

Saimaa University of Applied Sciences  
Technology, Lappeenranta  
Double Degree Programme  
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# **POTENTIAL CLIENT QUALITY CONCEPTION IN REAL ESTATE AND UNDERSTANDING OF IT BY BUILDING COMPANY**

Bachelor's Thesis 2012

## CONTENTS

ABSTRACT .....	3
1. INTRODUCTION .....	5
1.1 Background.....	5
1.2 Name target.....	6
1.3 Limitations .....	7
2. QUALITY IN CODES AND STANDARDS.....	11
2.1 Quality in construction .....	11
2.2 Technicalities.....	13
2.3 Definition of quality .....	15
2.4 Methods of evaluation .....	18
2.5 Analysis of volume and quality of shell and core works.....	23
3. VIEWPOINT ON QUALITY .....	26
3.1 Viewpoint from company and executor team.....	26
3.2 Viewpoint from potential customer .....	28
3.3 Analysis of feelings and wishes of clients.....	29
4. INVESTIGATION METHODS .....	32
4.1 Aims of interviewing .....	32
4.2 Process of interviewing.....	33
4.3 Result generation .....	34
5. DIFFERENCES IN UNDERSTANDING BETWEEN CLIENTS AND COMPANY.....	42
5.1 Designers understanding.....	42
5.1 Clients understanding.....	43
6. GUIDELINES .....	44
7. RESULTS .....	47
9. CONCLUSION .....	48
APPENDICES.....	49
SCHEME 1 .....	49
SCHEME 2.....	50
QUESTIONS FOR INTERVIEWING .....	51
REFERENCES .....	51

# ABSTRACT

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Potential client quality conception in real estate and understanding of it by building company, 52 pages

Saimaa University of Applied Sciences, Lappeenranta

Double Degree Programme in Civil and Construction Engineering

Civil and Construction Engineering 2011 - 2012

Bachelor's Thesis 2012

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The purpose of the study was to determine potential client logic, his needs and demands, to understand how he sees quality. The target is also to find out what designers, production persons and sales department think about the quality, and to compare those wishes and feelings to the clients' and find items which are most important to client and least important for all the others. In addition, the task was to find a way to narrow the gap between these wishes and feelings. The main goal of this work was to show the way for a building company to find the right method of getting on the right side of every client as individual personality.

The study was commissioned by Janne Kiiskila in NCC Russia, the project of the multi-storey residential complex Öland.

In the theoretical part of the study the main issue was the meaning of quality from different sides. The information to define construction regulations view point on good quality was gathered from the literature, codes and standards in Russia and the national law. The empirical part was done by interviewing potential clients who have already bought an apartment in Öland or who are preparing to buy it in the nearest future. This study was carried out in a statistics schedule showing which items are more important for clients and for construction regulations. The study showed that the quality point of view of the

construction regulations differed from the good quality objectives discovered through the theoretical customer.

The results of the study show how building and a construction company can simplify common ground with potential client in the sphere of quality, which innovations should they force into application in companies work policy, and which measures they can take to satisfy the requirements of clients, at the same time making convenience of usage, availability and ergonomics product. The conclusion was based on the interview answers and the comparison of them. The final result of this thesis was recommendations for the construction company how to improve the apartment taking over process.

Keywords: Quality, client, demands, construction regulations, interview

# 1. INTRODUCTION

## 1.1 Background

The difference in understanding quality by clients and building company is a very important and difficult question. For a correct organized process of delivering an apartment to a potential client the general contractor company needs to understand clients' viewpoint on building quality. It is important to draw a parallel between how a company monitoring the quality of building works and how customer see it, and what is necessary for him when he first time looks at a new apartment. What things he takes stock of defects and what are quite normal for him? This and many other questions are very essential in relationship between general contractor company and a potential future owner of a real estate.

Therefore the main problem is a difference in understanding the meaning of quality between a building company and a client. Because every customer is a certain person with his own opinion and views the company needs to give individual attention for every client. But it is very important to strike a balance between the demands of a customer and the facilities of a corporation.

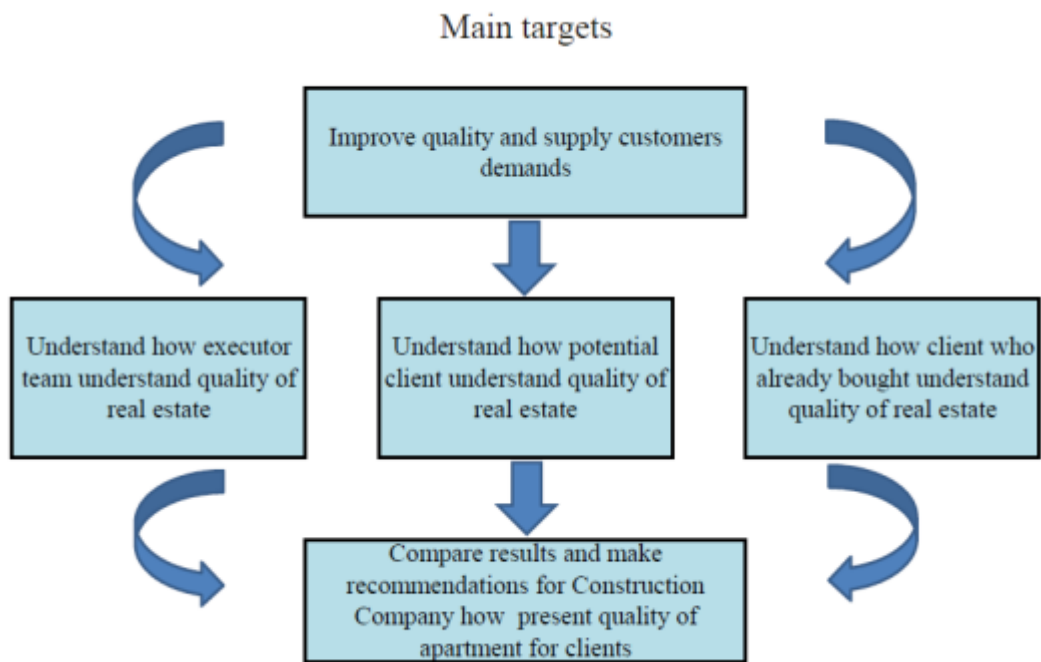
The general idea of a company is to satisfy client desires without drum up him. The saying "The customer is always right" is not right when we are talking about building and construction.

In consequence the object of the investigation work is which innovations should be impregnated in the policy of building and construction companies to simplify understanding with a potential client.

