Profile of Mr. Athakorn Kengpol
Associate Professor

Bachelor: Faculty of Engineering, KMUTNB

Master: Manufacturing System Engineering, Asian Institute of Technology (AIT)

Doctor: PhD in Manufacturing Engineering and Operations Management, The University of Nottingham, United Kingdom (UK)

DSc in Industrial Engineering and Management, Lappeenranta University of Technology, Finland

Postdoctoral: Production Engineering and Logistics Management, The University of Innsbruck, Austria

Postdoctoral: Industrial Engineering and Management, Lappeenranta University of Technology, Finland
What is a Project?

• Project Defined
  – A complex, nonroutine, one-time effort limited by time, budget, resources, and performance specifications designed to meet customer needs.

• Major Characteristics of a Project
  – Has an established objective.
  – Has a defined life span with a beginning and an end.
  – Requires across-the-organizational participation.
  – Involves doing something never been done before.
  – Has specific time, cost, and performance requirements.
Project Life Cycle

Defining
1. Goals
2. Specifications
3. Tasks
4. Responsibilities

Planning
1. Schedules
2. Budgets
3. Resources
4. Risks
5. Staffing

Executing
1. Status reports
2. Changes
3. Quality
4. Forecasts

Delivering
1. Train customer
2. Transfer documents
3. Release resources
4. Release staff
5. Lessons learned
The Challenge of Project Management

• The Project Manager
  – Manages temporary, non-repetitive activities and frequently acts independently of the formal organization.
    • Marshals resources for the project.
    • Is linked directly to the customer interface.
    • Provides direction, coordination, and integration to the project team.
    • Is responsible for performance and success of the project.
  – Must induce the right people at the right time to address the right issues and make the right decisions.
• Organizing Projects: Dedicated Teams

  – Teams operate as separate units under the leadership of a full-time project manager.

  – In a *projectized* organization where projects are the dominant form of business, functional departments are responsible for providing support for its teams.
• Organizational Culture Defined

  – A system of shared norms, beliefs, values, and assumptions which bind people together, thereby creating shared meanings.

  – The “personality” of the organization that sets it apart from other organizations.

  • Provides a sense of identify to its members.
  
  • Helps legitimize the management system of the organization.
  
  • Clarifies and reinforces standards of behavior.
Identifying Cultural Characteristics

• Study the physical characteristics of an organization.

• Read about the organization.

• Observe how people interact within the organization.

• Interpret stories and folklore surrounding the organization.
Project Scope Checklist

1. Project objective
2. Deliverables
3. Milestones
4. Technical requirements
5. Limits and exclusions
6. Reviews with customer
Step 1: Project Scope: Terms and Definitions

- **Scope Statements**
  - Also called statements of work (SOW)

- **Project Charter**
  - Can contain an expanded version of scope statement
  - A document authorizing the project manager to initiate and lead the project.

- **Project Creep**
  - The tendency for the project scope to expand over time due to changing requirements, specifications, and priorities.
Step 2: Establishing Project Priorities

• Causes of Project Trade-offs
  – Shifts in the relative importance of criterions related to cost, time, and performance parameters
    • Budget–Cost
    • Schedule–Time
    • Performance–Scope

• Managing the Priorities of Project Trade-offs
  – Constrain: a parameter is a fixed requirement.
  – Enhance: optimizing a parameter over others.
  – Accept: reducing (or not meeting) a parameter requirement.
Project Management Trade-offs

- Scope
- Quality
- Cost
- Time
Step 3: Creating the Work Breakdown Structure

• Work Breakdown Structure (WBS)
  
  – An hierarchical outline (map) that identifies the products and work elements involved in a project.
  
  – Defines the relationship of the final deliverable (the project) to its subdeliverables, and in turn, their relationships to work packages.
  
