.
- Try playing with your word choices.
- Turn the video on (and ask the other participants to follow)

Meeting Minutes

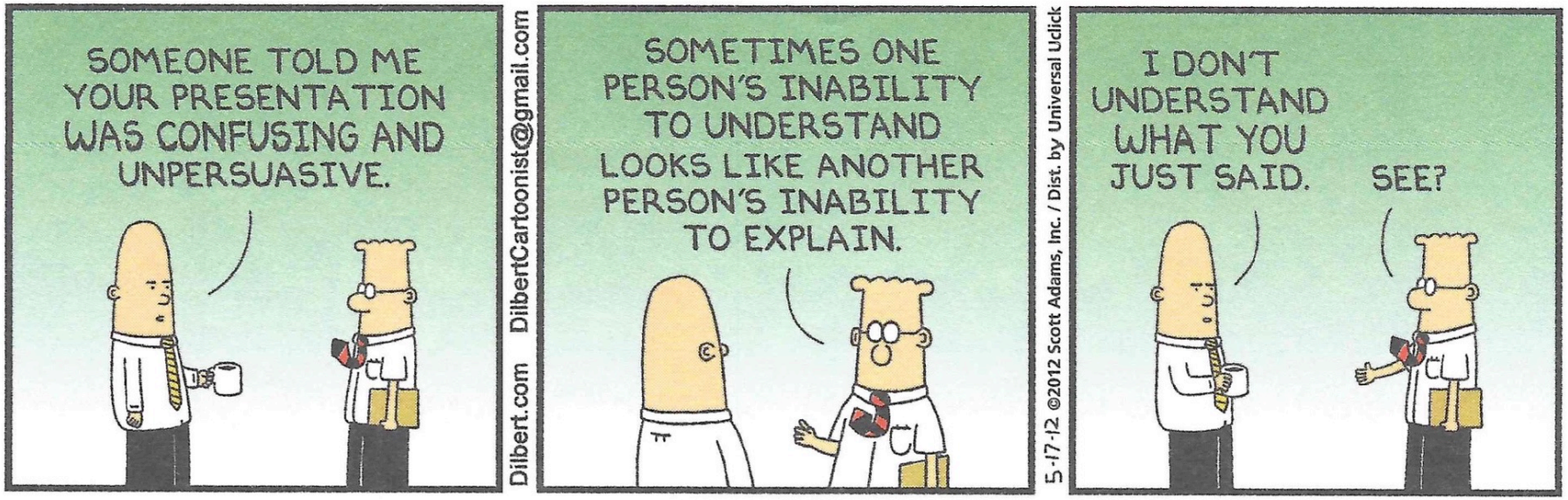
- Who was there and who was not?
- To whom the minutes will be circulated
- Place, Date and Time of the meeting
- Minutes Keeper
- Numerical identifier (for each topic
- Concisive desription of discussed contents (following the agenda)
- Open items, To-Dos, Responsibilities, Deadlines / Due Dates
- Decisions
- Next meeting

No.	Content	What?	Who?	When?
1	Prototype presentation	I	PM	
2	After discussing prototype B was selected	D	All	

Virtual teams – esp. international project teams

- The formal and technical requirements must be agreed (data formats, which tools to use, hardware and software for all participants, etc.).
- There should be an agreed project methodology and project language.
- There must be a shared understanding of the project. In most cases, this makes it worth holding a meeting with everyone in the same physical room, especially if the project participants don't know each other.
- Rules about information and communications must be very clearly agreed, and must be adhered to.
- The division of work (work packages and responsibilities) must be defined, and must be understood by everyone. A workflow plan is essential, with milestones and hand-over points. It is used both for orientation, and for controlling.
- In between the synchronisation points, the team members have full responsibility for working on their work packages.

Presenting information the right way



Important Points regarding Presentations I/II

- Speaking is not about information. It is all about the feelings that are triggered by the information
- The effect of a presentation is determined 30 % by the text and 70 % by the packaging
- Stand in the centre of the room
- Deliberate body language that exudes self-assurance
- Look at the people, move your eyes around the room
- People first, then the matter at hand
- Rhetoric means creating images in other people's heads
- A speech will only be effective if the speaker is enthusiastic about the topic and is authentic
- Gestures start with the hands in the home position: hands touching lightly in front of the stomach, just beneath the navel
- Maintain the volume (made easier with gestures)

Important Points regarding Presentations II/II

- Always give an example when you make a statement
- Show the visual aid for each topic
- Include elements that bring tension, curiosity, sympathy and fun
- A lecture should end if the listeners have heard everything they want to hear
- Short sentences, Verbs bring animation
- Present, not past or future
- Any sentence that does not generate interest can be deleted
- Words such as “dynamic”, “flexible” and “innovative” belong on the rhetoric scrapheap
- Start by talking about the slide; short pause; display the image at the same time the text is presented
- It must be possible to take in the entire slide within 2 s – Omit anything that takes time to read from the slide
- A statement is devalued if it is repeated on the slide

Guideline to building a presentation

- What‘s the topic?
- Who‘s the audience?
  - Who are the decision-makers?
  - Anyone who has negative feelings about this topic?
  - What are the lessons learned from past presentations to that group?
- What are the three points You want to make?
- What images / visual aids do You need? Do You need some data or input from others?
- How long is the presentation?
- At what time of the day?

- Carefully think about reusing slides from other presentations

Implementation Phase

- Building facilities and equipment (or even prototypes)
- Developing software
- Producing user-friendly documentation and instruction manuals
- Specifying organisational rules (information, faults, etc.)
- Sorting out maintenance organisations, servicing schedules, etc.
- Define Roll-Out-Plan

Concluding a project

- Complete any remaining work or postpone it to a future release
- Finalise all cost accounting issues
- Complete the project documentation and archiving
- Hand over tasks, competencies and responsibility to the operator
- Give the project documentation to the maintenance organisation
- Project completion with the project owner
- Debriefing with the project team (Lessons Learned).

Critical Topics at the End of a Project

- Technical and organisational problems because the successor organisation (training, service, etc.) was forgotten
- The project manager and team feel as though the end of the project is always being pushed back because the solution can be made even more perfect. This is a point at which the necessary resource check is omitted.
- Projects are suddenly no longer current and simply fizzle out, rather than being cleanly concluded
- Failed projects are “swept under the carpet”. There is no review. Bad feelings are not worked through (the project leaves “bodies” behind)
- Where projects do not have clearly defined goals, an unceasing stream of adaptations is demanded of the project team. The project completion date is thus continuously put back.

Measure Project Success

- The basics
  - On Time
  - Under Budget
  - With the right quality

  → If it was that easy, maybe the project was not important

- More complex factors
  - Long term success
  - Acceptance by the customer (over-achieving customer expectations)
  - Agile and efficient reaction to changing environment

Deliverables

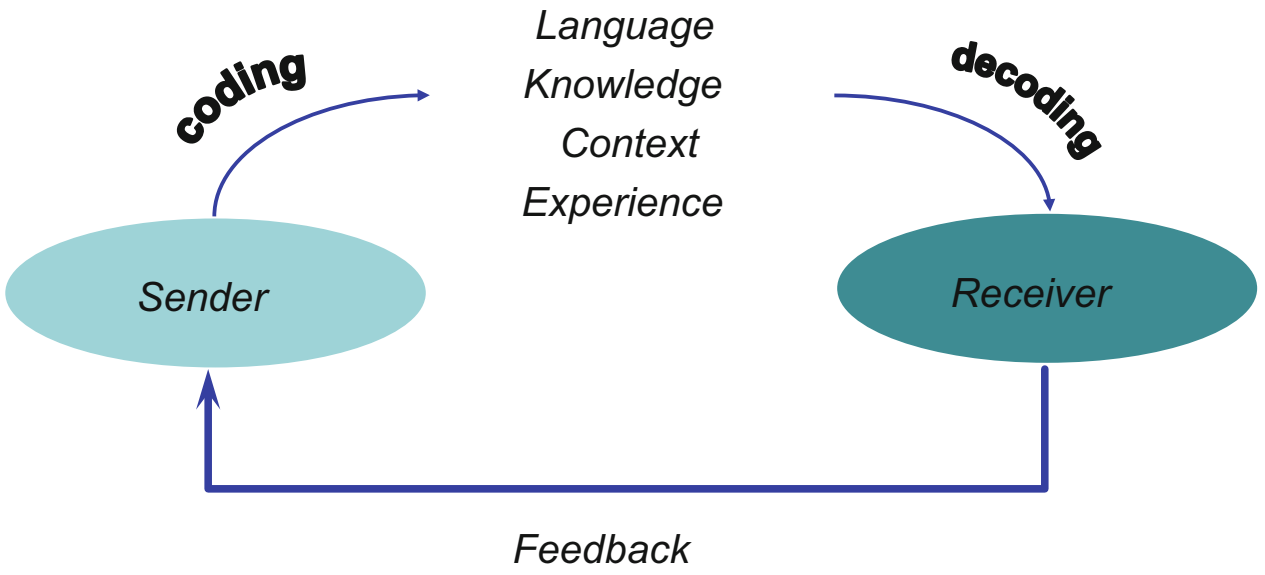
- Mid-term deliverables
  - Status reports/presentations
  - Project communication (Newsletter / Blogs)
  - Project poster presentations (in case of company events)

