PARTICIPANTS OF THE
CONSTRUCTION

1. Introduction
2. Participants
3. Typical organizations of the participants
4. The participants in the phases of the project
5. Relation of the participants
PROJECT MANAGEMENT KNOWLEDGE AREAS (PMBOK)

4. Project Integration Management
   4.1 Project Plan Development
   4.2 Project Plan Execution
   4.3 Integration Change Control

5. Project Scope Management
   5.1 Initiation
   5.2 Scope Planning
   5.3 Scope Definition
   5.4 Scope Verification
   5.5 Scope Change Control

6. Project Time Management
   6.1 Activity Definition
   6.2 Activity Sequencing
   6.3 Activity Duration Estimating
   6.4 Schedule Development
   6.5 Schedule Control

7. Project Cost Management
   7.1 Resource Planning
   7.2 Cost Estimating
   7.3 Cost Budgeting
   7.4 Cost Control

8. Project Quality Management
   8.1 Quality Planning
   8.2 Quality Assurance
   8.3 Quality Control

   9.1 Organizational Planning
   9.2 Staff Acquition
   9.3 Team Development

10. Project Communications Management
    10.1 Communications Planning
    10.2 Information Distribution
    10.3 Performance Reporting
    10.4 Administrative Closure

11. Project Risk Management
    11.1 Risk Management Planning
    11.2 Risk Identification
    11.3 Qualitative Risk Analysis
    11.4 Quantitative Risk Analysis
    11.5 Risk Response Planning
    11.6 Risk Monitoring and Control

12. Project Procurement Management
    12.1 Procurement Planning
    12.2 Solicitation Planning
    12.3 Solicitation
    12.4 Source Selection
    12.5 Contract Administration
    12.6 Contract Closeout

PROJECT HUMAN RESOURCE MANAGEMENT

What is obligatory?

Which case do we have a free choice?

What are the main constrains?
1 SYSTEMS OF MEANS

Power
(polynomial, legal, administrative, communicational, etc.)

Technical
(technological, material, architectural, etc.)

Human
(institutional, organizational, social, individual, etc.)

Economical
(financial, accounting, etc.)

The four definitive systems of means, in the building project management.

1 THE HISTORIC PROJECT MODEL

client (investor)

design

construction

architect (master builder)
THE BASIC PROJECT MODEL

client (investor)

contractor

directly involved personnel

architect

design (+consultation)

construction

PARTICIPANTS OF THE PROJECT

- client
- architect (designer)
- contractor
- consultant
- project manager (PM team)
- quality surveyor (supervisor)

- bank
- authorities
- public utilities
- public services
- maintainer
- facility manager
- user
## CLIENT

**Form**  
*Individual / firm / institute*

**Role**  
- defining the aim of the project
- ensuring the financial background
- selecting the other participants (according to the legal commitments if exist)

**Tasks and duties**  
- financial background, liquidity of the project
- to dispose with the construction site
- to procure the rights to build (attain building consent)
- to establish contract with the architect, consultant, contractor, etc.
- to share his/her/its rights and risks
- to attain permission for use

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## DESIGNER ARCHITECT(S)

**Form**  
*individual / firm*

**Role**  
- preparing the necessary drawings and documentations according to their contract:
  - outline planning consent
  - planning consent / building permit
  - construction plan
  - fulfillment plan
  - architectural supervision during the construction

**Tasks and duties**  
- to help the client in professional way to attain building permit
- to prepare documentations according the national/international standards and legal prescriptions
- to coordinate the work of the co-operative designers and professionals
### CO-OPERATIVE DESIGNERS AND PROFESSIONALS

**Form**  
individual / firm

**Role**  
preparing supplementary specialist drawings, plans or papers to the architectural documentation in different fields:
- structural design
- installation design
- electric design
- landscape architecture
- fire protection
- monument, archeological research
- cost and time estimation/calculation
- etc.

**Tasks and duties**
- to prepare documentations according the national/international standards and legal prescriptions
- continuous co-operation and communication with the designer architect

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### PROJECT MANAGER OR PM TEAM

**Form**  
individual / firm

**Role**  
helping the project with their professional work according to their contract in some or all of the following fields:
- quality surveying
- consultation
- communication between the participants of the project
- preparation of the construction project
- selection of the other participants of the project (organizing architectural competition, tender, etc.)
- etc.

**Tasks and duties**  
Depending on their contract.
CONSULTANTS

Form
individual / firm / (institute)

Role
helping the project with their professional advices (consulting)
- directly or in a form of documentation
- for the whole project or for single tasks
- for different subjects:
  - feasibility
  - economy
  - investment
  - technology
  - architecture
  - real estate development
  - law
  - etc.

Tasks and duties
Depending on their contract.