This work was made for NCC Russia Construction Company. NCC Housing develops and sells single-family housing and apartments in selected markets in the Nordic countries, Germany, the Baltic countries and St. Petersburg. Investigation is carried out on multistorey residential complex Öland in Saint-Petersburg in period of February 2012 until May 2012.

## 1.2 Name target

The significance of quality in building is very big. It involves several factors which are inextricably connected with each other. It is very important that quality of building and construction works determines the level of professionalism of a building company.



Customer requirements do change with time therefore the main goal of building companies is to create a customer “need” for tomorrow. This definition implies to do everything as well as possible every day. The goal is to operate without defects or errors in all areas of the company. Quality must be built into the products and services as they are planned and designed and procedures need to be developed to make all operations error-free.

It is quite important for building company to find the right method of getting on the right side of every client as individual personality. They should satisfy every valid client demand and at the same time not to keep on the razor-edge of allowable. It means that the customer is not always right. But they need to listen

to him and his understanding of the quality of apartments. After different observations and drawing conclusions about customer's psychology in the process of future residential space estimation, the company must produce its own system in the sphere of communicating with potential customer and performing building product in a favorable light.

Therefore the main purpose of a general contractor company is to hold a favorable position in market. They need to produce high quality of works, constructional materials, create an ergonomic, good looking and functional estate. A very important unit is that the quality of a building company works contains not high just level of organization inside, it contains a level of attitude to customer.

### **1.3 Limitations**

NCC is short for Nordic Construction Company. NCC's history started at the end of the 19th century with ship owners in Gothenburg, Sweden. The star in the company logo refers to the Nordstjärna family – the Northern Star (Nordstjärn) has led the way for a long time. NCC companies in Finland are NCC Construction, NCC Property Development and NCC Roads.

1996: Sweden's second-largest construction company, NCC AB, acquired the construction and construction design business of Finnish Puolimatka. NCC Puolimatka Oy started business on 1 January 1996.

1997: NCC-Puolimatka International Oy was established.

1998: Residential business and engineering construction business were started.

1999: Subsidiary Seinälevy Oy's capital stock was sold to Ansion Sementtivalimo Oy.

1999: The company name was changed to NCC Finland Oy on 1 October 1999.

2000: Precast concrete business started.

2000: Interasfaltti Oy was acquired.

2000: The Export Unit was renamed NCC International Oy on 1 June 2000.

1 January 2002: The industrial business segment was divided into two parts: Roads (asphalt, stone material and precast concrete business) and Altima (construction machinery rentals). The engineering construction and telecom sectors were shut down.

1 July 2002: NCC's building machinery and equipment rental business in Finland continued under the name of Altima Oy.

1 January 2002: NCC Finland Oy was divided into NCC Construction Ltd, NCC Property Development Oy and NCC Roads Oy.

1 January 2004: Altima Oy became an independent company, no longer connected to the NCC Group.

2008: NCC Roads Oy acquired the operations of Valtatie Oy from the French Colas Group.

NCC is the successor of Puolimatka's construction business

1947: Armas Puolimatka established his construction company.

1963: Building parts business started.

1964: Construction design business started.

1972: First projects in Russia.

1985: Company owner Hankkija; in 1990, Hankkija became Novera Group.

1992: Novera's bankruptcy; new owner Kansallis-Osake-Pankki Bank.

NCC's operations in Russia number nearly 40 years. Since 1972 the Group's enterprises have been engaged in industrial construction and reconstruction of public buildings in different regions of the country. The company has developed a large number of large-scale projects, including administrative and production facilities, hospitals, infrastructure objects.

With the years of successful operation many private and state-operated enterprises as well as largest international companies such as Pepsi-Cola, Procter&Gamble, McDonald's, AssiDoman, AGA, Master Foods, Samsung have become NCC's loyal customers.

At present company's activities in Saint-Petersburg are exercised in 2 fields: investment housing construction and road construction.



## 1.4 Research method

To sort out the problem and answer the question about understanding of quality is presented the point of view on quality from professionals and clients. It shows how the potential client view and evaluate the quality of work. This knowledge could be very useful when they sell their apartments. To solve this problem of building company with finding the right method of getting on the right side of every client as an individual personality. Several interviews are taken using the same question with customers and future buyers. The sphere of the interest is potential clients and fellow workers of building company. The questions (how to understand the quality of apartments and building work) will be the same and they could help in making statistics.

1. Interruption of air exchange in ventilation system
2. Concrete constructions (deviation from vertical, displacement of walls, roughness more than 5 mm)
3. Windows and doors ( openings, glass, abutting joint, consistency)
4. Recessed balconies
5. Electrical fitter
6. Water supply, sanitary piping and heating systems
7. Ventilation system
8. View from the window
9. Intensity of illumination
10. Floor flatness
11. Ceiling flatness
12. Smells inside apartment
13. Bad joint hermetization of walls in the winter
14. Other small defects
15. Surface appearance
16. Cleanness of accommodation
17. The quality of finishing works

Also theoretical literature, codes and standards are used to gain a greater understanding on how a company sees the quality of production and what they

are doing to improve it. On the other hand discussions are held with potential customers to understand their demands and how they evaluate quality.

## **2. QUALITY IN CODES AND STANDARDS**

### **2.1 Quality in construction**

Quality has been defined in many ways, but today it is equated with achieving customer satisfaction. Customer requirements do change with time, therefore the main goal of building companies is to create a customer “need” tomorrow that may not exist today. Quality has also been defined as excellence. This definition implies to do everything as well as possible every day. The goal is to operate without defects or errors in all areas of the company. Quality must be built into the products and services as they are planned and designed and procedures need to be developed to make all operations error-free.

The quality of building depends on quality of design documents, quality of constructional materials, constructions, half- finished products, components and quality of shell and core works. There are four types of characteristics of level of quality:

- Functional characteristics. It means that design documents have to be involve the most progressive work method, which provides high quality of production, minimalize spends and good sanitary- hygienic conditions of work process.
- Constructional characteristics, provides strength, resistance, reliability and life time of works on certain structural parts and building in totality.
- Engineering characteristics, shows how constructional and architectural decisions involve building in industrial methods with using modern equipment and technology of construction operations.
- Esthetical characteristics, shows how buildings correspond to the demands of society. Among these are architectural composition, ensemble, finishing of buildings.

The quality of building is inseparably related to economics. When quality is not very good it always grows up extra charges as financial, corporeal and human, they are needed for different rebuilding, updates, mistakes and liquidation of defects in quality of materials and process of building have been allowed in project. Extra time for utilization of defects lead to duration extension of building process, conduce to early wear of structures, and sometimes to complete failure of them. Consequently works for strengthening or renewal or unscheduled repair of buildings become necessary. Therefore the functional quality of different structures goes down and working expenses go up.