- Final deliverables at the end of a project are
  - Presentation
  - Report
  - In case of a product/system:
    - Technical documents (e.g. plans)
    - Manual
    - Training material/courses

Charateristics of a good Project Manager

- You like to work in a highly undefined work area
- You take all the responsibility, but have no authority
- You take all the responsibility, but can not blame other if it goes wrong
- You are a control freak, but let Your team go (from time to time)
- You want to lead people, but want to avoid contact with HR
- Your work won‘t get recognized (too much), but You have to praise others
- You‘re fast in figuring people out and motivate them

Communication



I don't know what I have said until I know what message has reached the recipient!

Fig. 18.9 Schematic representation of the communication process

Source: Kuster et al, Project Management Handbook, p. 204

Communication: 4 sides of a message

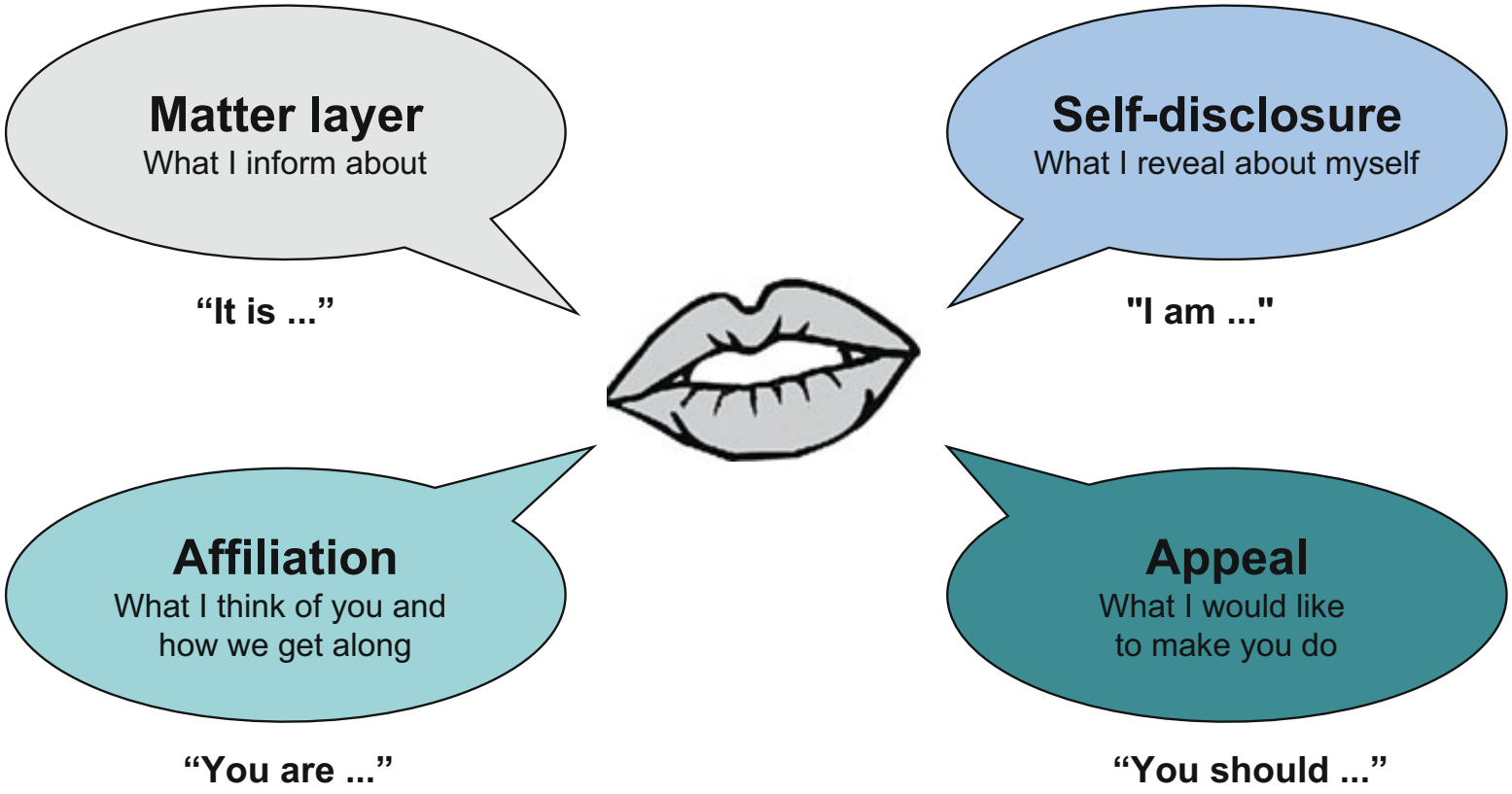


Fig. 18.10 The four sides of a message (Schulz von Thun, 2000)

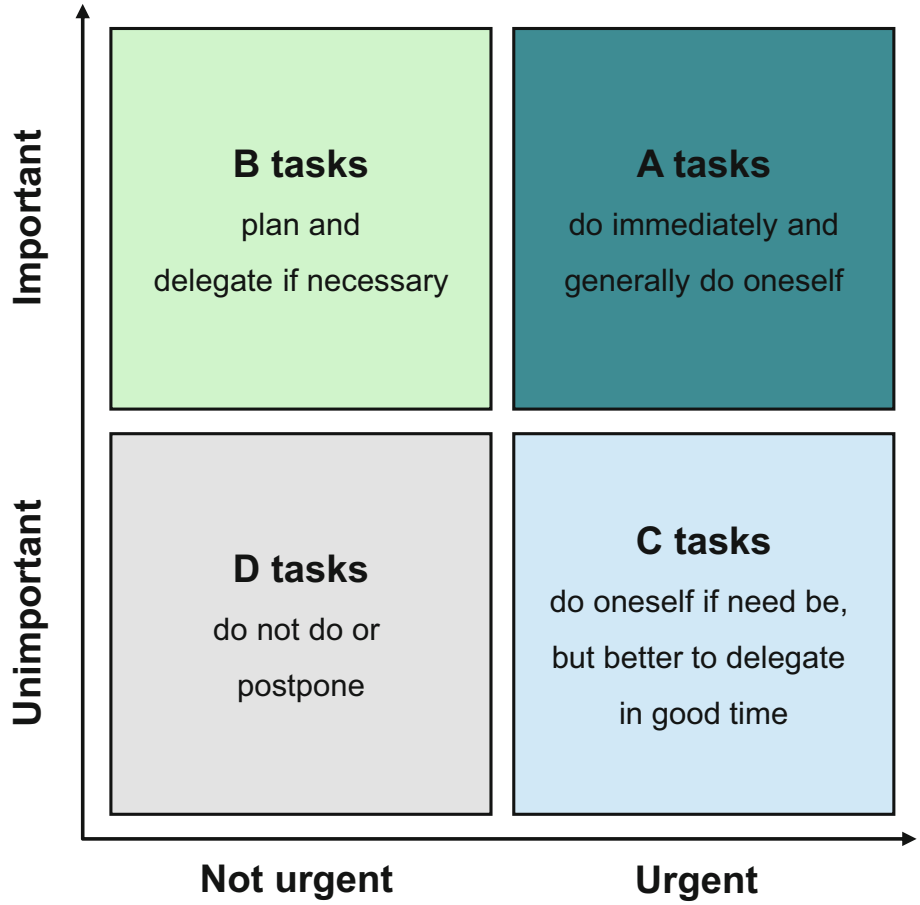
Source: Kuster et al, Project Management Handbook, p. 204

Leadership in Project Management

Special Aspects of Leadership in Project Management / for a Project Manager:

- **Leadership** role "**for a time**" - PM is formally incorporated into the project organisation hierarchy for a temporary period only
- PM **leads within the matrix** form of organisation with several established line managers
- Little or **no formal power** (authority to issue instructions)
- **No** or imprecisely defined **authority for resources**

ABC-Analysis for activities



Source: Kuster et al, Project Management Handbook, p. 381

Leaders have to decide!

