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PROJECT MANAGEMENT

Seminar 1

Agenda

☐ Why a lecture on Project management?

☐ Project – definition

☐ Project management

☐ Process approach to a project

☐ Initiation of a project

☐ Planning of a project

☐ Management and coordination of a project

☐ Closure of a project

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Why project management?

1. Changing nature of environment and its impact on management of companies;

2. Requirements on pretenders to managerial positions.

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Ad 1) Changing nature of environment …

- rapid development of new products;

- frequent and rapid changes of processes;

- individualization of products according to customer demand

=> All of these factors require a **one-shot managed set of activities.**

Ad 2) Requirements on pretenders …

Why project management?

=> increasing importance of project management knowledge and skills for businesses and graduates

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Project (definition)

☐ A project is a temporary organisation that is created for the purpose of delivering one or more business products according to an agreed business case.'

☐ short-term effort undertaken to create a unique objective (product / service).

1. temporariness = start and completion dates are set.
2. uniqueness
   goal
   technology
   people (=KSA)
   outer influence and risks

=> specific (one-shot) = every project is realized only once.

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Why projects fail

- Lack of project justification, no valid business case.
- Insufficient attention to quality from the start and through development.
- Poorly defined outcomes, confusion over what the project needs to achieve.
- Lack of communication amongst stakeholders.
- Poorly defined roles and responsibilities amongst project personnel.
- Poor cost and time estimating.
- Poor planning and resource coordination.
- Insufficient measurables and lack of progress control.
- Lack of quality control.

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What is project management

☐Project Management is the planning, delegating, monitoring and controlling of **all aspects of the project**, and the motivation of those involved, to achieve the project objectives within the expected performance targets for **time, cost, quality, scope, benefits, and risks**.
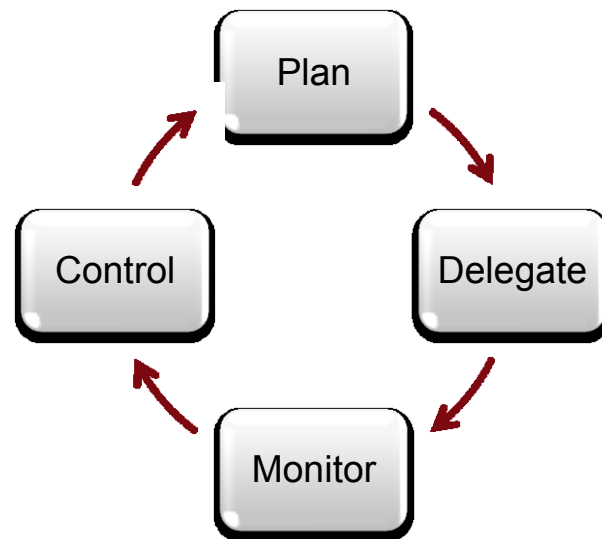
Distinctions of PM

- What makes PM different from traditional management approaches?

    ☐ temporariness;

    ☐ uniqueness;

    ☐ use of resources allocated based on the project's needs.

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Advantages of PM

☐rigorous delegation of authority and responsibility;

☐use of resources allocated based on the project's needs

=> flexibility;

☐creates environment for progress checks (to achieve the

project's goals);

☐system approach.

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Disadvantages / risks of PM

☐ specific demands of customers arise only during realization phase;

☐ need for frequent org. changes;

☐ need for planning and valuation ex-ante (before realization).

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Three bases of PM

Project is a unique sequence of coordinated activities and tasks:

☐ with a specific goal (final value);

☐ with a time framework;

☐ with a framework for drawing on resources.