Quality construction is an object in declared period of exploitation without losing its main function, appearance and performance characteristics. It includes a complex of components:

- Good constructional materials (material with high quality works longer and saves their performance characteristics)
- Honesty of team (It is always needs to produce working team inspire them to make their function above board. And do not let them go to concurrent companies)
- Proper control (to organize the working process with strict reporting system for done works, feature planning system and make works in correspondence with design solutions)
- Correspondence to design documents (for avoiding problems which rise in the process of building works)

We should always remember that a constructional project with high level of quality is a good looking and well done object. Appearance and professionalism of works are two main components of quality.

As a conclusion about quality residential space three main components are determined: convenience of usage, availability and ergonomics.

Therefore the main problem is a difference in understanding the meaning of quality between a building company and a client. Because every customer is a certain person with his own opinions and views. That is why the company needs

to give individual attention for every client. But it is very important to strike a balance between demands of customer and facilities of corporation.

The general idea of a company is to satisfy client desires without drum up him. The saying “The customer is always right” is not right when we talking about building and construction.

In consequence the object of the investigation work is which innovations should be impregnated in the policy of building and construction companies to simplify understanding with a potential client. (“Technology and organization of construction” A.A. Alekseev, 2001)

## **2.2 Technicalities**

Quality is a complex of object’s characteristics which satisfies the specified and supposed demands. Quality is defined as 'fitness to purpose', i.e. in terms of construction it is providing a building which provides an appropriate quality for the purpose for which it is intended. The price to be paid for a building is a reflection of the expectations of quality. A cheaper building probably uses inferior materials and is likely to be less attractive and less durable. The quality is also related to the timing of when it is delivered.

Quality policy is the main aim of organization in sphere of quality officially formulated with the upper executive management.

Quality control in the construction industry can be looked at as having three elements:

- To produce a building which satisfies the client
- To produce a building where quality is related to the price.
- To produce a building in which sufficient time is allowed to obtain the desired quality.

Like most other aspects of construction management quality control has to be planned. Planning seeks 'order' and a quality control system for a construction project reflects this sense of order. It may be seen to be in five basic stages:

- Setting the quality standard or quality of design required by client.
- Planning how to achieve the required quality, construction methods, equipment, materials and personnel to be employed.
- Construct the building right first time.
- Correct any quality deficiencies.
- Provide for long term quality control through establishing systems and developing a quality culture.

The costs of quality is obvious that quality is proportional to costs associated with the construction process. Costs associated with quality need to be identified for management decisions. The costs of quality can be broken down as follows:

- Failure costs: The costs of demolishing and rebuilding, the cost of production time, delays to other gangs
- Appraisal costs: The cost of inspection and testing.
- Prevention costs: The costs of providing better designs, more training to reduce failure costs, more maintenance.

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Improvement of quality- is the organization arrangement with purpose of the effectiveness and performance of activities and processes. The main goal is to improve efficiency for company and for future customer.

Production is the result of several activities or processes.

Consumer is an acceptor of production from the contractor.

Quality plan is a document regimented specific actions in the sphere of quality, resources and combination of activities related to particular production, project or contract. (№ 214 Federal Statute of participation in a pre-construction real estate project)

Demands of society- liabilities come from law, rules, instructions, codes, regulations and other observations.

The procedure of quality system- a document containing all essential wittings for effective control of companies activities having influence on production quality and embracing final element of quality system or a part of it.

Defect- is defined as non-conformity observed in a unit against the specifications. A unit may have multiple types of defects at the same time. Every certain discrepancy of production for setting standards (from GOST 16504).

Visible defect is a defect which is needed to visualize in codes and standards with special action written in this document (from GOST 16504)

Latent defect is a defect which is needed to visualize without special action written in codes and standards (from GOST 16504)

### **2.3 Definition of quality**

The quality control of construction product- is establishment; insurance and management of construction product quality level at all the stages of its creation:

- Designing
- Fabrication of constructional materials and products
- Process of shell and core works

- Operations with ready buildings and structures

There are main questions of preparing quality control system:

- Providing high normative requirements
- Creating progressive design solutions
- Producing effective constructional materials and products
- Enforcement to setting standards and design documents in a process of making constructional materials and shell and core works products

Implementation and insurance of control system operating are main aims of leader, managing or engineering and technical companies.

The definition of desired quality level prevents to start the works, the insurance of quality level makes before and through all building works, and in period of exploitation.

Quality is defined as 'fitness to purpose', i.e. in terms of construction it is providing a building which provides an appropriate quality for the purpose for which it is intended. The price to be paid for a building is a reflection of the expectations of quality - A cheaper building probably uses inferior materials and is likely to be less attractive and less durable. The quality is also related to the timing of when it is delivered.

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Quality assurance is a mechanism for ensuring that the construction process takes place within the framework of a quality management system. This suggests that quality assurance defines the organization structure, tasks and duties for implementing quality management.

In 1987, the Building research establishment surveyed the quality problems on Britain's construction sites. They found that half of the faults were design related, and 40% of the problems arose from faulty construction, 10% were product failing.

Design faults:

- Misunderstanding the client's brief to develop the design
- Using information which is incorrect or out of date
- Misunderstanding the client's expectations of quality standards
- Lack of co-ordination between the designers.
- Loose or inappropriate specifications
- Construction faults

- Not building to according drawings or specifications
- Poor supervision leading to bad workmanship
- Insufficient management of the quality of construction.
- In order to eliminate those potential problems many clients have looked to quality assurance to reassure them that they will get the right building without undue quality problems. (GOST 16456-70- Quality of production. Ergonomic parameters and nomenclature )

## **2.4 Methods of evaluation**

The basement of quality control system is special codes and standards which shows level of quality of different work types and establish needed demands with their production and acceptance. Principal kinds of codes and standards in Russia are Uniform Building Code and regulations (СНиП) and federal standards (GOST). These regulation norms control building works quality, structural materials and products, appurtenance, components and other. Codes and standards system is compulsive to use by all departments, ministries, building companies and independent from all departmental affiliation companies.

Requirements of Uniform Building Code and regulations (СНиП) are predominantly technical. They are adjacent to using end-use products. Regulatory requirements have mostly technical-and-economic condition define the functionality and possibilities of the fabrication of materials.

The function of Uniform Building Code and regulations and federal standards are:

Uniform Building Code the UBC was first published in 1927 by the International Council of Building Officials. It was intended to promote public safety and provided standardized requirements for safe construction which would not vary from city to city as had previously been the case.