- The team expects the PM to decide

- If You can‘t decide:
  - Ask yourself what other data you need to make the decision
  - Don’t like your options? Start thinking differently.
  - Is fear driving your inability to make that decision?
  - Push out or delay the decision.
  - Pick the least “bad” of your “bad” choices and iter- ate if necessary

- But always make a decision!

Decision-making in a team

Method	Speed	Commitment
Consultative: Group members are encouraged to contribute and discuss ideas, suggestions, and opinions freely. The decision maker makes the decision.	Fast	High
Consensus: Discussion continues until everyone's concerns and interests are addressed and incorporated. The group makes the decision and all members agree.	Slowest	Highest
Authoritative: The group leader makes the decision and announces the decision.	Fastest	Lowest
Voting: Everyone gets a vote. The group majority makes the decision.	Fast	Low

Source: McBride, Managing Projects in the real world, p. 127

Motivation by the Management

5 phases of group development

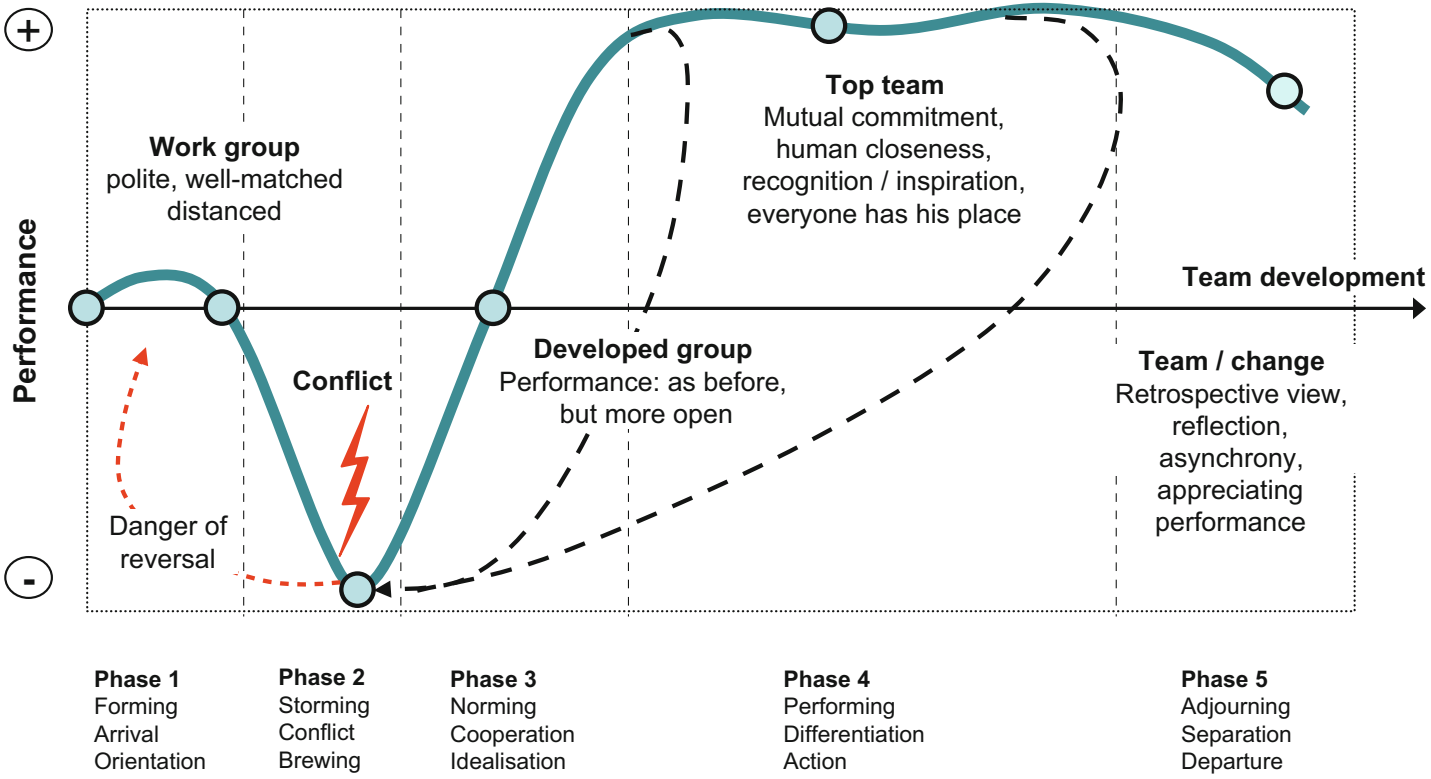


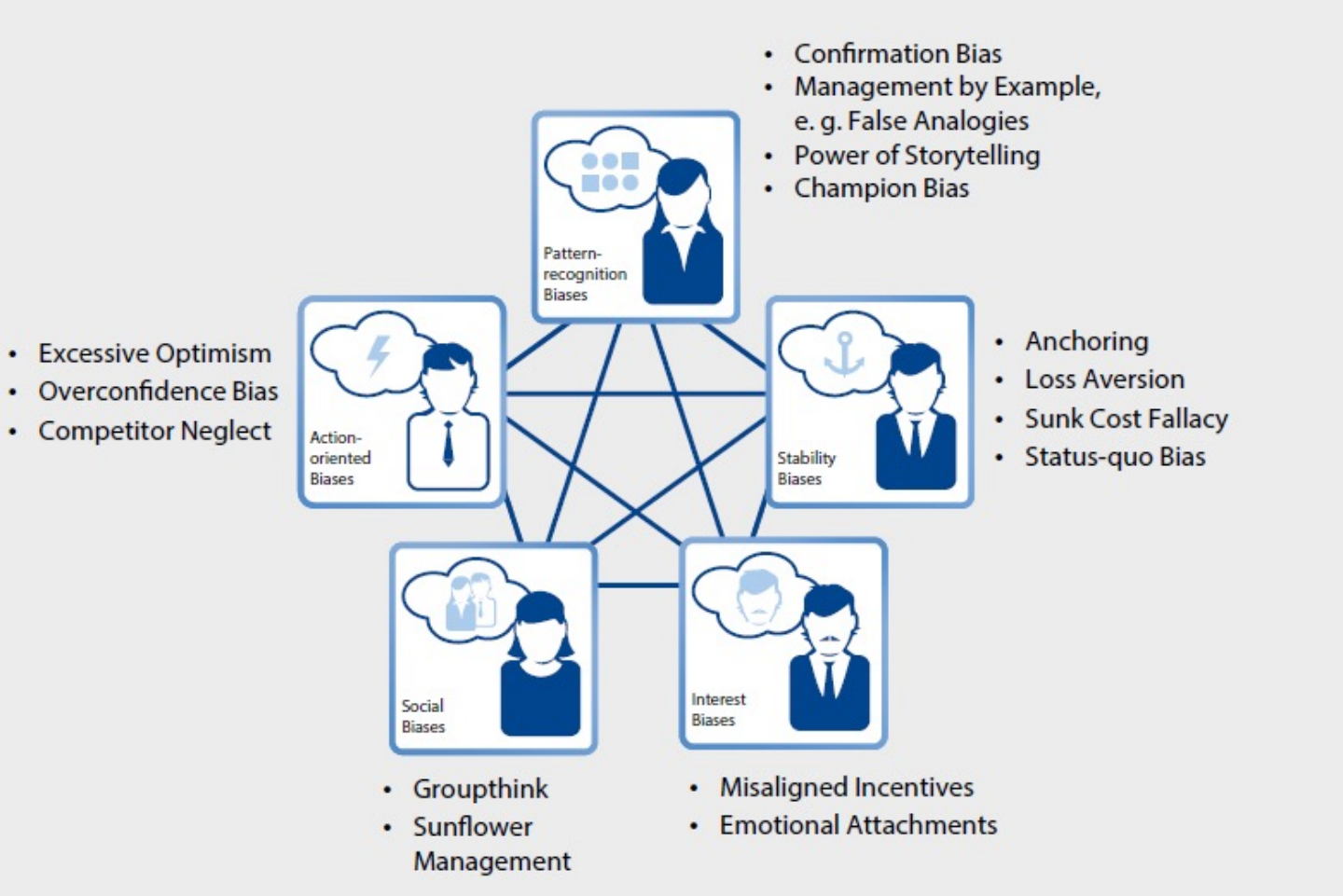
Fig. 20.9 Phases of team development (B. W. Tuckman et al.)