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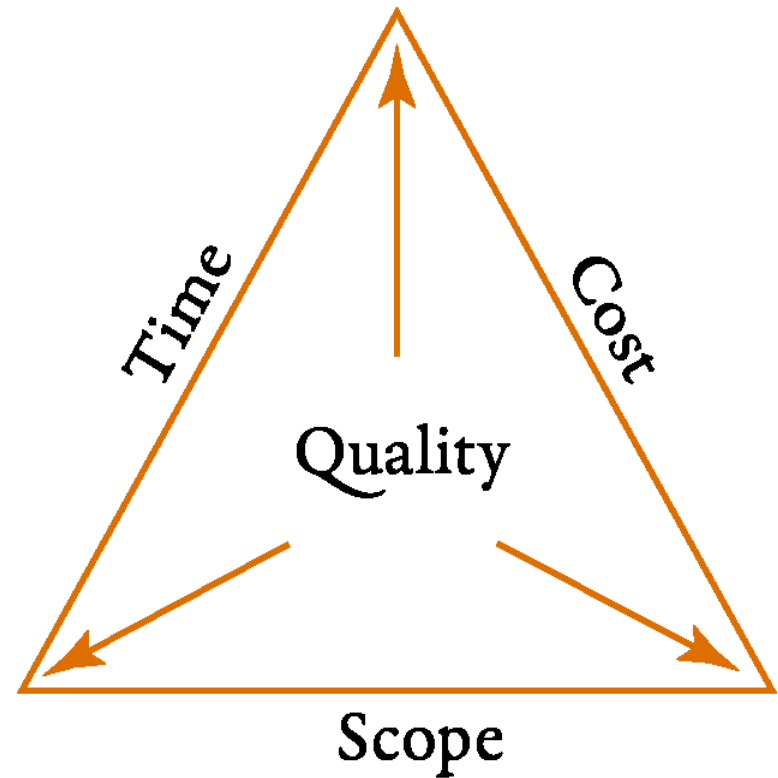
Problem of interdependence

☐ individual bases are interdependent

☐ specifics of the project define **<u>relative</u>** importance of every single

level (base)

=> need to seek **<u>balanced solutions</u>**. It is
more an optimization problem
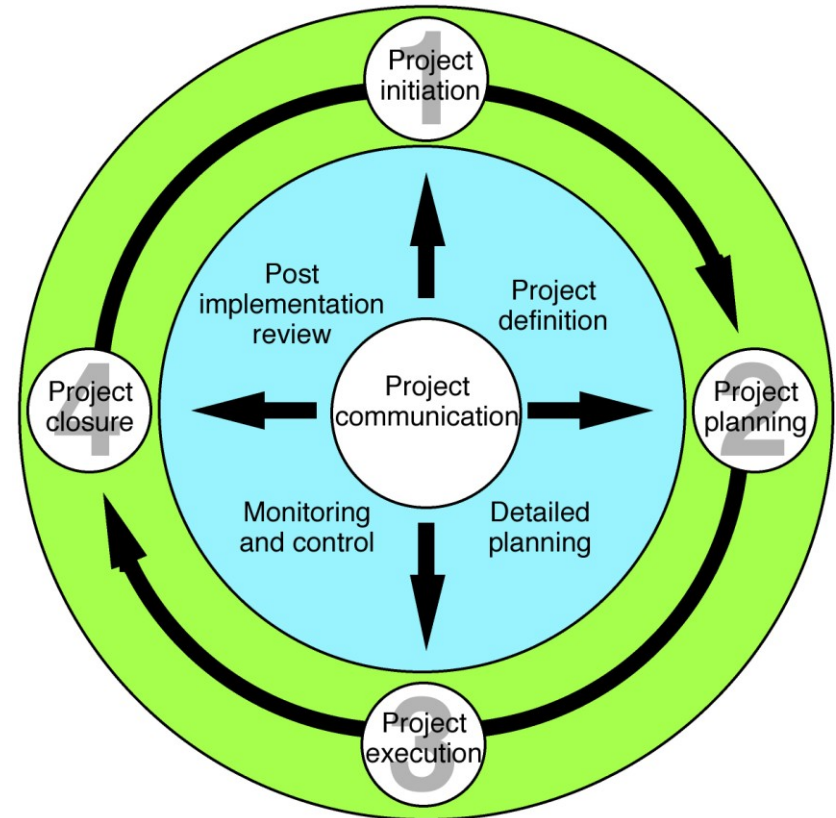(x maximization of individual categories).