  – Best suited for design and build projects that have tangible outcomes rather than process-oriented projects.
How WBS Helps the Project Manager

• WBS
  – Facilitates evaluation of cost, time, and technical performance of the organization on a project.
  – Provides management with information appropriate to each organizational level.
  – Helps in the development of the organization breakdown structure (OBS), which assigns project responsibilities to organizational units and individuals.
  – Helps manage plan, schedule, and budget.
  – Defines communication channels and assists in coordinating the various project elements.
Work Breakdown Structure (WBS)

Level 1
- Vendor, software, applications
- Mouse, keyboard, voice
- Disk storage units
  - Floppy
  - Optical
  - Hard
- Microprocessor unit
  - Internal memory unit
  - BIOS (basic input/output system)
    - ROM
    - RAM
    - I/O
    - File
    - Utilities
- More items

Level 2
- Personal computer prototype
- More items

Level 3
- More items

Level 4
- More items

Level 5
- Lowest manageable subdeliverables
  - Motor
  - Circuit board
  - Chassis frame
  - Read/write head

Work packages

WP-1M
- WP-1 CB
- WP-2 CB
- WP-3 CB
- WP-4 CB
- WP-5 CB
- WP-6 CB
- WP-7 CB

WP-1 CF
WP-2 CF
WP-3 CF

WP-1 RWH
WP-2 RWH
WP-3 RWH
WP-4 RWH
WP-5 RWH
Step 4: Integrating the WBS with the Organization

- Organizational Breakdown Structure (OBS)
  - Depicts how the firm is organized to discharge its work responsibility for a project.
    - Provides a framework to summarize organization work unit performance.
    - Identifies organization units responsible for work packages.
    - Ties the organizational units to cost control accounts.
Integration of WBS and OBS
# Direct Labor Budget Sorted By WBS

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<th></th>
<th>Description</th>
<th>Cost</th>
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## Direct Labor Budget Sorted by OBS

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<tr>
<td>1.1.3.4</td>
<td>Read/write head</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<td>1.1.3.3</td>
<td>Chassis frame</td>
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<td>1.1.3.4</td>
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</table>

<table>
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<td>1.1.3.4</td>
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<table>
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<th>Labor Budget</th>
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</thead>
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<table>
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<th>Software</th>
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</thead>
<tbody>
<tr>
<td>1.1.3.2</td>
<td>Circuit board</td>
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</table>

| Total | 1,660 |
Step 5: Coding the WBS for the Information System

- **WBS Coding System**
  - Defines:
    - Levels and elements of the WBS
    - Organization elements
    - Work packages
    - Budget and cost information
  - Allows reports to be consolidated at any level in the organization structure
<table>
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<th>ID</th>
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<tr>
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<td>1.1.1 Floppy</td>
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<td>4</td>
<td>1.1.2 Optical</td>
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<td>6</td>
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<tr>
<td>12</td>
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<tr>
<td>13</td>
<td>1.1.3.2.2 Cost account</td>
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<td>20</td>
<td>1.1.3.2.9*</td>
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</table>
**Work Package Estimates**

- **WP Description**: Final version
- **WP ID**: 1.1.3.2
- **Deliverable**: Circuit board
- **Original Unit**: Software
- **WP Duration**: 3 work weeks
- **Duration**: 9/29/XX
- **Project**: PC proto
- **Estimator**: RMG
- **Total Budget**: $265

### Time-Phased Budget ($)

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<td>Document</td>
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<td><strong>Total direct</strong></td>
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<td>75</td>
<td>90</td>
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</table>
• Cost Account

  – The intersection of the WBS and the OBS that is a budgetary control point for work packages.

  – Used to provide a roll-up (summation) of costs incurred over time by a work package across organization units and levels, and by deliverables.
Direct Labor Budget Rollup (000)

Total budget for cost account
Work package budget

Organization $1,660

- Manufacturing 1,250
  - Design 600
  - Production 650
  - Test 220
  - Purchasing 10
  - Software 180

Disk storage units $5,160

Floppy $500
Optical 3,000
Hard 1,660

Motor 10
Circuit board 1,000
Chassis frame 50
Read/write head 600

150
150
300
140
260
400
10
20
20
10
30
50
130
40
30
200
120
120
10
10
50
130
180
300
300
100
100

Summarize by deliverables

Summarize by organizational units
• Process-Oriented Projects
  – Are driven by performance requirements in which the final outcome is the product of a series of steps of phases in which one phase affects the next phase.