Source: Kuster et al, Project Management Handbook, p. 262

3 types of team members

- The camper: settled-in and is ready to go; fully committed
- The tourist: is curious and interested, but not yet committed
- The prisoner: not interested nor committed

Cognitive biases such as overconfidence



Source: Scherpereel, P., Gaul, J., Muhr, M. (2015) , p. 34

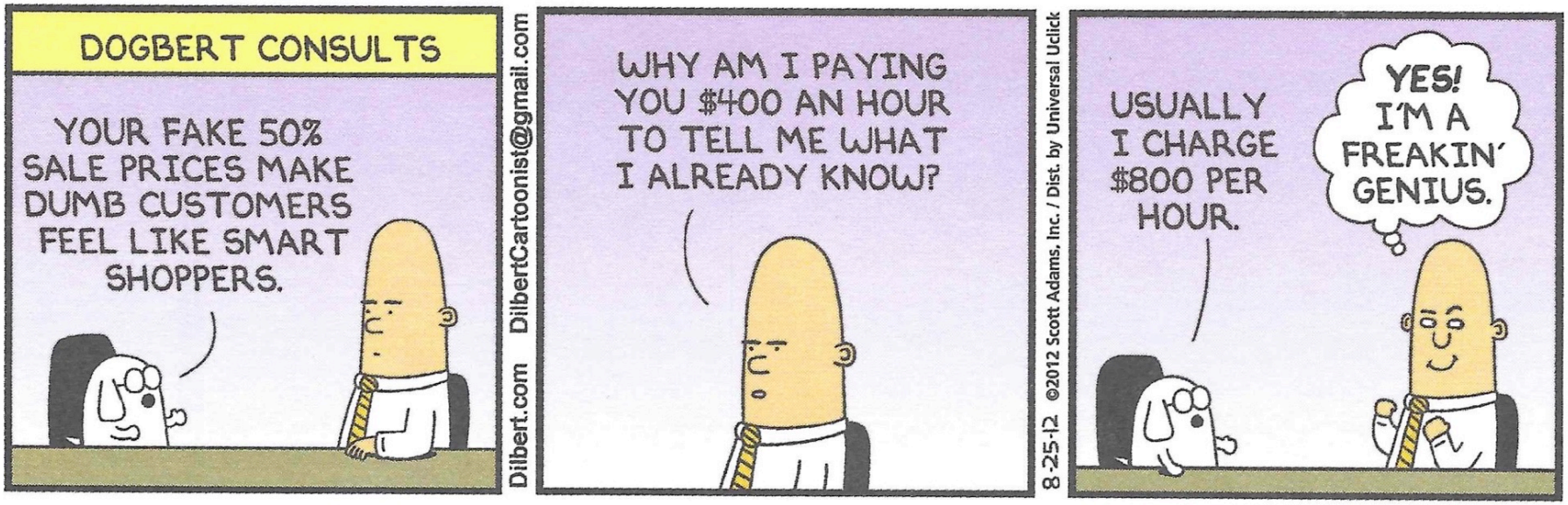
Demotivators

The bad communicator

- interrupts others.
- doesn’t listen to what others say.
- doesn’t understand the other person’s point of view.
- repeats him/herself all the time
- sounds like he/she doesn’t believe his/her own point.
- rambles

- Stakeholders or team members could be bad communicators... but it can also be You!

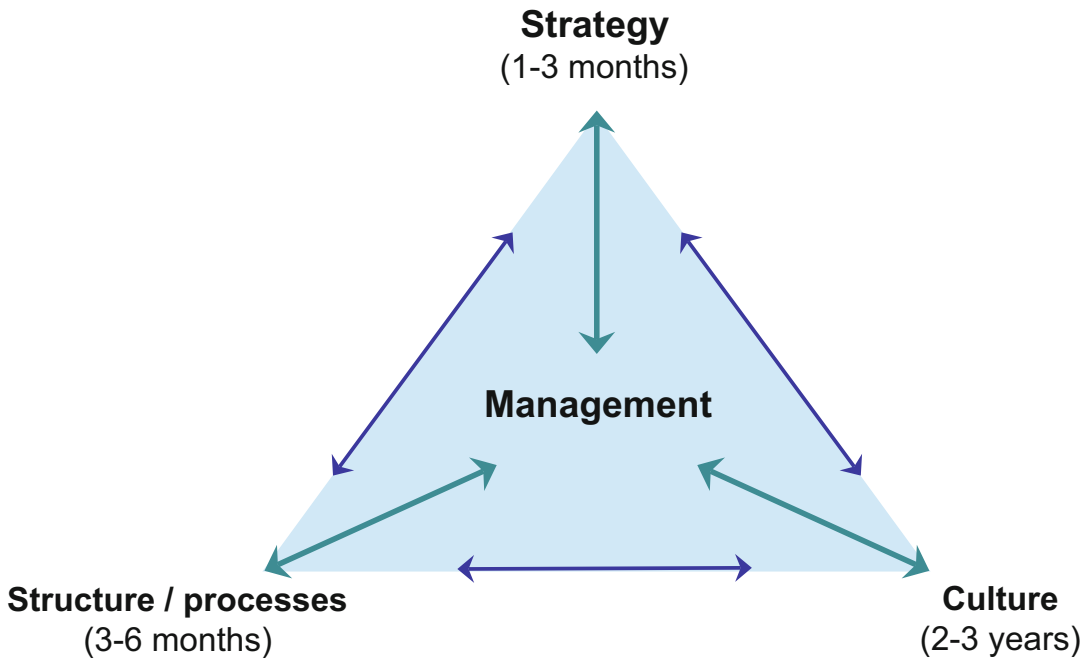
Pricing


DOGBERT CONSULTS
YOUR FAKE 50% SALE PRICES MAKE DUMB CUSTOMERS FEEL LIKE SMART SHOPPERS.
Dilbert.com DilbertCartoonist@gmail.com
WHY AM I PAYING YOU $400 AN HOUR TO TELL ME WHAT I ALREADY KNOW?
8-25-12 ©2012 Scott Adams, Inc. / Dist. by Universal Uclick
USUALLY I CHARGE $800 PER HOUR.
YES! I'M A FREAKIN' GENIUS.

8-step model in Change Management

1. Establish a sense of urgency
2. Form a powerful coalition of people willing to drive change
3. Create a vision for change, and a strategy to execute the vision
4. Communicate the vision
5. Empower people to act on the vision and the goals
6. Create short-term wins
7. Consolidate and build on the gains
8. Anchor the changes in corporate culture

Time for change



The processes must always be adapted as well if any change is made to the strategy. It is therefore necessary to modify the culture and the (leadership) conduct of every individual. The time taken to develop the strategy, structure and processes and to adapt the culture can differ greatly.