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Lifecycle of a project

Sequence of phases

☐ Initiation

☐ Planning

☐ Execution (coordination,

monitoring and control)

☐ Closing

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Goals setting

Project goal = new final value resulting form the project.

S.M.A.R.T.

- Specific

- Measurable

- Assignable

- Realistic

- Time-bound   =>critera for evaluation

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(Outline) Business Case

Defintion

Composition

☐Defines the justification for undertaking a project based on estimated costs against the anticipated benefits to be gained and offset by any associated risks.

☐**Reasons** for undertaking the project
☐(**Business) options** = how to reach the goals. => analysis and reasoned recommendation for which one option to choose => project approach
  Do nothing
  Do the minimum
  Do something
☐**Expected benefits** – desired outcomes (qualitative and quantitative) should be expressed in measurable terms.
☐**Expected dis-benefits** – (potential) negative outcomes of project activities
☐**Timescal**e
☐(Estimated) **costs**
☐(Expected) **major risks**

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Project Brief (= your first deliverable)

Definition

- is used to provide full and firm foundation for the initiation of the project and is created during starting up a project.

Composition

- **Project definition** – explains what the project needs to achieve. It covers the background, definition of project objectives, desired outcomes, project scope and exclusions, constraints and assumptions, and project tolerances.

- **Outline business case** (see previous slide)

- **Project product description** – explaining quality expectations and acceptance criteria.

- **Project management team structure** – describing the role of those in the project management team.

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What to plan for?

☐ time

☐ cost

☐ quality

☐ scope

☐ benefits

☐ risks

Work Breakdown Structure

☐ is a hierarchical structure of tasks ensuring a successful accomplishment of the set project goal

☐ it is important resource for managing all three bases of project management
⇒ allocation of resources (who will do what?)
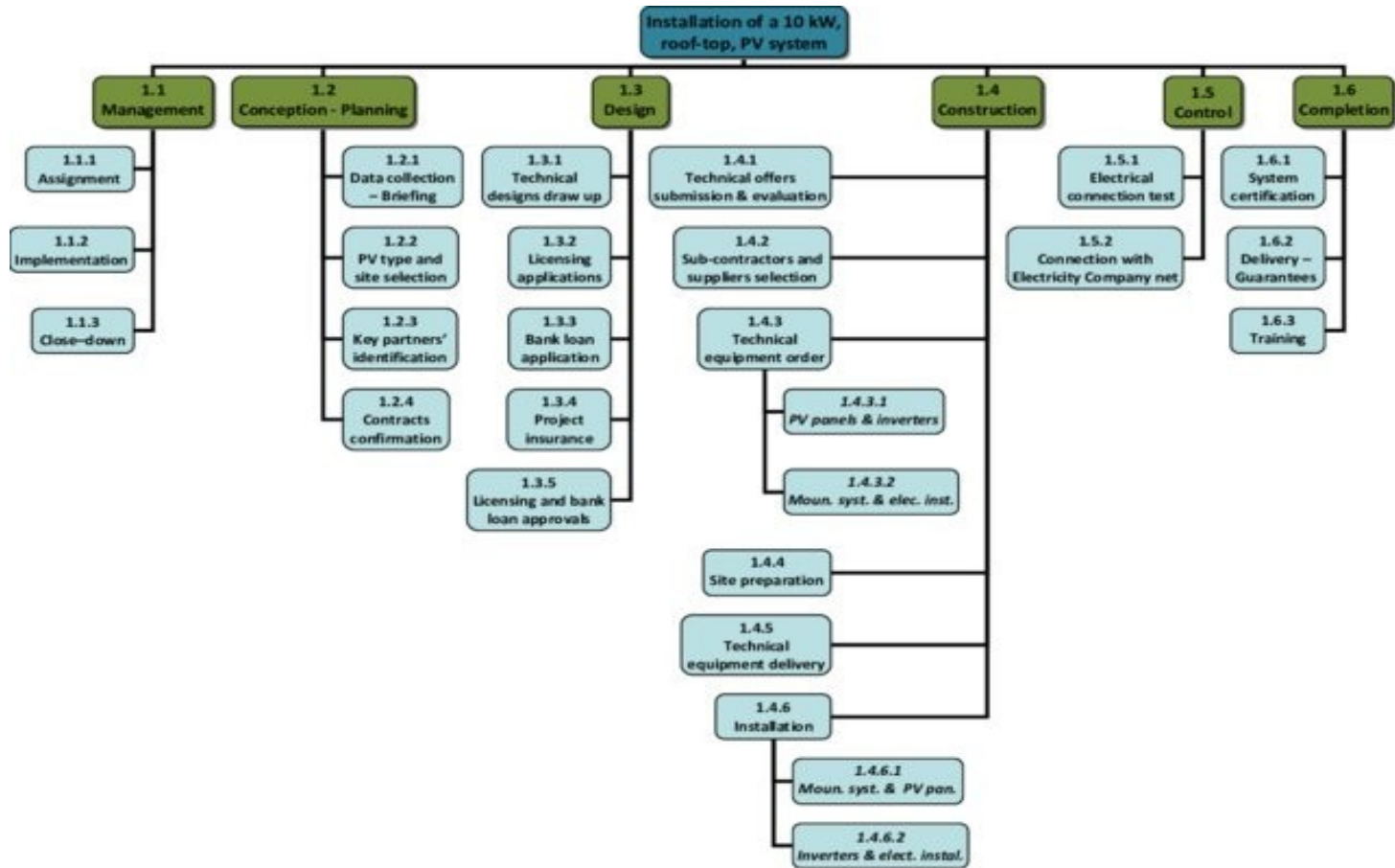⇒ time schedule (when?)
⇒ budget (how much is it going to be?)