CONTRACTOR(S)

Form
firm

Role
constructing the building according the contract

Tasks and duties
- to participate in the tendering process
- to contract with the client and with sub-contractors
- to report to the authority the start-up of the construction
- to construct the building according the national/international standards and legal prescriptions
- continuous co-operation and communication with the designer team during the construction
- to ensure the security standards and legal prescriptions on the construction site
- to provide a written statement of completeness of the building (to startup of the handover)
- statement of the competent technical executive (site engineer) for the permission of use
### QUALITY SURVEYOR

<table>
<thead>
<tr>
<th>Form</th>
<th>individual, (firm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Role</strong></td>
<td></td>
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<tr>
<td>– to ensure professionalism by controlling the plans and the construction work</td>
<td></td>
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<tr>
<td>– to propose alteration of the plan for the client, if it is technically or financially reasonable</td>
<td></td>
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<tr>
<td>– to take part in the hand over process</td>
<td></td>
</tr>
<tr>
<td><strong>Tasks and duties</strong></td>
<td></td>
</tr>
<tr>
<td>– control of the plans in accordance with the standards and the legal prescriptions</td>
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<tr>
<td>– control of the assignment of the building</td>
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<tr>
<td>– to ensure the prosecution of the prescribed tests (e.g. soil mechanics)</td>
<td></td>
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<tr>
<td>– to control the quality prescribed by the standards</td>
<td></td>
</tr>
<tr>
<td>– continuous control of the construction logbook</td>
<td></td>
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<tr>
<td>– note all failures (deficiencies and faults) in the construction logbook</td>
<td></td>
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<tr>
<td>– controlling hidden structures and volume of the completed work before getting covered</td>
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<tr>
<td>– to control the conformance of the used materials (CE, etc.)</td>
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<tr>
<td>– to control volume of the completed work</td>
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<tr>
<td>– to inform the client if the completed work is according to the contract</td>
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</tbody>
</table>

### AUTHORITIES

| Typical authorities | - Hungarian National Public Health and Medical Officer Service (ÁNTSZ) |
| - local fire department (disaster prevention) |
| - local authorities – building department |
| - National Inspectorate for Environment, Nature and Water |
| - National Office of Cultural Heritage (KÖH) |

| **Role** | ensuring the legal environment |
| **Tasks and duties** | - providing building permit |
| - providing permission of use |
| - giving consent for the plans, for the technical solutions, etc, according to the legal prescriptions |
2 **PUBLIC UTILITIES / SERVICES**

**Public utilities**
- electric power supplying companies
- gas works
- water works
- sewage works

**Public services**
- local chimneysweep service

**Tasks and duties**
- give a consent for the plans (capacity, standards, etc.)
- verify the finished work

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2 **BANK**

**Form**
- firm

**Role**
- providing credit for financing
- ensure the liquidity of the project in case of credit is granted

**Tasks and duties**
- considering the requests for credit
- grant credit by schedule for the project
### USERS

**Form**
One or more target group utilizing the building.

**Role**
The activity of the users are in relation with the main function or with some of the sub-functions of the building.

**Tasks and duties**
No defined task, but a representative group of users recommended to be involved in the planning phase of the project to define functional requests.

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### MAINTAINER

**Form**
individual, firm or organization  
(can be the client or the user of the building but can be independent too)

**Role**
responsible for the operation and maintenance of the building

**Tasks and duties**
- responsible for the operation and maintenance of the building  
- facility management
The form of the organization (firm, institute) depends on:

- the function of the organization
- economic reasons (market relations, budget, etc.)
- institutional traditions
- regulations

usually conservative:
- authorities
- architect offices

usually flexible:
- construction management and PM offices,
- contractors
- consultant companies
3 TYPES AND FORMS OF ORGANISATIONS

- single-line organisations
- multi-lined organisations

A. linear organisation
B. organisation with management team
C. functional organisation
D. divisional organisation
E. matrix organisation

3 LINEAR ORGANISATION

director

+ outsourcing
3 ORGANIZATION WITH MANAGEMENT TEAM

- director
- management team

level 1.

level 2.

level 3.

3 FUNCTIONAL ORGANIZATION

- director
- financial
- technical
- commercial
- productional
- HR

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3 DIVISIONAL ORGANIZATION

- director
  - financial
    - div 1.
    - div 2.
    - div 3.

3 MATRIX ORGANIZATION

- director
  - technical
  - commercial
  - productional
  - etc.

  - project 1.
  - project 2.
  - project 3.
THE ROLE OF THE PARTICIPANTS IN THE PHASES OF THE PROJECT

1. Start-up
   - client

2. Analyses, studies
   - client, consultants, architect, (users)

3. Feasibility study
   - client, consultants, PM team

4. Ensuring the requirements of the feasibility
   - client, bank, authorities, architect, co-designers, utilities, consultants, PM team

5. Selecting the contractor (tendering)
   - client, consultants, PM team, (architect, authorities)

6. Construction works
   - client, consultants, PM team, architect, contractor, authorities, utilities, quality surveyor

7. Handover, set in operation
   - client, contractor, quality surveyor, PM team, authorities, utilities, maintainers, users

RELATION PATTERNS

The relation pattern of the project depends on:

- the form of the client (regulations)
- the preparedness of the client (technical, institutional)
- the scale of the project (physical and financial)
- the complexity of the project
- economic reasons (budget, rate of return, etc.)
5 TYPICAL RELATION PATTERNS OF PARTICIPANTS

A. traditional relation pattern

B. relation pattern for „turn-key” project

C. relation patterns with a management

5 TRADITIONAL RELATION PATTERN

- client
- architect
- contractor
- quality surveyor
5

RELATION PATTERN WITH MORE THAN ONE CONTRACTOR

relations

client

architect

contractor

contractor

contractor

quality surveyor

5

REALATION PATTERN FOR TURN-KEY PROJECTS

relations

client

quality surveyor

contractor responsible for the entire project

architect

sub-contractor

sub-contractor

sub-contractor

sub-contractor
CONSTRUCTION PROJECT WITH MANAGEMENT – SAMPLE 3.

- client
- quality surveyor
- project management
- architect
- contractor
- contractor
- contractor

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