Fig. 21.1 Changes to strategy, structure and culture

Source: Kuster et al, Project Management Handbook, p. 268

Stages of change processes

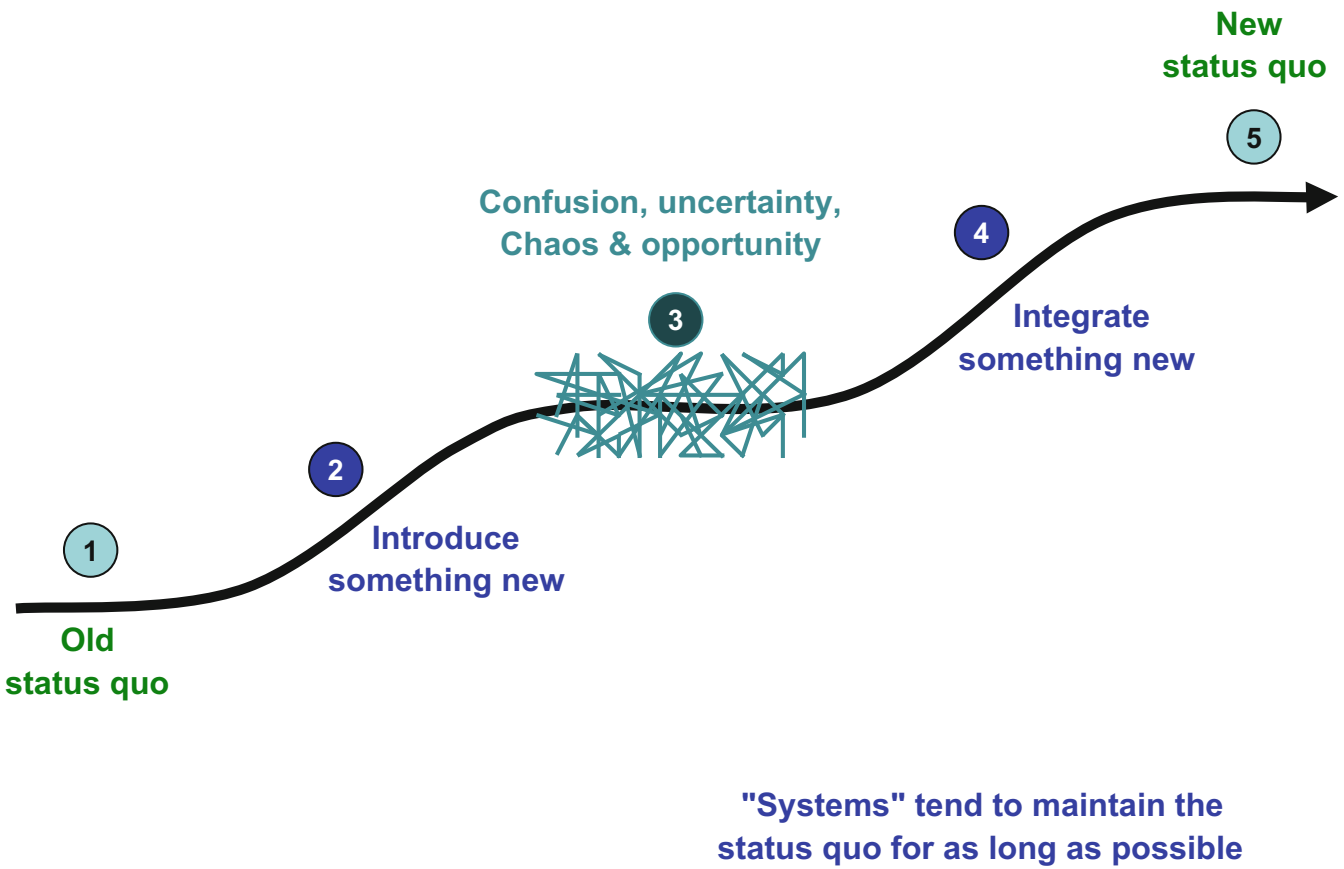


Fig. 21.3 Stages of change processes (Virginia Satir)
Source: Kuster et al, Project Management Handbook, p. 270

Typical attitudes in change processes

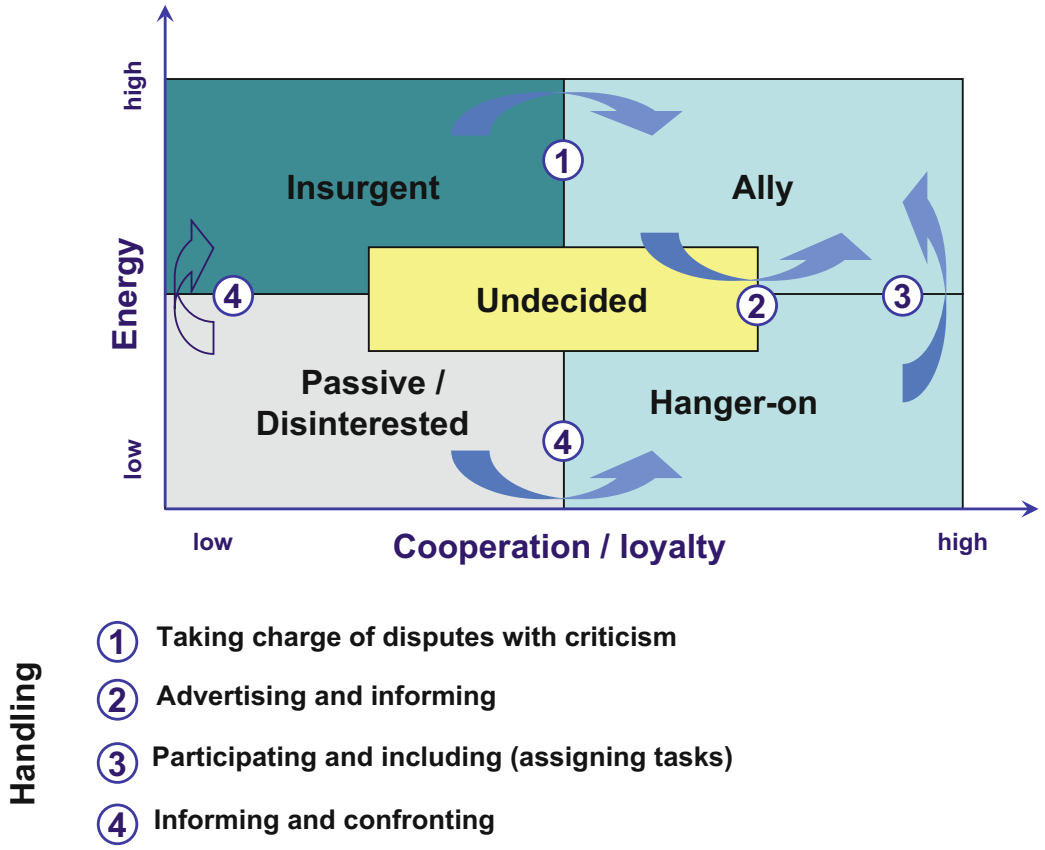
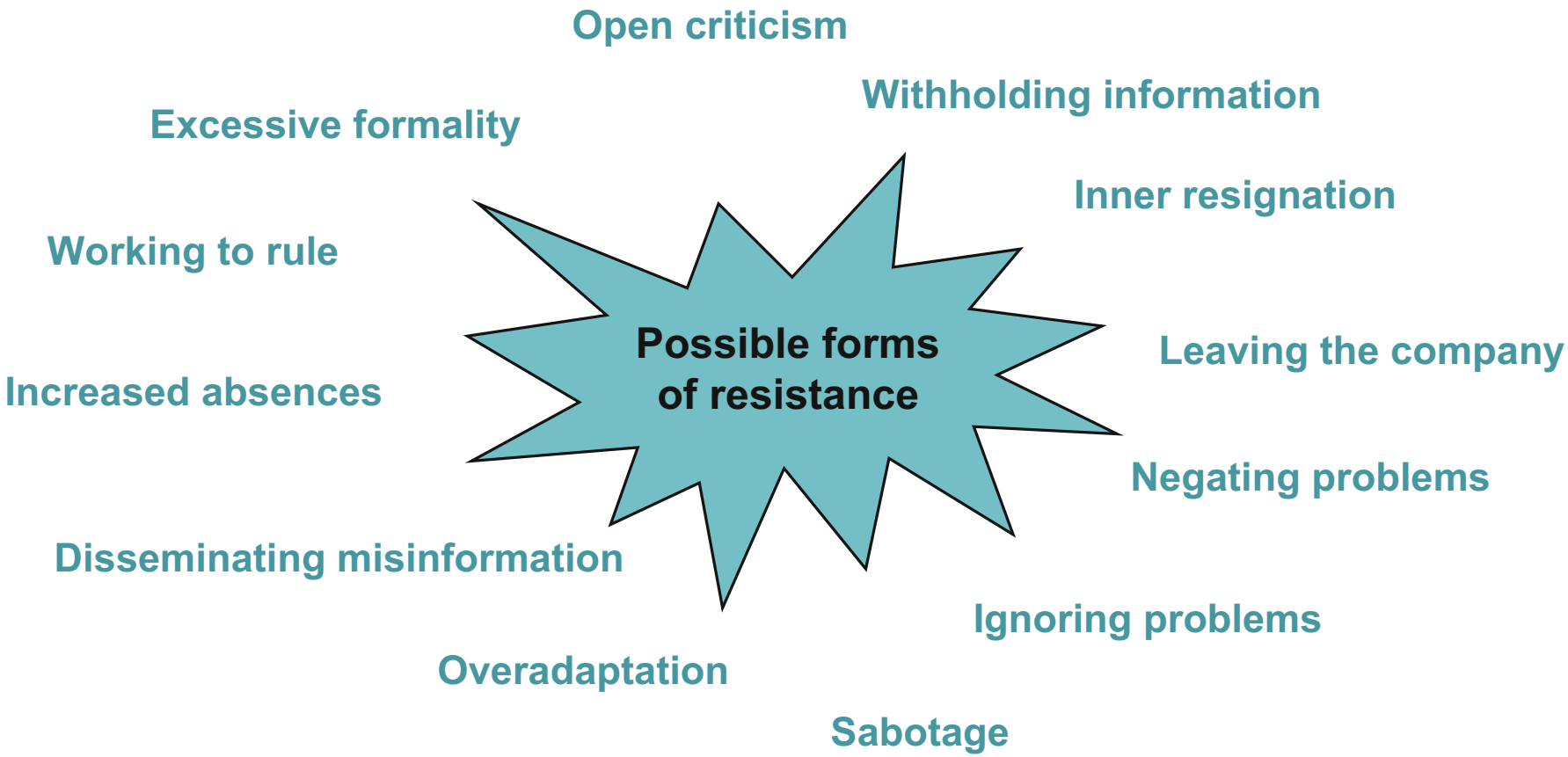