• Process Breakdown Structure (PBS)
  – Defines deliverables as outputs required to move to the next phase.
  – Checklists for managing PBS:
    • Deliverables needed to exit one phase and begin the next.
    • Quality checkpoints for complete and accurate deliverables.
    • Sign-offs by responsible stakeholders to monitor progress.
PBS for Software Project Development

Software development project

1 Level Major phases:
- Analysis
- Design
- Construct
- Test
- Rollout

2 Level Activities:
- Define user interface
- Develop technical design
- Establish quality requirements
- Develop detailed design

3 Level Activities:
- Define application architecture
- Define processing flow
- Design logical database structure
- Design system interfaces

Outputs:
Design phase deliverables:
- Design document
  - Application architecture
  - Application flow
  - Database design
  - End user interface design
  - Workflow diagram
  - User documentation outline
Responsibility Matrices

• Responsibility Matrix (RM)
  – Also called a linear responsibility chart.
  – Summarizes the tasks to be accomplished and who is responsible for what on the project.

  • Lists project activities and participants.
  • Clarifies critical interfaces between units and individuals that need coordination.
  • Provide an means for all participants to view their responsibilities and agree on their assignments.
  • Clarifies the extent or type of authority that can be exercised by each participant.
### Responsibility Matrix for a Market Research Project

<table>
<thead>
<tr>
<th>Task</th>
<th>Richard</th>
<th>Dan</th>
<th>Dave</th>
<th>Linda</th>
<th>Elizabeth</th>
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<td>Identify target customers</td>
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<td></td>
<td>S</td>
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<td>S</td>
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<td>R</td>
<td>S</td>
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<td>Prepare mailing labels</td>
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<td>R</td>
<td>S</td>
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<td>S</td>
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</table>

R = Responsible  
S = Supports/assists
Responsibility Matrix for the Conveyor Belt Project

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<th>Development</th>
<th>Documentation</th>
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<th>Testing</th>
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</table>

Legend:
1. Responsible
2. Support
3. Consult
4. Notification
5. Approval
Estimating Project Times and Costs
Estimating Projects

• Estimating
  – The process of forecasting or approximating the time and cost of completing project deliverables.
  – The task of balancing the expectations of stakeholders and the need for control while the project is implemented

• Types of Estimates
  – Top-down (macro) estimates: analogy, group consensus, or mathematical relationships
  – Bottom-up (micro) estimates: estimates of elements of the work breakdown structure
Why Estimating Time and Cost Are Important

• Estimates are needed to support good decisions.
• Estimates are needed to schedule work.
• Estimates are needed to determine how long the project should take and its cost.
• Estimates are needed to determine whether the project is worth doing.
• Estimates are needed to develop cash flow needs.
• Estimates are needed to determine how well the project is progressing.
• Estimates are needed to develop time-phased budgets and establish the project baseline.
Estimating Guidelines for Times, Costs, and Resources

1. Have people familiar with the tasks make the estimate.
2. Use several people to make estimates.
3. Base estimates on normal conditions, efficient methods, and a normal level of resources.
4. Use consistent time units in estimating task times.
5. Treat each task as independent, don’t aggregate.
6. Don’t make allowances for contingencies.
7. Adding a risk assessment helps avoid surprises to stakeholders.
Methods for Estimating Project Times and Costs

• Macro (Top-down) Approaches
  – Consensus methods
  – Ratio methods
  – Apportion method
  – Function point methods for software and system projects
  – Learning curves
PROJECT MANAGEMENT

Developing a Project Plan

Assoc. Prof. Dr.Dr. Athakorn Kengpol
Developing the Project Plan

• The Project Network
  – A flow chart that graphically depicts the sequence, interdependencies, and start and finish times of the project job plan of activities that is the **critical path** through the network.

  • Provides the basis for scheduling labor and equipment.
  • Enhances communication among project participants.
  • Provides an estimate of the project’s duration.
  • Provides a basis for budgeting cash flow.
  • Identifies activities that are critical.
  • Highlights activities that are “critical” and can not be delayed.
  • Help managers get and stay on plan.
From Work Package to Network

WBS/Work Packages to Network

<table>
<thead>
<tr>
<th>Lowest element</th>
<th>Circuit board</th>
</tr>
</thead>
<tbody>
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<td>Design cost account</td>
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</tbody>
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| Design | WP D-1-1 Specifications  
WP D-1-2 Documentation |
| Production cost account |
| Production | WP P-10-1 Proto 1  
WP P-10-2 Final Proto 2 |
| Test cost account |
| Test systems | WPT-13-1 Test |
| Software cost account |
| Software | WP S-22-1 Software preliminary  
WP S-22-2 Software final version |
From Work Package to Network (cont’d)

Activity network for circuit board work packages

WBS/Work Packages to Network (cont’d)
Constructing a Project Network

• Terminology

  – **Activity**: an element of the project that requires time.