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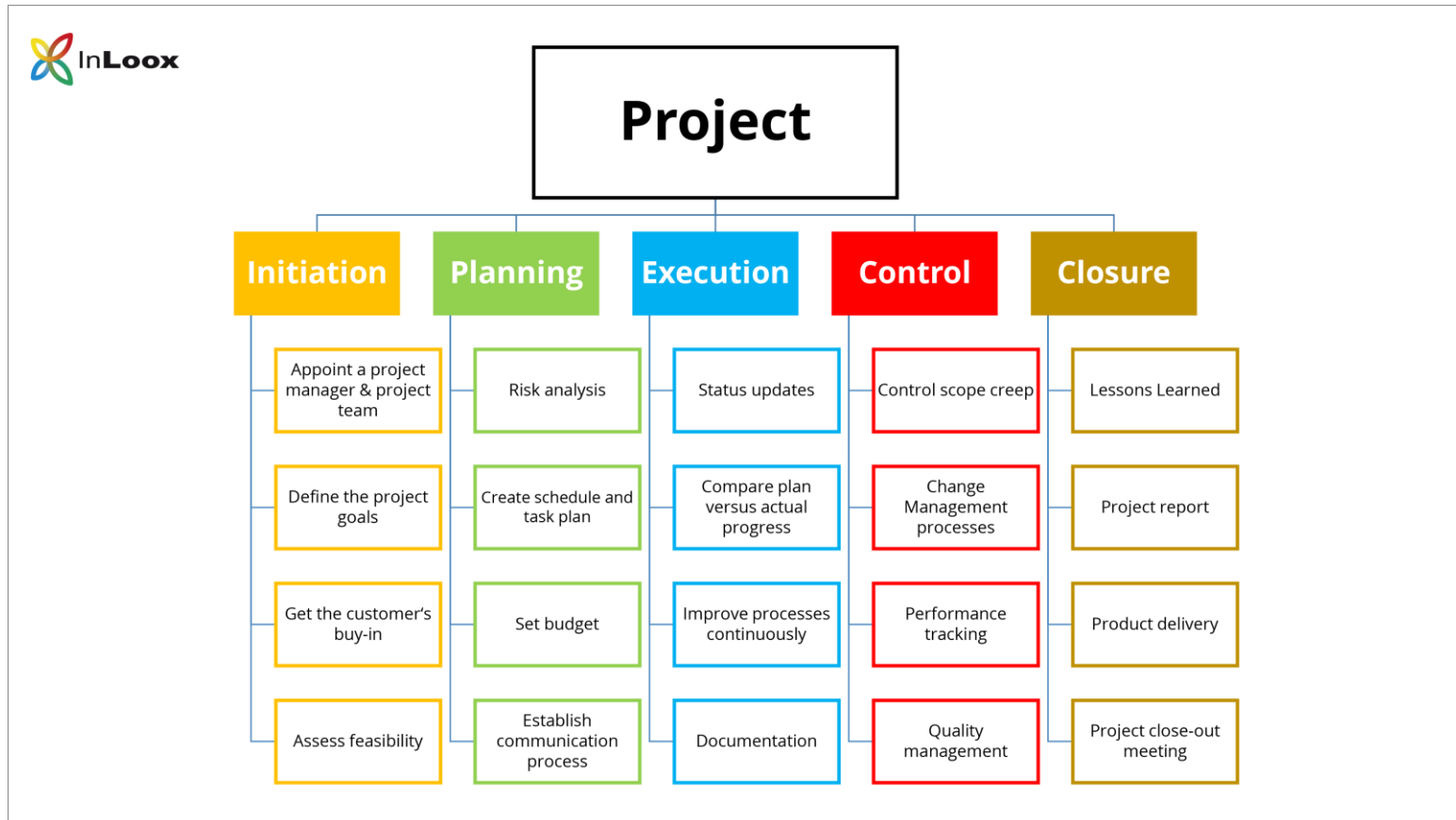
WBS – example 1