Updated editions of the code were published approximately every three years until 1997, which was the final version of the code. The UBC was replaced in 2000 by the new International Building Code (IBC) published by the International Code Council (ICC). The ICC was a merger of three predecessor organizations which published three different building codes. These were:

- International Council of Building Officials (ICBO) Uniform Building Code
- Building Officials and Code Administrators International (BOCA) The BOCA National Building Code
- Southern Building Code Congress International (SBCCI) Standard Building Code

The new ICC was intended to provide consistent standards for safe construction and eliminate differences between the three different predecessor codes. It is primarily used in the United States.

Federal standards ( GOST)- refers to a set of technical standards maintained by the Euro-Asian Council for Standardization, Metrology and Certification (EASC), a regional standards organization operating under the auspices of the Commonwealth of Independent States (CIS).

All sorts of regulated standards are included, with examples ranging from charting rules for design documentation to recipes and nutritional facts of Soviet-era brand names (which have now become generic, but may only be sold under the label if the technical standard is followed, or re-named if they are reformulated).

GOST standards were originally developed by the government of the Soviet Union as part of its national standardization strategy. The word GOST (Russian: ГОСТ) is an acronym for gosudarstvennyy standart (Russian:государственный стандарт), which means state standard.

The history of national standards in the USSR can be traced back to 1925, when a government agency, later named Gosstandart, was established and put

in charge of writing, updating, publishing, and disseminating the standards. After World War II, the national standardization program went through a major transformation, which provided the necessary methodological, logistical, and technological support for the long economic expansion that lasted into the early 1980s. The first GOST standard, GOST 1 State Standardization System, was published in 1968.

After the disintegration of the USSR, the GOST standards acquired a new status of the regional standards. They are now administered by the Euro-Asian Council for Standardization, Metrology and Certification (EASC), a standards organization chartered by the Commonwealth of Independent States.

At present, the collection of GOST standards includes over 20,000 titles used extensively in conformity assessment activities in 12 countries. Serving as the regulatory basis for government and private-sector certification programs throughout the Commonwealth of Independent States (CIS), the GOST standards cover energy, oil and gas, environmental protection, construction, transportation, telecommunications, mining, food processing, and other industries.

The following countries have adopted GOST standards in addition to their own, nationally developed standards: Russia, Belarus, Ukraine, Moldova, Kazakhstan, Azerbaijan, Armenia, Kyrgyzstan, Uzbekistan, Tajikistan, Georgia, and Turkmenistan.

Because GOST standards are adopted by Russia, the largest and most influential member of the CIS, it is a common misconception to think of GOST standards as the national standards of Russia. They are not. Since the EASC, the organization responsible for the development and maintenance of the GOST standards, is recognized by ISO as a regional standards organization, the GOST standards are classified as the regional standards. The national standards of Russia are the GOST R standards.

Building inspections are an important part of the home and commercial property market. A pre-purchase building report will offer a wide variety of information about the condition of a property and estimation for the cost of repairs. The building is assigned a number after being judged against the condition of buildings of a similar size, type, and age. This provides an accurate estimation of the overall quality of the building. (“Management review in departments” Yerina G.A., 2000)

Total building inspections are much more than a simple structural report. The full pre-purchase building report includes a wide variety of information. The complete list of inspections includes:

- Mechanical services
- Asbestos
- Mould
- Drainage
- Geotechnical
- Appliance
- Durability of exposed surfaces
- Alarm
- Intercom
- Data systems
- Structural
- Air conditioning
- Hydraulic
- Council

The finished report will consist of an extensive list of major and minor defects, allowing the buyer and seller to establish the realistic value of a building. The report will contain specific details about the inspection, including weather information, furnishings, and details about area inspections. The inspectors will access and inspect the sub-floor, roof space, roof interior, garages, and external buildings. Photos will be included in the report that documents any notable issues. This increases the validity and value of the report.

The pre-purchase building report will include in-depth information about the condition of the internal and external features of the building. Some internal features that will be inspected include: windows, doors, walls, ceilings, kitchens, floors, the woodwork, toilets, laundry, bathrooms, and the hot water system. The report on the interior of the building will also include general comments on the plumbing and electrical systems and the smoke detectors.

Internal inspection includes:

- Receiving inspection of materials and equipment( it can be selective of solid)
- Functional inspection
- Acceptance inspection

The external building report also includes a very extensive inspection. The building's external aspects that will be examined in the report include: roof framing, roof cladding, the chimney, valleys, eaves, gutters, downpipes, fascia and barge boards, external walls, lintels, damp course, footings, the sub-floor area, awnings, verandas, paving, the pool, spa, and fencing.

- Building works external control makes by technical supervision institutes:
- Engineering companies
- State Architectural and Construction Supervision
- State sanitary supervision
- State fire supervision
- Technical supervision of union regulation
- Banker's control
- State acceptance commission
- Working committee

The full building inspection report can be up to twenty pages long and includes information about all defects inside and outside of the building. These reports are vital, because the inspectors are trained professionals that know how to look for property damage and estimate the cost for repair. A building inspection prevents buyers from purchasing a house with substantial damage that was not fully understood before purchasing. The inspection helps buyers make

educated decisions and it helps sellers place a reasonable price tag on properties. (GOST 15467-79\*- Product quality control. Fundamental concept, terms and definitions. )

## **2.5 Analysis of volume and quality of shell and core works**

The building volume of contracting organizations works is defined by its production program. This program includes objects planning for building and start- up in the declared period, the deadlines and volume of core and shell works.

The economic ratio and activities of a building company depend on accomplishment of this program.

I present several method of quality estimation which can be useful in process of building organization:

1. The analysis of volume of core and shell works calculates the growth rates and mark-up volume of a contracting organization at 5- 10 previous years. It also estimates productive activities stability, competitive power, look of a company in business constituency, its honesty etc. There are special formulas to calculate changes in core and shell works value by changing their structure:

***Coefficient of implementation of program= Core and shell works volume in actual estimate/ Core and shell works volume in estimate according to plans***

***Coefficient according to plans specified time= Volume of works in labour hour in fact/ Volume of works in labour hour in fact according to plans***

***Influence of structural factors= (Coefficient of implementation of program- Coefficient according to plans specified time)\* volume of core and shell works in correspondence with plan of value.***

2. The estimation test of works quality should be corresponds to norms and standards. Deviation from norms is called defect. We can estimate quality by using defect coefficient:

***Defect coefficient= losses of defects at reference period/ Real volume of done works at reference period***

3. Regularity of the work. Regularity of the building company work is a very important factor showing the level of organization process. It offers a special schedule with preparing program of working process. Regularity of the work is one of the main conditions to carry an object into process.

For estimating regularity plan accomplishment we use several variables:

Direct (coefficients of regularity, variations, relative density of product every month or quarter for yearly account)

Circumstantial (eta pay for overtime works, payment for wasted time through a fault of a company, defect losses, availability of unaccomplished losses)

The main purpose of contracting organization is bringing construction project into action in declared time. Bringing project into action is the main estimate point of contracting organization.