  – **Merge Activity**: an activity that has two or more preceding activities on which it depends.

  – **Parallel (Concurrent) Activities**: Activities that can occur independently and, if desired, not at the same time.
• Terminology

– **Path**: a sequence of connected, dependent activities.

– **Critical path**: the longest path through the activity network that allows for the completion of all project-related activities; the shortest expected time in which the entire project can be completed. Delays on the critical path will delay completion of the entire project.

(Assumes that minimum of A + B > minimum of C in length of times to complete activities.)
Constructing a Project Network (cont’d)

• Terminology
  – **Event**: a point in time when an activity is started or completed. It does not consume time.
  – **Burst Activity**: an activity that has more than one activity immediately following it (more than one dependency arrow flowing from it).

• Two Approaches
  – Activity-on-Node (AON)
    • Uses a node to depict an activity.
  – Activity-on-Arrow (AOA)
    • Uses an arrow to depict an activity.
Basic Rules to Follow in Developing Project Networks

- Networks typically flow from left to right.
- An activity cannot begin until all of its activities are complete.
- Arrows indicate precedence and flow and can cross over each other.
- Identify each activity with a unique number; this number must be greater than its predecessors.
- Looping is not allowed.
- Conditional statements are not allowed.
- Use common start and stop nodes.
Activity-on-Node Fundamentals

(A)  
- A is preceded by nothing
- B is preceded by A
- C is preceded by B

(B)  
- Y and Z are preceded by X
- Y and Z can begin at the same time, if you wish
Activity-on-Node Fundamentals (cont’d)

- J, K, & L can all begin at the same time, if you wish (they need not occur simultaneously)

  but

- All (J, K, L) must be completed before M can begin

(C)

- Z is preceded by X and Y

- AA is preceded by X and Y

(D)
<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Preceding Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Application approval</td>
<td>None</td>
</tr>
<tr>
<td>B</td>
<td>Construction plans</td>
<td>A</td>
</tr>
<tr>
<td>C</td>
<td>Traffic study</td>
<td>A</td>
</tr>
<tr>
<td>D</td>
<td>Service availability check</td>
<td>A</td>
</tr>
<tr>
<td>E</td>
<td>Staff report</td>
<td>B, C</td>
</tr>
<tr>
<td>F</td>
<td>Commission approval</td>
<td>B, C, D</td>
</tr>
<tr>
<td>G</td>
<td>Wait for construction</td>
<td>F</td>
</tr>
<tr>
<td>H</td>
<td>Occupancy</td>
<td>E, G</td>
</tr>
</tbody>
</table>
Koll Business Center—Complete Network

KOLL BUSINESS CENTER
County Engineers Design Department

A
Application approval

B
Construction plans

C
Traffic study

D
Service availability check

E
Staff report

F
Commission approval

G
Wait construction

H
Occupancy
Network Computation Process

• Forward Pass—Earliest Times
  – How soon can the activity start? (early start—ES)
  – How soon can the activity finish? (early finish—EF)
  – How soon can the project finish? (expected time—ET)

• Backward Pass—Latest Times
  – How late can the activity start? (late start—LS)
  – How late can the activity finish? (late finish—LF)
  – Which activities represent the critical path?
  – How long can it be delayed? (slack or float—SL)
### Network Information

#### KOLL BUSINESS CENTER
County Engineers Design Department

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Preceding Activity</th>
<th>Activity Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Application approval</td>
<td>None</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>Construction plans</td>
<td>A</td>
<td>15</td>
</tr>
<tr>
<td>C</td>
<td>Traffic study</td>
<td>A</td>
<td>10</td>
</tr>
<tr>
<td>D</td>
<td>Service availability check</td>
<td>A</td>
<td>5</td>
</tr>
<tr>
<td>E</td>
<td>Staff report</td>
<td>B, C</td>
<td>15</td>
</tr>
<tr>
<td>F</td>
<td>Commission approval</td>
<td>B, C, D</td>
<td>10</td>
</tr>
<tr>
<td>G</td>
<td>Wait for construction</td>
<td>F</td>
<td>170</td>
</tr>
<tr>
<td>H</td>
<td>Occupancy</td>
<td>E, G</td>
<td>35</td>
</tr>
</tbody>
</table>
Forward Pass Computation

• Add activity times along each path in the network (ES + Duration = EF).

