This thesis is submitted to the Ethiopian institute of Architecture, Building Construction and City Development (EiABC), the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the degree of Master of Science in Housing and Sustainable Development.

Title of Thesis: Planning and Design Processes and Organizational structures in Mass Housing: The case of Addis Ababa Integrated Housing Development Program

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Declaration

I declare that, this thesis prepared for the PARTIAL FULFILLMENT of the requirements for the degree of **MASTERS OF SCIENCE IN HOUSING AND SUSTAINABLE DEVELOPMENT** entitled **"***PLANNING AND DESIGN PROCESSES AND ORGANIZATION STRUCTURES IN PUBLIC MASS HOUSING: THE CASE ADDIS ABABA INTEGRATED HOUSING DESIGN PROGRAM***"** is my original research work prepared independently by my own effort with the close advice and guidance of my adviser. I also declare that this thesis has not been presented in any university and all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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Abstract

In the urbanized part of Ethiopia, the need for housing had always been eminent and Addis Ababa city, being the capital, has seen its fair share. In the past decade, the introduction of the Integrated Housing Development Program (IHDP) had presented Addis Ababa with providing housing opportunities for the mass population while fulfilling other objectives related to housing. Approximately 276,000 houses were built and jobs were created but the housing demand still remained. This accounted to many factors, one of which was the fact that much of the project was not completed in its designated time.

The driving force for the research lies on the need for understanding about the IHDP, to find data related to how mass housing projects are produced and who the actors were that were involved in the planning and design process. The research has taken a case-study method for a better description and explanatory take on planning and design processes and organizational structures in the Addis Ababa IHDP.

The research found several critical points regarding both design/planning process and organizational structures. From the organizational structure perspective, the research found that AAHDPO (which had to change its structure from product divisional to geographic divisional to the current matrix structure) is the constant actor that remained through different phases in the making of AAIHDP whereas other governmental, non- governmental and private actors participated in within different timelines with AAHDPO. There were cases of duplication of effort in organizations where there shouldn‘t occur and a lack of a proper monitoring mechanism (actor) for projects in AAIHDP. There is also no room given for the local community in the planning and design process. From the process standpoint, there have been issues with sequence in the LDP, NHD and typology preparation where typology precedes the first two. Consecutively, LDP & NHD preparation were given a time of 1 month whereas typology designs were given 60 days showing that the designs that needed more time to develop are given half the amount of time.

The research finally puts forward recommendations for both design/ planning process and organizational structures. Recommendations such as less duplication of effort, participation of the local community in the design and planning process, a statement of a clear housing policy, a clear flow of design and planning process shall be considered.

Key words: Design and Planning Process, Organizational Structure, Mass Housing, Integrated Housing Development Program

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I would also like give a huge gratitude to the co-operation of Urban Plan Institute and the private consultants and contractors for their inputs to this research. I thank my good friends Tekea Haile and Helina Abye for keeping up with my progress and pushing me to finish this project. I'm also truly grateful to my mom and dad, who helped me a lot with some translation and further understanding documents and gave me courage to proceed with this research so that I can become a better person in my future endeavors. And Above all I would like to thank GOD for making all of this possible when I thought all possibilities were closed in.

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Redeat Abate Fanta
June, 2016

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Abbreviations

AACA- Addis Ababa City Administration

AAHA- Addis Ababa Housing Agency

AAHDPO - Addis Ababa Housing Development Project office

AAHCPO- Addis Ababa Housing and Construction Project Office

AASHDE - Addis Ababa Saving Housing Development Enterprise

BPR- Business Process Reengineering

CBE- Commercial Bank of Ethiopia

E.C- Ethiopian Calendar

G.C - Gregorian calendar

GTZ- German Technical Corporation

HDPO- Housing Development Project Office

IHDP- Integrated Housing Development Program (in Ethiopia)

IHSDP- Integrated Housing & Slum Development Program (in India)

IRDP- Integrated Residential Development Program (in South Africa)

LDP- Local Development Plan

MoHUD- Ministry of Housing and Urban Development (from 2015 to present)

MoHUDC- Ministry of Housing, Urban Development and Construction (From

MoWUD- Ministry of Works and Urban Development (From

MoUDC- Ministry of Urban Development and Construction (From

NHD- Neighborhood Design

ORAAMP- Office of Revision for Addis Ababa Master Plan

AASHDE- Addis Ababa Saving Housing Development Enterprise

ToR- Terms of Reference

UPI- Urban Plan Institute

USD- United States Dollars

Local Terms

Ato- amharic word for ―Mr."

W/ro. - amharic word for ―Mrs."

