

PHASES AND PARTICIPANTS OF THE CONSTRUCTION PROCESS ROLES AND RESPONSIBILITIES

BUTE – Faculty of Architecture
Department of construction
technology and management

István Vidovszky PhD

Basics of construction

CONSTRUCTION

Introduction

What is construction?

DEF.:

Construction is a technical **project**
in accordance with an **investment** of a real estate,
where a part of a building or an entire building is
established or restored.



Each construction has unique project model!

CONSTRUCTION

Characteristics

PROJECT

*Single,
complex,
unique
task, that
is **limited** in
costs and
time,
and
has
predefined
goals,
and
**assigned
sources.***

CONSTRUCTION

Characteristics

It is...

- | | |
|------------|---|
| ...single | ...as it is not a product of an ongoing procedure, |
| ...complex | ...as it deals with several challenges in many fields , |
| ...unique | ...as each project is different . |

CONSTRUCTION

Limitation in costs and time means:

Characteristics

... **costs** and **time** are the main constraints
restricted by decision or capacity.

CONSTRUCTION

How it has...

Characteristics

... **predefined goals**,
... **assigned sources**

... **defining goals** is the initial step of the project
management – bases of every decision.

... **the assigned** resources are result of a decision process,
or defined by the capacity of the investors.

CONSTRUCTION

Introduction

What is investment?

DEF.:

Investment is the commitment of money or capital to purchase financial instruments or other assets in order to gain profitable returns in the form of interest, income, or appreciation of the value of the instrument.

CONSTRUCTION

Introduction

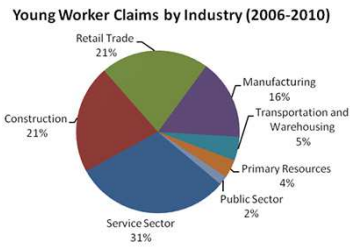
What is special in case of a construction project as an investment?

- most cases single, unique, **project-like** investment
- relative high investment **costs**
- high demands on **professionals**
- predefined **quality**
- directly (e.g. cultural segment) or indirectly (e.g. industry, agriculture) satisfies **social claims**

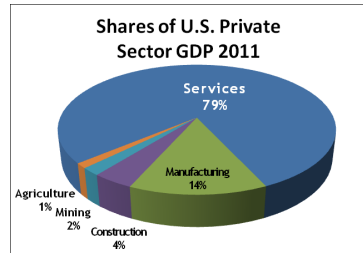
CONSTRUCTION

high costs – determining branch of industry

Characteristics



<http://www2.worksafebc.com/topics/youngworker/Statistics.asp>



<http://blog.trade.gov/category/trade-data/>

CONSTRUCION

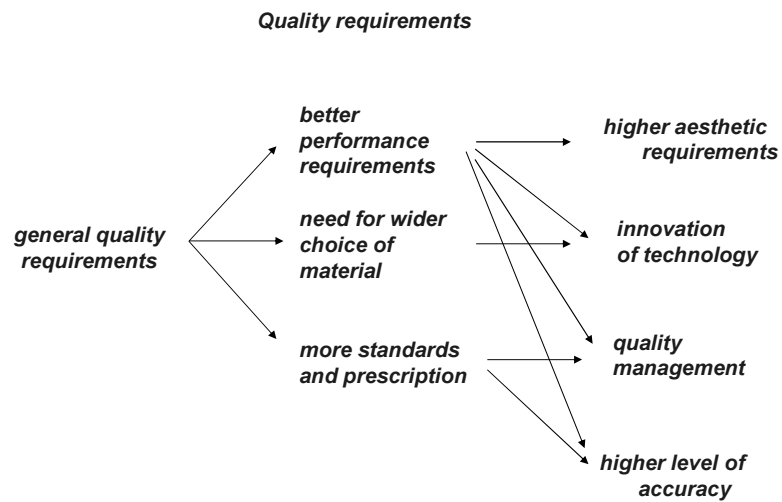
high costs - determining branch of industry

Characteristics



CONSTRUCION

Characteristics



CONSTRUCION

Characteristics

Claims for educated personnel (skilled workers, graduated professionals)

- **technical staff:** architect, civil engineer, mechanical-engineer, electrical-engineer, landscape architect, transportation engineer (design, construction, quantity surveyor, etc.)
- **economy staff:** economist, economy-specialist engineers and jurists (cost-calculation, cost-control, financial scheduling, cost-strategy etc.)
- **legal personnel** (lawyers, attorneys)
- **consultants** (e.g. institute-specialist, technology-specialist, etc.)
- **skilled worker** : (mainly building trades, general foreman)

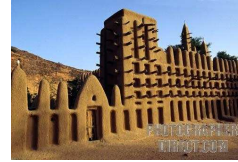


CONSTRUCCION

Characteristics

Social claim

1. **Level of defense**
 - a) physical defense, protection of the property
– against natural forces
 - b) sacral – against supernatural forces
2. **Level of the society**
– serving the functions of the community
3. **Level of luxury** - entertainment