• Carry the early finish (EF) to the next activity where it becomes its early start (ES) unless...

• The next succeeding activity is a merge activity, in which case the largest EF of all preceding activities is selected.
Activity-on-Node Network Backward Pass

Legend:
- ES: ES
- ID: ID
- EF: EF
- SL: SL
- LS: LS
- Dur: Dur
- LF: LF

Node A:
- Activity: Application approval
- Start Time (ES): 0
- ID: 5
- EF: 5
- SL: Application approval
- LS: 0

Node B:
- Activity: Construction plans
- ES: 5
- ID: 15
- EF: 20

Node C:
- Activity: Traffic study
- ES: 10
- ID: 10
- EF: 20

Node D:
- Activity: Service check
- ES: 15
- ID: 5
- EF: 20

Node E:
- Activity: Staff report
- ES: 185
- ID: 15
- EF: 200

Node F:
- Activity: Commission approval
- ES: 20
- ID: 10
- EF: 30

Node G:
- Activity: Wait for construction
- ES: 30
- ID: 170
- EF: 200

Node H:
- Activity: Occupancy
- ES: 200
- ID: 35
- EF: 235

KOLL BUSINESS CENTER
County Engineers Design Department
Backward Pass Computation

• Subtract activity times along each path in the network (LF - Duration = LS).

• Carry the late start (LS) to the next activity where it becomes its late finish (LF) unless

• The next succeeding activity is a burst activity, in which case the smallest LF of all preceding activities is selected.
Determining Slack (or Float)

• Slack (or Float)
  – The amount of time an activity can be delayed after the start of a longer parallel activity or activities.

• Total slack
  – The amount of time an activity can be delayed without delaying the entire project.

• The critical path is the network path(s) that has (have) the least slack in common.
Practical Considerations

• Network Logic Errors
• Activity Numbering
• Use of Computers to Develop Networks
• Calendar Dates
• Multiple Starts and Multiple Projects
การควบคุมและติดตามโครงการ การประเมินและบริหารความเสี่ยงรวมถึงปัญหาในการบริหารโครงการ และการปิดโครงการ

Assoc. Prof. Dr. Dr. Athakorn Kengpol
Risk Management Process

• Risk
  – Uncertain or chance events that planning cannot overcome or control.

• Risk Management
  – A proactive attempt to recognize and manage internal events and external threats that affect the likelihood of a project’s success.

  • What can go wrong (risk event).
  • How to minimize the risk event’s impact (consequences).
  • What can be done before an event occurs (anticipation).
  • What to do when an event occurs (contingency plans).
Risk Management’s Benefits

• A proactive rather than reactive approach.

• Reduces surprises and negative consequences.

• Prepares the project manager to take advantage of appropriate risks.

• Provides better control over the future.

• Improves chances of reaching project performance objectives within budget and on time.
The Risk Management Process

Step 1 Risk Identification
Analyze the project to identify sources of risk

Known risks

Step 2 Risk Assessment
Assess risks in terms of:
- Severity of impact
- Likelihood of occurring
- Controllability

Risk assessment

Step 3 Risk Response Development
Develop a strategy to reduce possible damage
Develop contingency plans

Risk management plan

Step 4 Risk Response Control
Implement risk strategy
Monitor and adjust plan for new risks
Change management

New risks
Managing Risk

• Step 1: Risk Identification
  – Generate a list of possible risks through brainstorming, problem identification and risk profiling.
    • Macro risks first, then specific events

• Step 2: Risk assessment
  – Scenario analysis
  – Risk assessment matrix
  – Failure Mode and Effects Analysis (FMEA)
  – Probability analysis
    • Decision trees, NPV, and PERT
  – Semiquantitative scenario analysis
Partial Risk Profile for Product Development Project

Technical Requirements
Are the requirements stable?

Design
Does the design depend on unrealistic or optimistic assumptions?

Testing
Will testing equipment be available when needed?

Development
Is the development process supported by a compatible set of procedures, methods, and tools?

Schedule
Is the schedule dependent upon the completion of other projects?

Budget
How reliable are the cost estimates?

Quality
Are quality considerations built into the design?

Management
Do people know who has authority for what?