Fig. 21.6 Attitudes in change processes

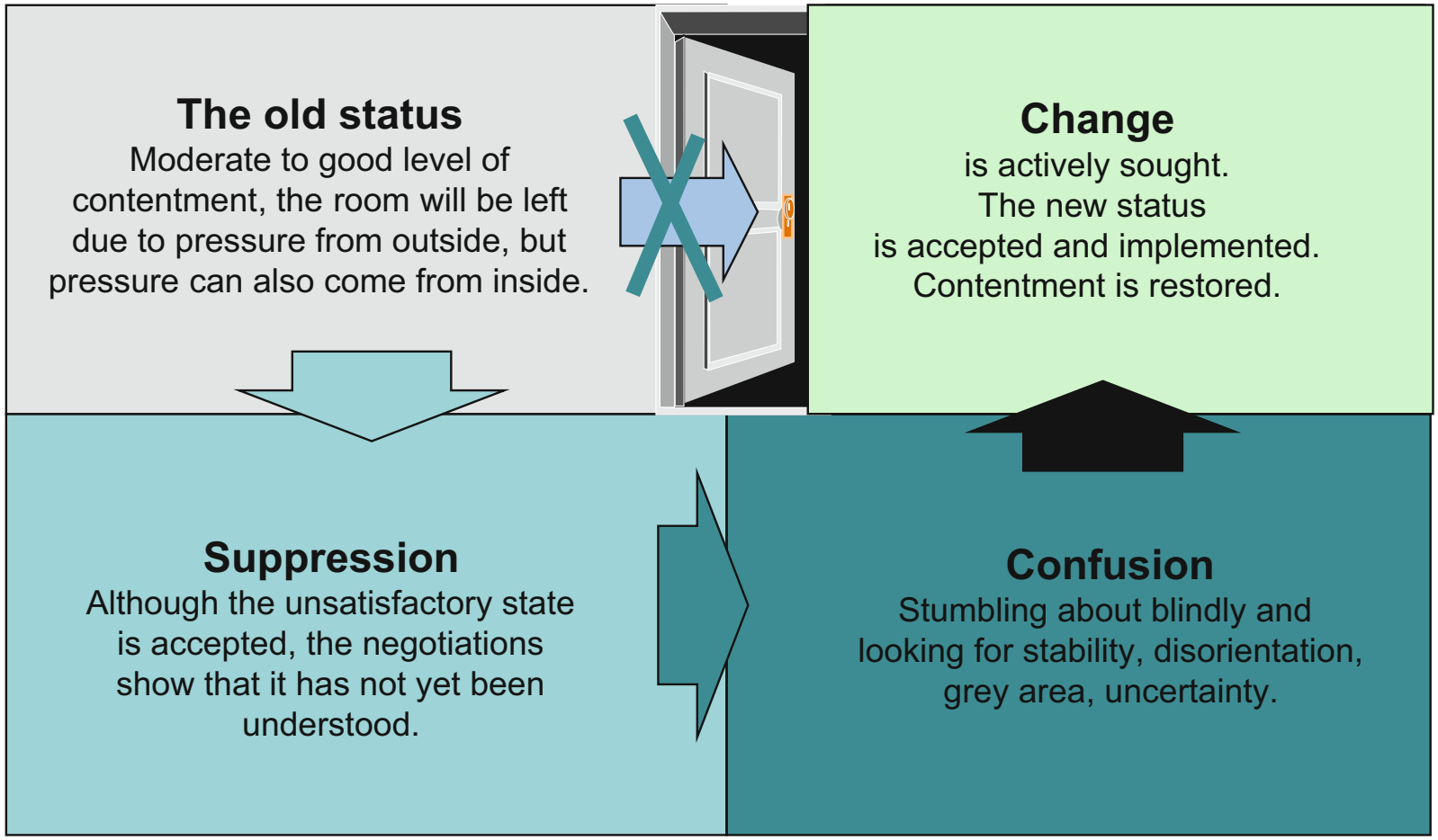
Source: Kuster et al, Project Management Handbook, p. 275