4. Bringing stock object into action. For the generalized characteristics of duration change in building we calculate

$$T = \frac{\sum t_i \times C_i}{\sum C_i}$$

Where  $i$  - is a quantity of objects in the process of building

$t_i$  - is the building duration of the first object

$C_i$  - is the target value of the first object



Duration reduction of building makes conditions for making plan for bring into force, surplus decrease of unaccomplished building and speed-up of capital turnover of developer, untimely turning out of building and construction works( because of contactor fault) which have an adverse effect on economic situation. (GOST 16504-81- System of production governmental tests. Testing operation and quality control of products. Basic terms and definitions. )

## **3. VIEWPOINT ON QUALITY**

### **3.1 Viewpoint from company and executor team**

The difference in understanding quality by clients and building company is a very important and difficult question. For a correctly organized process of delivering an apartment to a potential client the general contractor company need to understand client's viewpoint on building quality. It is important to draw a parallel between how a company monitoring quality of building works and how customer see it, and what is necessary for him when he first time looks at a new apartment. What things he takes stock of defects and what are quite normal for him? This and many other questions are very essential in the relationship between a general contractor company and a potential future owner of a real estate.

It is quite important for building company to find the right method of getting on the right side of every client as individual personality. They should satisfy every valid client demands in the same time not to keep on the razor-edge of allowable. It means that the customer is not always right. But they need to listen for him and his understanding of quality of apartments. After different observations and drawing conclusions about customer's psychology in the process of future residential space estimation, company must produce its own system in the sphere of communicating with potential customer and performing building product in a favourable light.

Therefore the main purpose of general contractor company is to hold a favourable position in market. They need to produce high quality of works, constructional materials, create ergonomic, good looking and functional estate. Very important unit is that quality of building company works contains not high just level of organization inside, it contains a level of attitude to costumer.

Here is presented the same of view on quality from professionals and clients. It shows how the potential client viewpoint and understand the quality of work. This knowledge could be very useful when they will sale their apartments.

The executor team in construction consists of several divisions. The guidelines of them are engineering department, Chief Project Engineer and Project Head Manager.

The main goal of Project Structural Engineer is inspection of designing. It always includes control of deadlines and maintenance for demands by design engineers. He needs to inspect building and construction works every day, during and in the end of them. The main purpose of project structural engineer is to keep correspondence of building and construction works to design documents.

Project structural engineer always needs to be ready to hangover works during the process and making variations in design documents. Therefore, readiness for timely solutions, controlling situation and acting in correspondence of new design consideration, analysis of value, deadlines and quality are main field of concern.

Engineering department enforce the preservation of quality with simplification of works, because when working costs go lower and quality goes higher the construction company can get more money from the building project.

In the process of using design documents engineering department team follow these rules to take quality under control:

Designing quality structural solution.

Trying to use fabric materials because they are more cheaper than hand work, quality of production goes higher and prices goes lower.

Research and follow the market.

Following variations of technologies, improve professional skills, studying professional literature.

Corroborate knowledge in Codes and Standards and work methods.

Aspirate to make object good looking to satisfy potential client.

Design clear, good illustrated drawings, understandable for working men.

Process manager has responsibility for building and construction works during the whole process from the start of the project until putting it into operation. Therefore he needs to inspect foremen, project structural engineer, contactors and other employers with making their function.

Process manager is the main person on building site who is in charge of following the quality of apartments. His function includes:

Producing professional working team, inspire them to make their function in good way.

Controlling the quality of materials when the company buys them. Controlling economical pay-out of company.

Organizing strict reporting of done works and materials used in the process of building.

Producing construction works in correspondence with design solutions.

Following of appearance of an object.

Control stepping of building works in the process of constructing and observance of technology.

### **3.2 Viewpoint from potential customer**

Understanding quality by clients is not the same as persons who work in a building company, because a person who is not working in building and construction sees this process from another site.

For a potential client most important are feelings and wishes, not concrete items such as the properties of materials. It is the main reason why persons who works in the area of building and construction cannot clearly understand what customer expects from a new apartment. How he imagines an ideal home, what are his needs to feel himself comfortable in this place?

Typically potential clients pay their attention not to technical characteristics. At first they are usually looking for the appearance of the apartment, the view from the window, foreign smells are also very important for them. Therefore the task of prime importance for building company is to understand clients' wishes and feelings.

Friendly attitude towards customer is much needed too. The company should know ways how to cooperate with them. They need their own system to make the potential customer feel that they could trust the companies, and further, to recommend it to the acquaintances, who want to purchase an apartment.

But the views of buyers about quality can be different. It is impossible to try to understand wishes of the universal client. It is necessary to have an individual approach to each client, because people are different age, material conditions and marital status have absolutely different concepts and thoughts about «the perfect apartment».

That is why the research I tried to reveal regularities and basic needs of different target audiences.

The clients think about the reputation of the building company chosen by them in the market. So we can make a conclusion that the issue of a high-quality, ergonomic product and an individual approach to clients are the factors, which all activities of large modern building company, such as NCC, are based on.

### **3.3 Analysis of feelings and wishes of clients.**

To understand the requirements and preferences of the customer, people were interviewed trying to find out what the quality of the apartment means for them. Making questions for the interview, the main aspects in construction were relied on. Also State Standard Specifications and specifics of construction in Russia were studied and analyzed.

For the interview people were divided into two groups: the first group is people who are going to buy the apartment and the second group is people who have already got it in the property. Also each group I divided into two groups more based on age categories: the first category is elderly people from 50 years who has already had an experience in buying the apartment and they have already made their own opinion of estimating the quality of the apartment; the second category is people of middle age from 30 years with small children; the third category is young people from 20, who do not have enough experience in buying apartment.

In my sociological work eight main questions were allocated which help to understand and characterize the main client opinion and his requirement of the quality of building. Below these questions are represented:

1. What does the quality of construction means to you?
2. Which thing is the most important to you, when you first come to see the apartment in a new building?
3. According to which factors do you estimate the quality of construction works and materials? Is the producer important?
4. How do you think the esthetic aspect is important?
5. How, in your opinion, the construction company should organize the process of providing the apartments to clients?
6. Which disadvantages can you mention in the work of the modern construction companies with the potential clients?

The interview wants to pay attention to some points in the questions and readiness or awareness of clients in buying an apartment in a new building. First of all, many clients do not have enough experience and knowledge about construction of a new building. For the majority it is the first experience in buying property in a new building. Secondly, according to psychological and moral principles of the majority of buyers, it is easy to analyze that the client is interested in attention and participation of the construction organization.