Work Environment
Do people work cooperatively across functional boundaries?

Staffing
Is staff inexperienced or understaffed?

Customer
Does the customer understand what it will take to complete the project?

Contractors
Are there any ambiguities in contractor task definitions?
Contingency Planning

• Contingency Plan
  – An alternative plan that will be used if a possible foreseen risk event actually occurs.
  – A plan of actions that will reduce or mitigate the negative impact (consequences) of a risk event.

• Risks of Not Having a Contingency Plan
  – Having no plan may slow managerial response.
  – Decisions made under pressure can be potentially dangerous and costly.
<table>
<thead>
<tr>
<th>Risk Event</th>
<th>Response</th>
<th>Contingency Plan</th>
<th>Trigger</th>
<th>Who Is Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface problems</td>
<td>Reduce</td>
<td>Work around until help comes</td>
<td>Not solved within 24 hours</td>
<td>Nils</td>
</tr>
<tr>
<td>System freezing</td>
<td>Reduce</td>
<td>Reinstall OS</td>
<td>Still frozen after one hour</td>
<td>Emmylou</td>
</tr>
<tr>
<td>User backlash</td>
<td>Reduce</td>
<td>Increase staff support</td>
<td>Call from top management</td>
<td>Eddie</td>
</tr>
<tr>
<td>Equipment malfunctions</td>
<td>Transfer</td>
<td>Order different brand</td>
<td>Replacement doesn't work</td>
<td>Jim</td>
</tr>
</tbody>
</table>
Contingency Funding and Time Buffers

- **Contingency Funds**
  - Funds to cover project risks—identified and unknown.
    - Size of funds reflects overall risk of a project
  - Budget reserves
    - Are linked to the identified risks of specific work packages.
  - Management reserves
    - Are large funds to be used to cover major unforeseen risks (e.g., change in project scope) of the total project.

- **Time Buffers**
  - Amounts of time used to compensate for unplanned delays in the project schedule.
Managing Risk (cont’d)

• Step 4: Risk Response Control
  – Risk control
    • Execution of the risk response strategy
    • Monitoring of triggering events
    • Initiating contingency plans
    • Watching for new risks
  – Establishing a Change Management System
    • Monitoring, tracking, and reporting risk
    • Fostering an open organization environment
    • Repeating risk identification/assessment exercises
    • Assigning and documenting responsibility for managing risk
Change Management Control

• Sources of Change
  – Project scope changes
  – Implementation of contingency plans
  – Improvement changes
Change Request Form

Project name: Irish/Chinese culture exchange
Project sponsor: Irish embassy

Request number: 12
Date: June 6, 2xxx

Originator: Jennifer McDonald
Change requested by: Chinese culture office

Description of requested change:
1. Request river dancers to replace small Irish dance group.
2. Request one combination dance with river dancers and China ballet group.

Reason for change:
River dancers will enhance stature of event. The group is well known and loved by Chinese people.

Areas of impact of proposed change—describe each on separate sheet:
- [X] Scope
- [X] Cost
- [ ] Other
- [ ] Schedule
- [ ] Risk

Disposition:
- [ ] Approve
- [X] Approve as amended
- [ ] Disapprove
- [ ] Deferred

Priority:
- [X] Emergency
- [ ] Urgent
- [ ] Low

Funding Source:
- [ ] Mgmt. reserve
- [ ] Budget reserve
- [X] Customer
- [ ] Other

Sign-off Approvals:

Project manager: William O'Mally  Date: June 12, 2xxx
Project sponsor: Kenneth Thompson  Date: June 13, 2xxx
Project customer: Hong Lee  Date: June 18, 2xxx
Other:  Date:  
Leadership:
Being an Effective Project Manager

Assoc. Prof. Dr. Dr. Athakorn Kengpol
Social Network Building

• Mapping Dependencies
  – Project team perspective:
    • Whose cooperation will be needed?
    • Whose agreement or approval will we need?
    • Whose opposition would keep us from accomplishing the project?
  – Stakeholders’ perspective:
    • What differences exist between the team and those on whom the team will depend?
    • How do the stakeholders view the project?
    • What is the status of our relationships with the stakeholders?
    • What sources of influence does the team have relative to the stakeholders?
Ethics and Project Management