Forms of resistance



Source: Kuster et al, Project Management Handbook, p. 276

4-Rooms-Model to Change



Source: Kuster et al, Project Management Handbook, p. 277

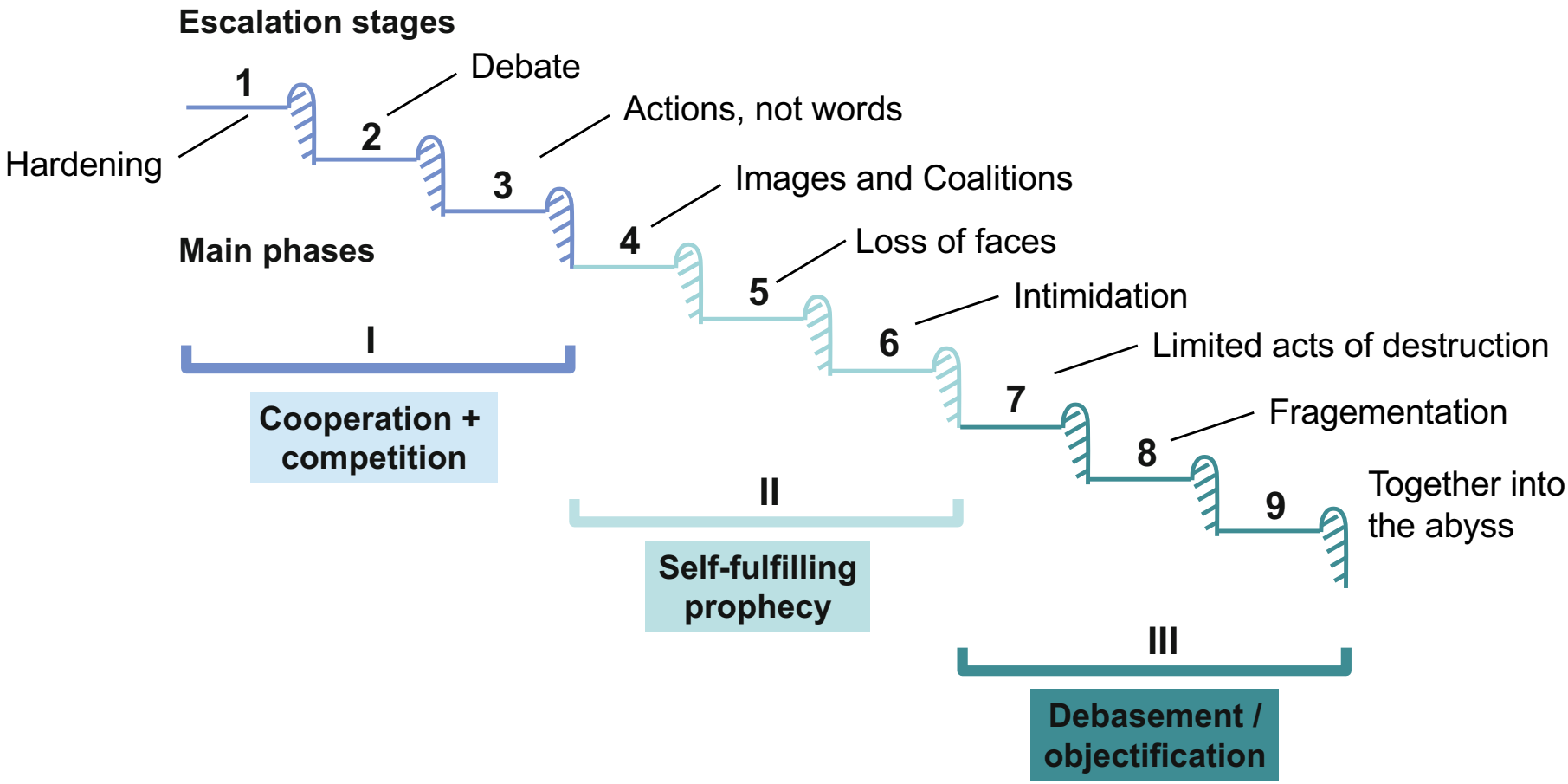
Dealing with resistance

Order of approach

Cause of resistance	Dealing with resistance
Step 1: Concerns about content	- Provide information - Put forward arguments - Provide clarification
Step 2: Fears and misgivings	- Understand, rather than explain - Listen, rather than argue - Enquire and reflect
Step 3: Self-interest	- Adress clearly and compromise - Confrontation and backing down - Clarification about the hierarchy

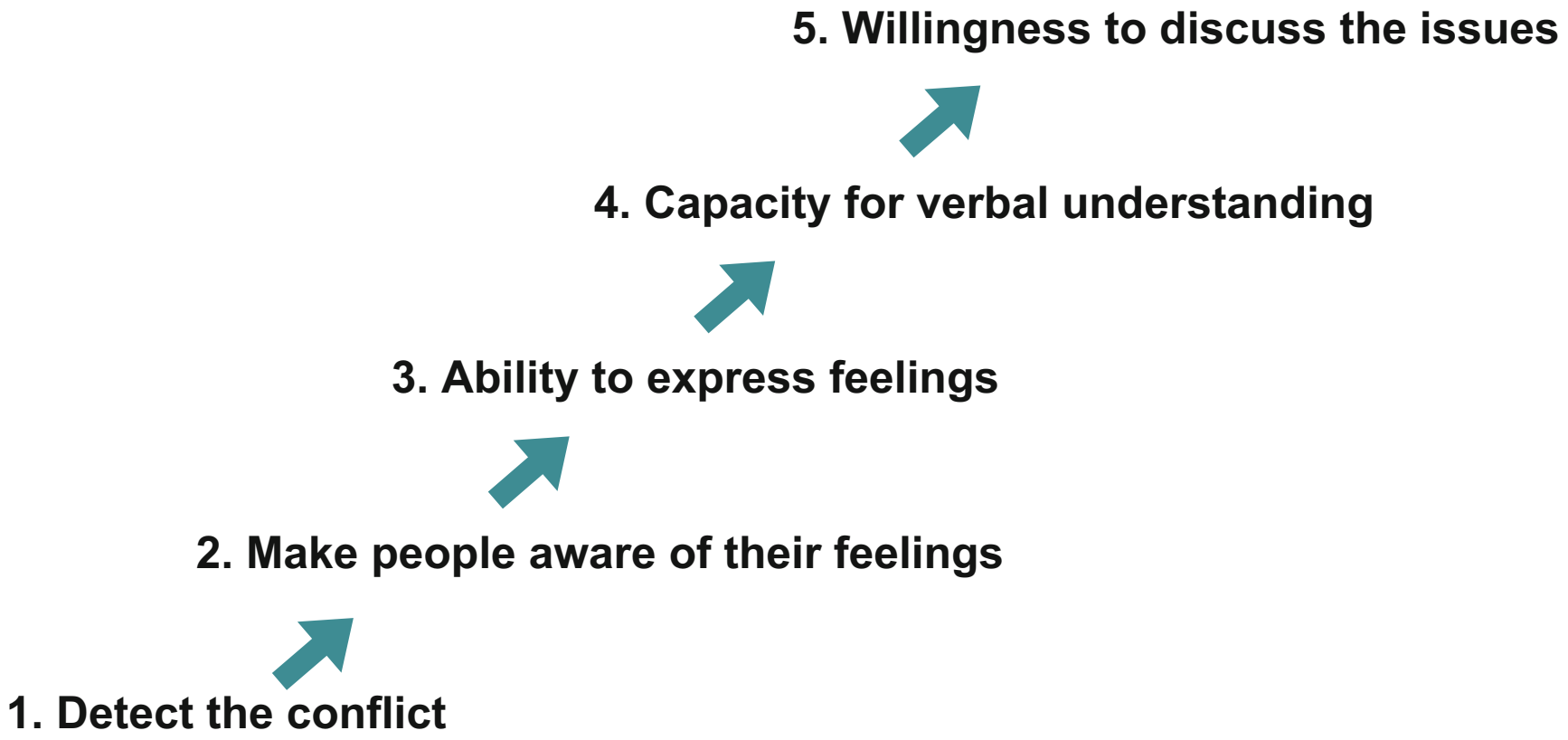
Source: Kuster et al, Project Management Handbook, p. 279

Dynamics of Conflict Escalation



Source: Kuster et al, Project Management Handbook, p. 294

Requirements for constructive conflict resolution



Source: Kuster et al, Project Management Handbook, p. 305

Resolving Conflicts

- Do not Discuss Conflict Solutions When Emotions Are Running High
- An Impartial Person (Mediator) Can Offer Help
- The Earlier the Better
- Both Sides Put Their Points of View
- Emphasise Points in Common, not Differences
- Identify Room to Manoeuvre
- Look Forward, Don’t Dwell on the Past
- Stay Focused on Goals
- Not All Conflicts Can Be Resolved

Preventing Conflicts

- Make a conscious effort to perceive the various stakeholder groups
- Clarify the different roles and responsibilities
- Recognise and declare a person's different interests
- Use preventive risk management
- Clarify and clearly delimit areas of authority
- Make sure that backs are covered
- As a project manager, constantly reflect with the team on the work processes, both on the hard skills issues and at relationship level

Career Path in Project Management

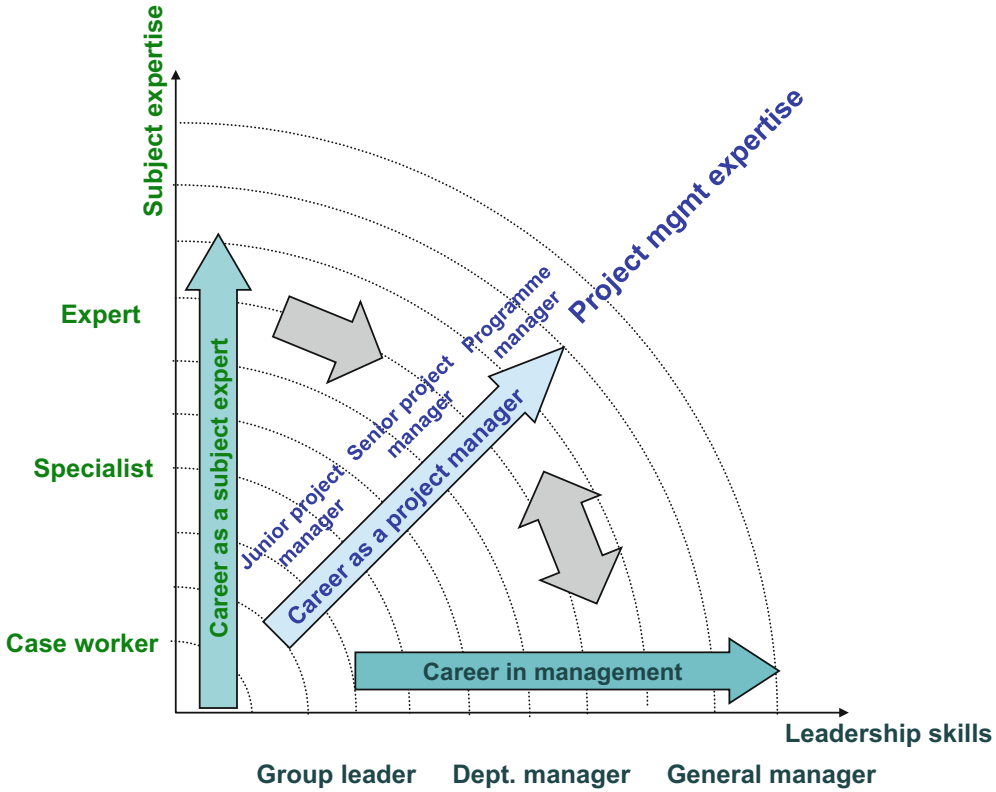


Fig. 8.1 Project management career development using the three-tier personnel development model