15 people who are going to buy the apartment and 15 people who have already got it were interviewed. From all interviewed people, three most significant examples were chosen, they describe the general opinion of the population about purchasing an apartment in a new building.

## **4. INVESTIGATION METHODS**

### **4.1 Aims of interviewing**

The main purpose of the interviews was to understand the point of view of the potential clients going to buy the apartment in the new house.

This is quite a difficult work because all clients are very different. The research chose the clients who have already bought apartments in the NCC Company and who were only going to do that. Also it is important, that they belong to different age, social and intellectual groups. Such a method will allow estimating the results of the research more correctly. The thing, which is important for one person, can seem absolutely uninteresting to another. For example, for somebody the attitude towards the client by the construction company is a very important factor, for others it is an insignificant thing.

Especially it was noticed that these distinctions are connected with an age difference. For example the thoughts of married couples about the quality of future apartment coincide with ideas of quality of the builder. But younger buyers are interested in factors, which depend less on the concept of the construction company. Such as illumination, view from the window, prestigious of the area and infrastructure.

Also the purpose was to analyze these interviews and choose the most important factors for estimation of real property for all groups of the clients. The reason was to prove that the company, which want to sell the product more successfully and wants to be competitive, should see each buyer as an individual, trying to find an individual approach, to make him to be interested in buying an apartment only in this company.



It is a very difficult task for the staff of the construction company to understand wishes of certain clients, because people, who work in the sphere of construction, look at this question absolutely in different way. And even if they buy the new apartment for their own they choose it according to factors different from other people. It happens because working in the sphere of construction, they choose the apartment relying only on their professional point of view.

When the main list of important factors for the clients was defined, it was necessary to allocate some main factors to estimate just handed over apartment. These factors should be important for all groups of the clients. In these purposes I have made the schedule which shows clearly what wishes are the most important for potential buyers of all age and social categories.

Choosing methods of estimating the real estate the construction company should rely on the aforementioned points. This research is very important and useful because as a rule an accurately definite purpose brings the maximum result.

#### **4.2 Process of interviewing**

The process of interviewing passed as follows: 30 people were chosen of different age, sex, the social status and outlook. These people were asked questions about their understanding of product quality of a construction company. One part of these people was planning to buy an apartment, and the other part had already bought real property in the Swedish construction company NCC.

People two or three times were interviewed a week in the period from March to July, 2012. Sometimes potential clients at sales offices of the NCC company, and further, agreed with them a personal meeting for interviewing them. Also potential clients were found at special forums for future owners of real property. Clients who have already got apartments were found in this construction

company too by the special client NCC base, and with the workers of the sales department help.

Most of them communicated with pleasure, shared their experience and answered interview questions in details. They explained that the attitude to the potential buyer as to the individual, participation and desire to cooperate are very important in the process of choosing the builder. And consequently, people will cooperate with more please with the company and respect its aspiration to become even better and more available to buyers.

At the same time, people, who were going to buy the apartment with this construction company, often were quite skeptical and even did not want to answer any questions. They explained it by negative experience during working with many Russian construction companies.

Having collected all interviews and having analyzed answers, the main points were noted which are important for all groups of interviewed. About twenty factors were found, but using a schedule were selected some main factors. According to them it will be easier to understand the point of view of the potential buyers and to make more exact recommendations to the construction company.

### **4.3 Result generation**

Before making some conclusions, estimating the wishes of interviewees, looking for interrelations and concretizing their wishes, is presenting three examples of interviews.

At first 30 clients of the NCC company took part in the interview, 15 of them are the clients who have already bought real estate, and the other part is only planning to do that.

For an example of the interview were chosen married couples of different ages with different interests, outlooks and point of view concerning the construction. All of them have in common one thing - they want to receive the high quality of the product which can satisfy all their needs in comfortable, ergonomic and qualitative apartment.

Married couple of elderly people: Anastasia (54 years) and Alexander (57 years)

1. What quality of construction means for you?

She: For me and my husband quality of construction guarantee the checked company, good construction materials and the most important is an attentive communication with the client, and terms of readiness of the apartment.

He: I completely agree with my wife, but for me the most important thing is the quality of materials.

2. Which thing is the most important for you, when you first come to see the apartment in a new building?

She: First of all I pay attention to the quality of construction, for example - on a condition of concrete constructions, internal refinishing, doors and windows, flatness of a floor and a ceiling. In our age, the most important for us is location of the house, it should be in the quiet district near the park with the arbors and flower beds.

He: We will pay great attention to planning as well – it should be convenient, the space should be shared rationally on functional zones. The main factor is design of the apartment and the whole house.

3. According to which factors you estimate quality of construction works and materials? Is the producer important?

She: Certainly according to its design.

He: I think that it is necessary to estimate the quality not only according to design, but also according to the control of technical parameters. The producer is not so important, the quality of the executed works is important. Buying an apartment I will surely check flatness of the walls and floor with a spirit level.

4. How do you think the esthetic aspect is important?

She: The esthetic aspect is very important, because, the first thing we see is an appearance and on this base we make the first opinion of the apartment.

5. How, in your opinion, the construction company should organize process of providing the apartments to clients?

She: The most important thing in the process of transferring the apartment is to do it in the promised terms. And in these terms the apartment should look tidy and qualitative.

He: I think that one of the most important aspects during the transfer of the apartment is communication of the company with the client; the attention and politeness make the buyer trust the company.

6. Which disadvantages can you mention in work of the modern construction companies with the potential clients?

She: In most cases it is a communication with the client and doing all work in time.

Couple of middle age with children: Natalia (31 year), Peter (35 years) and daughter Anna (5 years):

1. What quality of construction means for you?

Natalia: We don't have enough experience in construction so for us the most important thing is appearance.

Peter: Of course it the quality of materials and the executed works.

2. Which thing is the most important for you, when you first come to see the apartment in a new building?

Natalia: Now for us the most important thing is space, it should be convenient to live in an apartment for family with the child. Also nearest location of the kindergarten and school is very important, and children playground in the yard. Still the main aspect is illumination of rooms, after all we have a small child, so it is necessary for us to have a lot of light and space.

Peter: First of all I will pay attention to communications and quality of furnish. Also it is very important to have underground parking. Underground parking allows to free a lot of space in the yard for the territory and playgrounds.

3. According to which factors you estimate quality of construction works and materials? Is the producer important?

Peter: As my wife said, we don't have enough experience in construction. We generally look at appearance. In my opinion the producer should be European.

4. How do you think the esthetic aspect is important?

Natalia: We suggest that it is very important, as we can estimate the apartment and the house only on external qualities.