• Ethical dilemmas
  – Situations where it is difficult to determine whether conduct is right or wrong.
    • Padding of cost and time estimations
    • Exaggerating pay-offs of project proposals
    • Falsely assuring customers that everything is on track
    • Being pressured to alter status reports
    • Falsifying cost accounts
    • Compromising safety standards to accelerate progress
    • Approving shoddy work

– Code of conduct
  • Professional standards and personal integrity
Contradictions of Project Management

- Innovate and maintain stability.
- See the big picture while getting your hands dirty.
- Encourage individuals but stress the team.
- Hands-off/Hands-on.
- Flexible but firm.
- Team versus organizational loyalties.
Qualities of an Effective Project Manager

- Systems thinker
- Personal integrity
- Proactive
- High tolerance for stress
- General business perspective
- Good communicator
- Effective time management
- Skillful politician
- Optimist
High-Performing Teams

• Synergy
  – 1 + 1 + 1 = 10 (positive synergy)
  – 1 + 1 + 1 = 2 (negative synergy)

• Characteristics of High-performing Teams
  • Share a sense of common purpose
  • Make effective use of individual talents and expertise
  • Have balanced and shared roles
  • Maintain a problem solving focus
  • Accept differences of opinion and expression
  • Encourage risk taking and creativity
  • Sets high personal performance standards
  • Identify with the team
Establishing a Team Identity

- Effective Use of Meetings
- Co-location of team members
- Creation of project team name
- Team rituals
Managing Project Reward Systems

- Group Rewards
  - Who gets what as an individual reward?
  - How to make the reward have lasting significance?
  - How to recognize individual performance?
    - Letters of commendation
    - Public recognition for outstanding work
    - Desirable job assignments
    - Increased personal flexibility
Rejuvenating the Project Team

• Informal Techniques
  – Institute new rituals.
  – Take an off-site break as a team from the project.
  – View an inspiration message or movie.
  – Have the project sponsor give a pep talk.

• Formal Techniques
  – Hold a team building session facilitated by an outsider to clarify ownership issues affecting performance.
  – Engage in an outside activity that provides an intense common experience to promote social development of the team.
Managing Virtual Project Teams

• Challenges:
  – Developing trust
    • Exchange of social information.
    • Set clear roles for each team member.
  – Developing effective patterns of communication.
    • Include face-to-face if at all possible.
    • Keep team members informed on how the overall project is going.
    • Don’t let team members vanish.
    • Establish a code of conduct to avoid delays.
    • Establish clear norms and protocols for surfacing assumptions and conflicts.
Project Management

Project Audit and Closure

Assoc. Prof. Dr. Dr. Athakorn Kengpol
1. Evaluate if the project delivered the expected benefits to all stakeholders. Was the project managed well? Was the customer satisfied?

2. Assess what was done wrong and what contributed to successes.

3. Identify changes to improve the delivery of future projects.
Project Audit Components

• A review of why the project was selected.
• A reassessment of the project’s role in the organization’s priorities.
• A check on the organizational culture to ensure it facilitates the type of project being implemented.
• An assessment of how well the project team is functioning well and if its is appropriately staffed.
• A check on external factors that might change where the project is heading or its importance.
• A review of all factors relevant to the project and to managing future projects.
Types of Project Audits

• In-process project audits
  – Allow for corrective changes if conditions have changed and for concentration on project progress and performance.

• Postproject audits
  – Take a broader and longer-term view of the project’s role in the organization and emphasize improving the management of future projects.
Step 3: Reporting

• Audit Report Content Outline
  – Classification of project
    • Project type
    • Size
    • Staffing
    • Technology level
    • Strategic or support
  – Analysis of information gathered
    • Project mission and objectives
    • Procedures and systems used
    • Organization resources used
  – Recommendations
    • Corrective actions
  – Lessons learned
    • Reminders
  – Appendix
    • Backup data
  – Summary booklet
Implementing Closedown

1. Getting delivery acceptance from the customer.
2. Shutting down resources and releasing to new uses.
3. Reassigning project team members.
4. Closing accounts and seeing all bills are paid.
5. Evaluating the project team, project team members, and the project manager.
Multirater appraisal or the “360-degree feedback”

– Involves soliciting feedback concerning team members’ performance from all the people their work affects.

– This includes project managers, area managers, peers, subordinates, and even customers.
Thank You Very Much,

Contact:

athakorn.kengpol@gmail.com