CONSTRUCCION

Model of the construction project

The participants

- client
 - architect (designer)
 - contractor
- } **directly involved**
- consultant
 - project manager, construction manager
 - quality surveyor (supervisor)
 - maintainer, facility manager
 - user
- bank
 - authorities
 - public services

CONSTRUCTION

Client

Individual / firm / institute

- *What is the aim of the project?
(financial or social benefit)*
- *What kind of financial sources are available?
(private capital, bank loan, grants, etc.)*
- *How has been the other participants selected? (e.g.
What are the legal commitments?)*

CONSTRUCTION

Consultants

*economy, investment, technology, architecture, real
estate development, law etc.*

individual / firm

- *for feasibility*
- *for the whole project*
- *for single tasks*

CONSTRUCION

Designers – architectural plan types

architect
+
co-operators:
structural designer
installation designer
electric designers
landscape architect
fire safety specialist
++
monument specialist
calculation specialist
etc.



outline planning consent
planning consent/ building permit

construction plan

fulfillment plan

Model of the construction project

CONTRUCTION

Contractor

general construction management

turnkey
project



Project manager

hired by the client, responsible for
the connection and for the
information transport between
the participants

Quality surveyor

a single firm or a firm with
sub-contractors



depends on the capacity
and the specialization of
the firm

most PM crews have
technician and
economist specialist
staff as well

Model of the construction project

CONSTRUCTION

Authorities (national/regional)

- *public health and medical officer service*
- *local fire department*
- *local municipality – building department*
- +
- *inspectorate for environment, nature and water*
- *office of cultural heritage*

Public Services / Utilities

- *public services for electricity*
- *gas works*
- *water works*
- *sewage works*
- *local chimneysweep service*

Bank

CONSTRUCTION

Maintainer, facility manager

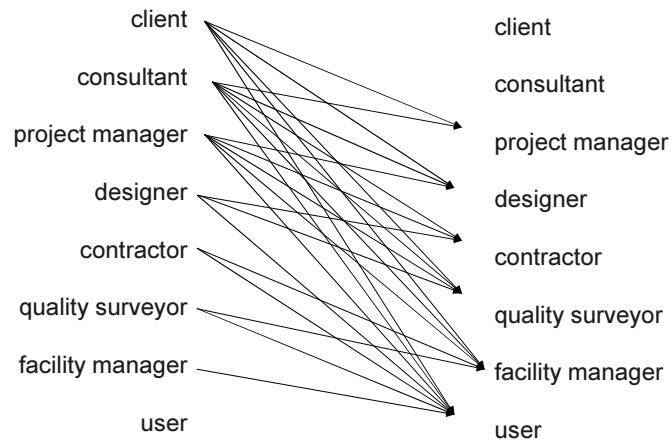
- *responsible for the operation and maintenance of the building*
- *individual, firm or organization*

Users

One or more target group utilizing the building.

CONSTRUCTION

Different roles of the participants



CONSTRUCTION

The project model

- show the **organigram** of the **project**
- demonstrate the **connections of the participants**
- demonstrate the characteristics of the connections of the participants

CONSTRUCTION

The project model

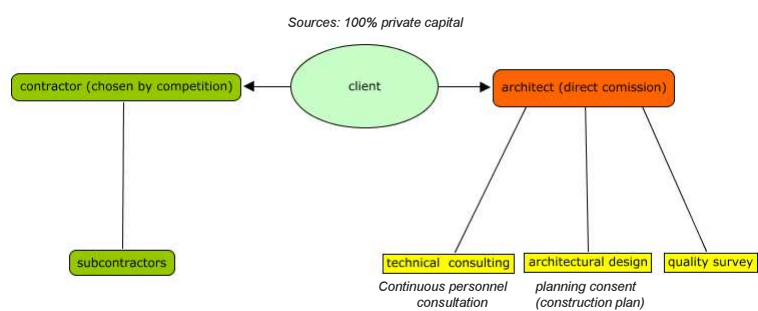
- real/realistic claims
- relation network on real basis
- financeable investment (with the essential resources / capital)
- process accordingly to the scale of the project



Model of the construction project

CONSTRUCTION

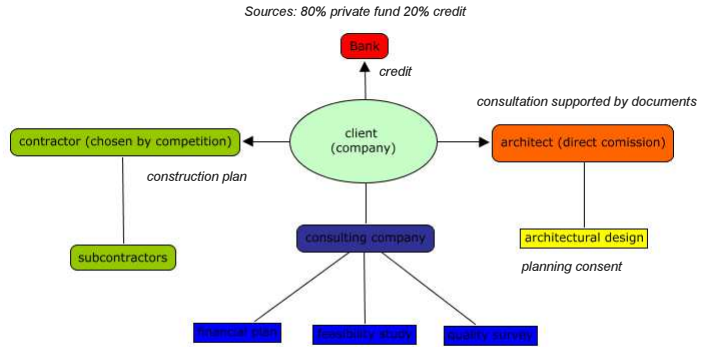
FAMILY HOUSE



examples

CONSTRUCTION

STOREHOUSE



CONSTRUCTION

LOCAL MUSEUM

Sources: 60% governmental funds 40% grant