5. How, in your opinion, the construction company should organize process of providing the apartments to clients?

Natalia: The most important is that the apartment should be cleaned and it should smell nice.

Peter: For me the most important is readiness in time! Time is money!

6. Which disadvantages can you mention in work of the modern construction companies with the potential clients?

Natalia: We don't even know. We are satisfied with the NCC Company in everything, and we didn't have a deal with other companies, so we can't give an exact answer.

Young pair: Alesya (23 years) and Andrey (25 years):

1. What quality of construction means for you?

Andrey: As we don't have an experience in construction at all, we can only rely on opinion of relatives and acquaintances.

Alesya: Making our choice we rely on reputations of the construction organization.

2. Which thing is the most important for you, when you first come to see the apartment in a new building?

Alesya: Certainly, appearance of the house is really important, as well as appearance of the apartment and environment. And the most important is availability of windows and light and also in the apartment there should be a loggia.

Andrey: Also for us really important is the location of the house, it should be close to the subway and the transport infrastructure should be developed in the nearest area.

3. According to which factors you estimate quality of construction works and materials? Is the producer important?

Andrey: The main thing for us is the construction firm, and we trust it. We consider that if the construction organization works in the market for a long time and has a good reputation, it will choose the best materials and watch for the realization of works.

4. How do you think the esthetic aspect is important?

Alesya: The esthetic aspect is very important thing; according to it we can estimate quality and the construction organization.

Peter: I completely agree with Alesya.

5. How, in your opinion, the construction company should organize process of providing the apartments to clients?

Peter: In time and qualitatively.

Alesya: For me the most important is that everything should be organized correctly.

6. Which disadvantages can you mention in work of the modern construction companies with the potential clients?

Peter: We can't answer this question because of absence of the experience. But the most important is politeness during working with the client and understanding what he wants.

Alesya: Yes, Peter is right, understanding between the client and the construction organization is very important.

Having analyzed all the interviews, the schedule was made. Here you can see the main points which were mentioned in interviews by potential buyers and clients who have already bought the apartment:

Items of quality evaluation	Potential clients		Clients who have already bought an apartment in Lland	
Concrete constructions	■	□	■	□
Interruption of air exchange in ventilation system	■		■	
Windows and doors	■	□	■	□
Recessed balconies	■	□	■	□
Electricity	■	□	■	□
Water supply, sanitary piping and heating systems	■	□	■	□
Intensity of illumination	■		■	□
View from the window	■		■	□
Floor flatness	■	□	■	
Ceiling flatness	■	□	■	
Smells inside apartment	■	□	■	
Joint hermetization of walls in the winter	■	□	■	□
Surface appearance	■		■	
Cleanness of accommodation	■	□	■	□
The quality of finishing works	■	□	■	
Other small defects	■	□	■	□
Attitude to the client	■		■	

It is obvious that the clients, who are going to purchase an apartment, are interested in such parameters as a view from the window, illumination of a room, appearance of a building and the apartment, and also a condition of doorway and window apertures.

At the same time, the clients who are already owners of apartments in a new building more often mentioned such factors as flatness of the surfaces, foreign smells, operational work of ventilation etc.



It means that the clients, who are only planning to purchase the apartment estimate the quality of house more relying on feelings and emotions. While people with experience of purchasing the real property estimate the quality of the apartment like professionals, paying attention to such details, which the person not connected with construction, will hardly notice.

But one factor is absolutely equally important for both parties. It is the attitude of the building company to the client. The attentive attitude, desire to help and consult in such a difficult choice, readiness to make concessions and an individual approach to each buyer – these are necessary points for the company, which is applying for a high competitive market position.

## **5. DIFFERENCES IN UNDERSTANDING BETWEEN CLIENTS AND COMPANY**

As we can see in the research, potential buyers of apartments and people working in construction industry, look at the question of quality of residential multi-store construction absolutely in a different way.

### **5.1 Designer's understanding**

For the building company of the general contractor the quality of the construction is in general such technical characteristic, as a proportion of necessary technologies of the construction, well picked up materials or correctly executed work.

Not all contract organizations can always do their task in the best way, that is why it is necessary for a general contractor to exercise permanent control over the executing work. All complex of these conditions is necessary because finally we will receive a convenient, beautiful and functional product for living.

Also for a construction company of the general contractor it is very important to monitor a process of building and assembly jobs and their terms of execution, because this process influences the quality of an end product.

Therefore, the task of the general contractor, as well as the base of the estimation and quality control, is permanent systematic control over all the processes of building and assembly jobs, holding all necessary technologies and monitoring the quality of all the ordered materials.

## **5.1 Client's understanding**

Potential clients estimate the quality of construction according to their emotions and feelings. As a rule, they are not interested in the process of building or control over it. They do not want to understand deeply the whole construction processes.

They are interested in the final visible result of the work. The buyer after purchasing a new living space wants to come in a beautiful, finished and warm room. In the apartment he wants to see even walls, ceilings and the floors, qualitatively established windows and loggias, the correct door and window apertures with there are no cracks and drafts.

The view from the window and clearness in the room is as important for them as the illumination of the apartment in general.

According to the aforesaid we can make a conclusion that the building company which is responsible for the performance of the apartments, should create such conditions for future buyers which can make the buyers feel pleasant to enter into this room, without feeling discomfort.

That is why it is necessary for the employees of the company to study and analyze the wishes of clients for the creation of such simple at first sight conditions, and finally it will help to find an individual approach for every client.

## 6. GUIDELINES

It is quite difficult to staff of the building company to understand the wishes of potential buyers and their idea about the perfect apartment.

That is why having an analyzed interview with clients of different age groups and different social status, some conclusions can be made and give the following recommendations given to the construction company of the general contractor performing apartments to individual clients:

- First of all, the room exposed on sale, as well as the nearest areas (such as lifts, staircases and marches and the yard) should be surely cleaned and be in order. That is the thing which can attract the view of the potential buyer, who is not involved in construction business.
- Performing the apartment is better during daylight hours, because it will make easier for the client to examine the apartment and will help to fix all possible disadvantages. Also it will help to understand, what kind of illumination will be in the apartment.
- All sockets, switches and electro devices should work regularly.
- Ventilation, the sewerage and water supply system should function regularly.
- Windows and balcony doors should be completely established and work.
- Inside the apartment there should be a minimum of foreign smells (both chemical and organic)
- And the most actual – it is necessary to provide the potential buyer with comfortable conditions for cooperation with the representatives of real the

building company who should listen to all the wishes of the client, coordinate meetings according to their schedule and provide them with a maximum of necessary information about the process of construction, of repair work and terms of performing the object.