Source: Kuster et al, Project Management Handbook, p. 41

Certificates

PMI		IPMA	
PgMP®	Program Management Professional	IPMA Level A®	Certified Projects Director
PMP®	Project Management Professional	IPMA Level B®	Certified Senior Project Manager
		IPMA Level C®	Certified Project Manager
CAPM®	Certified Associate in Project Management	IPMA Level D®	Certified Project Management Associate
			Basic Certificate in Project Management (GPM – Deutsche Gesellschaft für Projektmanagement)

Source: Kuster et al, Project Management Handbook, p. 426

Knowledge Management

- Extract key figures from project and the data You analyzed
  - Time and usage of resources for various activities
  - Cost figures, Process Performance Data
- Save newly or further developed templates to Your templates folder (Expand Your tool box)
- Conduct a feedback session with Your project team
- Conduct a lessons learned session with the customer
- Identify gaps and think about ways to close them (e.g. training or look out for data when it comes along)

Project Management Trends

- Increased **differentiation**:
  One-size-fits-all approach to project management not useful; various priorities lead to specialized approaches (e.g. Change projects, political projects, research projects)
- **Agile** Project Management:
  Self-organization, flexibility, individual, dynamic
- **International** Project Management:
  Virtual projects around the globe → different cultures, time zones, language barriers, less face-to-face-communication

SCRUM

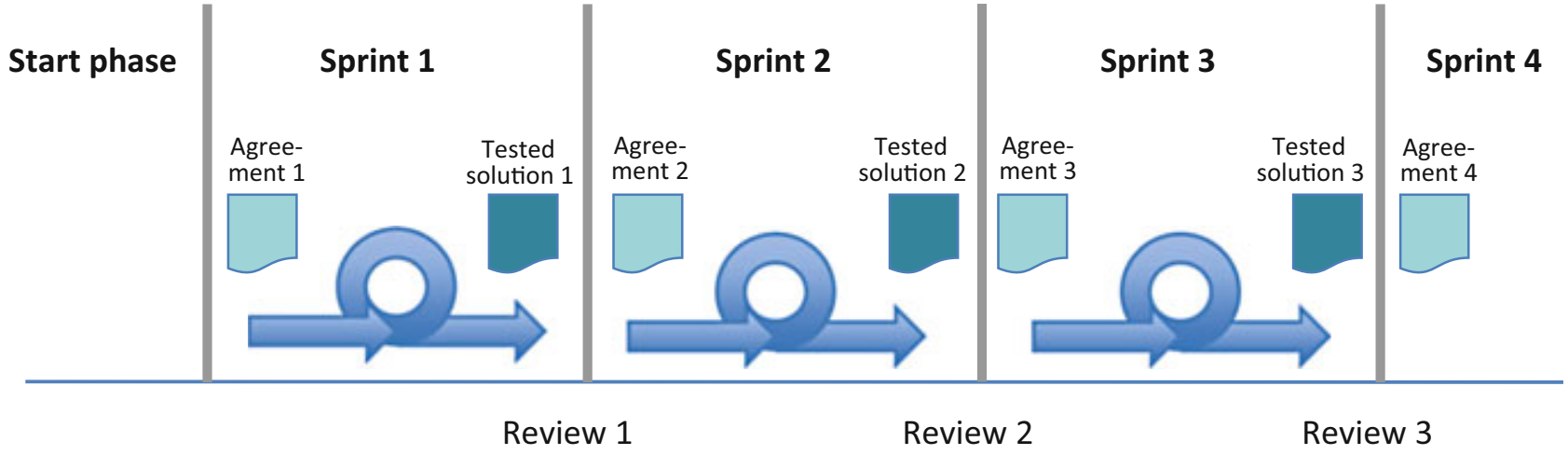


Fig. 6.3 The SCRUM approach to agile project management

Source: Kuster et al, Project Management Handbook, p. 32

EXAM

- Currently scheduled for 12th of March 2022 (in Frankfurt 10am - 12pm)
- 120 Min. in total – together with Research Methods
  → 60 Min. about Project Management
- I will upload 2 old exams
- You will be allowed to bring
  1 self-designed DIN A4 paper
  (printed or handwritten, double-sided)
  to the exam
  (content related to project management and NOT Research Methods)

The project:

Safe travel during COVID-19 –

How to adapt airport & airline processes

Task 1: Stakeholders

Who are relevant stakeholders?

5-10 Min.

Task 2: The stakeholders requirements

2.1 Formulate 5 requirements!

2.2 Consolidate & prioritize all requirements

2.1 15 Min.
2.2 15-30 Min.

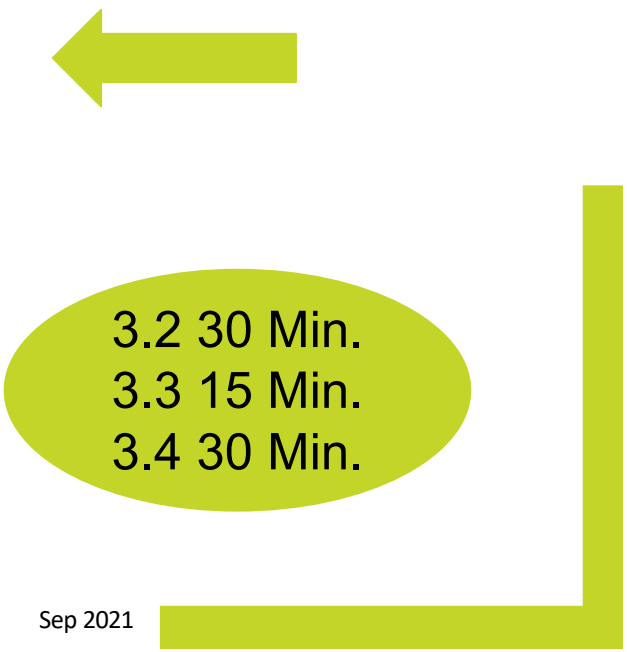
Task 3: Form 3 teams and setup a project

3.1 Form a team

3.2 Develop a WBS

3.3 Analyze and structure the project risks

3.4 Present Your project proposal (10 Min. Presentation)



MBA
AVIATION & TOURISM
MANAGEMENT

FRANKFURT
UNIVERSITY
OF APPLIED SCIENCES

OUTLOOK 2ND SEMESTER

2nd semester module: Applied Research Project

Identifying project ideas und forming groups — **until 17th December 2021**

- Ideally a problem out of one's company to be analyzed
- Availability of information is a prerequisite (documents, data, interviews, observations etc.)
- group size: min. 3 members, max. 4

Approval of project idea — **until 28th January 2022**

- Discussion (skype/meeting) with supervisor
- If not approval, modification or disapproval (e.g., because too complex, too simple..)
- If disapproval either again contact with (other) company by team or supervisor

Collecting further information on project idea (problem) — **until Mid of March 2022**

- Mainly team member who works in company
- If needed, supported by other team members

Working on specifying project charter — **Mid of March 2020**

- Team meetings within three-day module *Applied Research Project* @ HOLM, Frankfurt (additional contents will be covered)
- Coached by supervisor

Project execution — **March – June 2022**

Handing in project report — **July, 3rd 2021***

Presentation FRA-UAS (maybe additional presentation for project sponsor) — **to be scheduled**

* to be confirmed

Former project topics

- Business Case / Analysis for the introduction of electric GSE
- Benchmarking and Optimization of pilot and cabin crew training
- Using Google Glass for an In-door navigation system at Frankfurt airport
- Wizzair route network development at Nürenberg airport
- Increasing the non-aviation revenue by targeting indian passengers at Frankfurt airport
- Traffic development strategy (Limak Kosovo Prestina International Airport)
- Requirements of low cost carriers to a MRO Organization
- Analysis on competence gaps in Airbus customer services material and logistics operations
- Change Management: Implementation of a pull communication tool regarding the Apron controller working position at Frankfurt airport

Some final words....