WBS – example 2

WBS – example 3

Time scheduling

☐defines sequence and deadlines of activities within a project.
☐tools:
   ☐**line segment charts (Gantt charts)**
      + easy-to-create
      + easy-to-follow
      - inability to display the connections between activities
      - inability to show the completion rate as a percentage
   ☐**network diagrams**
      C.P.M. – based on analysis of a critical path = longest sequence of activities
      without any float time (reserves).
      P.E.R.T. – duration set according to pessimistic, realistic and optimistic
      alternatives.
      G.E.R.T – improvement of PERT method
      + present interdependencies
      + allow for seeking alternative solutions
      + define critical path
      - complex
      - not that easy-to-follow

Budgeting

☐timed plan represented with monetary or working (labor) units:

☐general x detailed
☐timed according to presumed time of spending the resources

☐methods

Project Plan (= your final deliverable)

Definition

☐ provides a statement of how and when objectives are to be achieved, by providing the **major products**, **activities** and **resources required** for the scope of the plan. It identifies the **management stages** and other **major control points**.

☐ A plan should cover not just the activities to create products but also the **activities to manage** product creation.

Structure

- planning assumptions;

- products description;

- tolerances – time, cost and scope tolerances;

- budgets – time and cost budgets, including provisions for risk and changes;

- schedule – incl. a Gannt chart and work breakdown structure;

- monitoring and control details

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Progress tracking

- involves measuring actual progress against the performance targets of time, cost, quality, scope, benefits and risk.

- Plans need to be fit for progress tracking

- Progress tracking is a forward looking excercise
  - Estimates „to comlete"
  - Estimates „at completion"

- Monitor progress.
- Compare level of achievement with plan.
- Review plans and options against future situations.
- Detect problems and identify risks.
- Initiate corrective action.
- Authorize further work.

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Project Closure

☐ Verify user acceptance of the project's products and ensure that the host site is able to support the products when the project is disbanded.

☐ Review the performance of the project against its baselines.

☐ Assess any benefits that have already been realized and update the benefits management approach to include any post-project benefit reviews.

☐ Ensure that provision has been made to address all open issues and risks, with follow-on action recommendations.

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