All these recommendations which, at first sight, seem insignificant for workers of a construction industry, actually are at least important for a successful estimation of the quality and further sale of a product, as well as the quality of bearing constructions, concrete overlappings, the competent project documentation and the whole construction process.

The process of transfer of the apartment is very important and responsible task for large building company. It is very important not to spoil the reputation in the market and to satisfy all the requirements of the customer without lowering product quality.

In order to organize the process of transfer of the apartment to the client correctly it is necessary to understand his point of view on quality of construction, to find an individual approach to each potential customer.

It is very important to draw parallels between two things: how the building company controls the quality of the object and how the potential client imagines it.

The process of transfer of the apartment to the client should be very competently organized, for the satisfaction of all customer requirements. And the company should not lower either quality or reputation.

Doing researches and making conclusions about the psychology of the buyer, the construction company should develop its own policy in the sphere of interaction with the potential clients.

Analyzing all the aforesaid, we can make a conclusion that the main purpose of the large construction company is to occupy the relevant position in the market

and to provide the highest level of quality of works, furnish and client servicing, creating beautiful, ergonomic and reliable habitation.

The reputation of the modern large construction company depends on such factors, as the organization of the construction process of a building and finding an approach to individual clients.

## 7. RESULTS

For disclosing a question of points of view on the quality of the building of the potential buyer, the work, first analyzed the problem of qualities from the theoretical point of view. For this purpose factors of its estimation were used in Russia are state standard specifications and Construction Norms and Regulations because the NCC real construction company builds the objects in Sankt-Petersburg, according to the Russian legislation.

Then the estimation methods were analyzed of the quality from the point of view of the representatives of the building company, such as the project manager, the chief engineer of the project and the engineer-designer.

Then using the interviews of potential clients who are only going to purchase an apartment and the clients who have already bought in NCC building company, most important for them aspects were founded to estimate the quality. Having analyzed all this information, the main and most important of them was received.

According to this information, the list of the main recommendations was made for representatives of the construction company. They will help to understand and satisfy all the wishes of clients and their idea of a high-quality apartment, making a reliable, ergonomic and beautiful product.

## 9. CONCLUSION

Quality is one of the main and most important issues of construction. That is why it is necessary to pay much attention to this question, to monitor all market changes and requests of buyers.

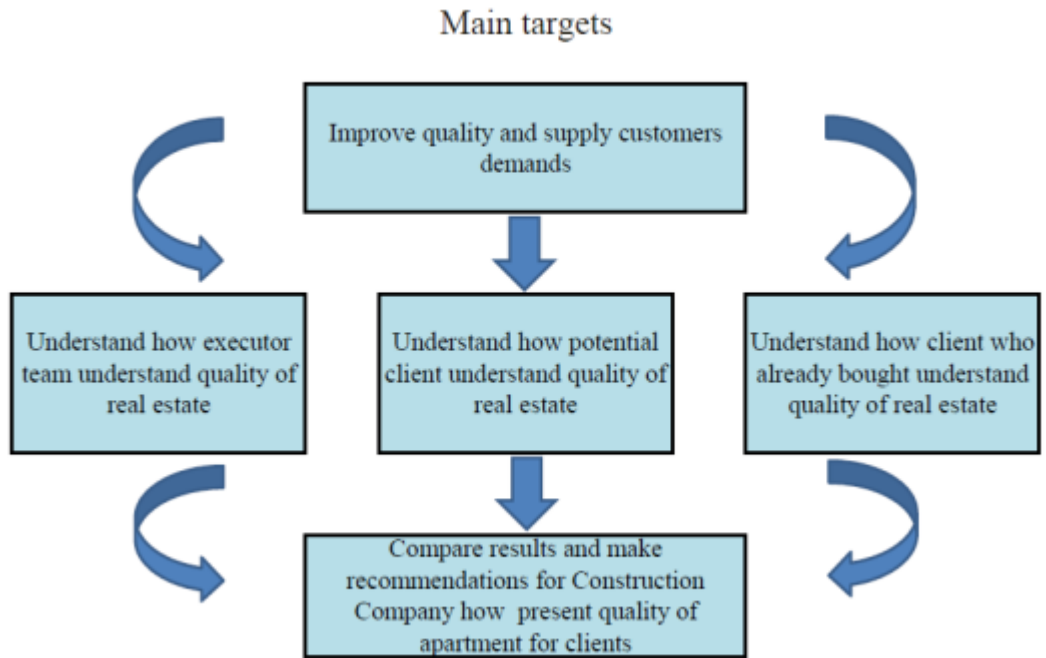
To reach a really good result, it is necessary for the building company to know the needs of potential clients, their wishes and representation.

It is important to try to satisfy these requests, without breaking the technology of construction. For this purpose it is necessary to research the consumption market all the time. The understanding of it is necessary to reduce "the hole" between the idea of quality by the representatives of a construction industry and the potential client, as individual.

Therefore my work should help the building company of the general contractor with policy of the improvement of sales and mutual understanding with the potential client.



SCHEME 1



# APPENDICIES

## SCHEME 2

Items of quality evaluation	Potential clients		Clients who have already bought an apartment in Qland	
Concrete constructions	■		■	
Interruption of air exchange in ventilation system	■		■	
Windows and doors	■		■	
Recessed balconies	■		■	
Electricity	■		■	
Water supply, sanitary piping and heating systems	■		■	
Intensity of illumination	■		■	
View from the window	■		■	
Floor flatness	■		■	
Ceiling flatness	■		■	
Smells inside apartment	■		■	
Joint hermetization of walls in the winter	■		■	
Surface appearance	■		■	
Cleanness of accommodation	■		■	
The quality of finishing works	■		■	
Other small defects	■		■	
Attitude to the client	■		■	

## QUESTIONS FOR INTERVIEWING

In Russian:

1. Что означает для Вас качество строительства?
2. На что в первую очередь вы обратите внимание, когда придете смотреть квартиру в новом здании?
3. По каким критериям, вы считаете нужным, оценивать качество строительных работ и материалов? Важен ли производитель?
4. Насколько важен, на ваш взгляд, эстетический аспект при оценке качества?
5. Как, на ваш взгляд, строительная компания должна организовать процесс сдачи квартир клиентам?
6. Чего не хватает современным строительным компаниям при работе с потенциальными покупателями жилья?

In English:

1. What does the quality of construction means to you?
2. Which thing is the most important to you, when you first come to see the apartment in a new building?
3. According to which factors do you estimate the quality of construction works and materials? Is the producer important?
4. How do you think the esthetic aspect is important?
5. How, in your opinion, the construction company should organize the process of providing the apartments to clients?
6. Which disadvantages can you mention in the work of the modern construction companies with the potential clients?

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