Kebele –lowest administrative body of the government, currently phased into woreda

Woreda- is the city 3rd level of administer is a sub set of sub city

Birr (ETB) - Ethiopian Birr/ currency

General Notes

Unless stated; sources for pictures, tables and figures are by the author.
The exchange rate of 1 USD is equivalent to 21.66 ETB (on 15 May, 2016)

CHAPTER ONE

Introduction to the Study

In designing any grand housing project it‘s important to study and properly devise methods and strategies for the planning and design process so as to bring about a better neighborhood. With the increment of urban poverty, congestion and other global problems throughout different cities, the United Nations Human Settlement Program, UNHABITAT has brought a few set of strategies for achieving these sustainable neighborhoods to life. The Millennium Development Goal, which focuses on empowering communities that couldn‘t afford housing through different mechanisms, can also provide them with shelter and a self-sustaining income generation setup. This strategy is also said to bring about a balanced environment, thereby completing the whole circle of sustainability by means of synergistic solutions.

A strategy such as this one requires a series of calculated steps, procedures and a multitude of companies that bring about a common goal to the housing realm. This paper mainly focuses on understanding the processes and procedures to be taken in producing mass housing projects and the right actors that are involved and are needed to implement such projects with the utmost careful manner.

1.1. Motivation

The motivation for this research is to grasp the concepts and understand systems that led way for the construction and occupancy of the mass housing such as IHDP, and understand the origins and development phases that took place to design all condominiums throughout Addis Ababa. It is hoped that findings revealed throughout the research should be helpful to those organizations reviewing and evaluating their own organizational structures and the processes they take in their future design.

1.2. Relevance

This study is relevant to all who would like to understand the system of the IHDP in general, and to those interested to create their design processes and organizational structures by discovering the strengths and weaknesses on the current methods practiced in production of mass housing in particular. With this study, management professionals (construction and other), architects and urban planners can choose or even prepare the best method used for housing

production. It allows them to have a general understanding about the procedures and processes taken while designing such grand housing projects and to have detailed information about the organizational hierarchy and the role of each participant in the design and decision making process. It also helps them in understanding the outcome of these design processes in the design, construction and post occupancy period as well.

1.3. Problem Statement

Addis Ababa, the capital city of Ethiopia shows significant growth in economy and population in the past 10 years. With the different factors that have brought about migration towards the city, increase in congestion, poverty and the coherent need for housing drove the city‘s perspectives towards producing more housing units for its inhabitants. IHDP is a housing scheme provided by the initial drive of the city‘s administration that aims to alleviate the problems mentioned above. But the housing provided still said to have not met the current demand in numbers and quality.

This flaw could arise from either one of the three things: the actors are not carrying out their tasks right, the actors are carrying out the right set of tasks but applying the wrong set of procedures, or the actors are not organizationally well structured and co-ordinated enough to take on tasks in the first place. From the organizational structure point of view, problems arise in areas where there is a vague understanding of positions and responsibilities as well as flaws in organizational hierarchy and inter-organization links and the imbalance in the role and influence of one actor over another. From the stand point of processes, the issue of failure to execute tasks in a timely manner and with precision can be seen throughout the project which resulted in short of the issue of the demand and supply of the product.

1.4. The Research Approach

The research covers and analyzes all the different processes and actors in the making of IHDP as a means of acquiring a holistic approach as to the different approaches and actors to the design processes, while analyzing standards for using such techniques and putting these standards and criterion as a reference where by analyzing these design processes with respect to the standards set and with each other respectively.

1.5. Objective of the Research

This study mainly aimed to identify and understand previous design and planning processes and organizational structures for housing identify the strengths and weaknesses persistent in the current systems and recommend a better solution in planning and designing grand housing projects such as Condominiums (IHDP). The specific objectives of this research are to:

- Identify the different types of organizational structures and processes
- Review the past and current organizational structures and processes that have been used for the integrated and mass housing production, both internationally and locally
- Report the findings, recommendable practical solutions and systems
- Recommend points that improve the qualities of processes and structures

1.6. Scope of the Research

1.6.1. Thematic Scope

The Thematic Scope of the research is within the realm of the housing provided under IHDP. It discusses all the steps taken for the preparation and development of the design as well as the responsible body for the implementation of these steps.

1.6.2. Spatial Scope

The Spatial Scope limited to Addis Ababa city and it covers Integrated Housing Development Program project sites in Addis Ababa that have been completed and are still under construction and development up-to-date.

1.7. Limitation of the Research

The major limitation of this study is expected to be data shortage. There is an information gap since most of the data needed to carry out this research was not documented properly and people involved throughout the different design processes are not currently present at their positions . However extensive literature search related to the topic which also includes theoretical foundation, others works on the topic, works on related topics and real world application of the topic will be explored in order to build a general insight about the topic under study.

1.8. Research Questions

The research questions follow the main and specific objectives which are as follows:

- Who are the actors that were involved and what are their roles in the design and planning processes for AAIHDP projects?
- What organizational structures, organizations, and procedures are used in the AAIHDP?
- What are the strengths and weaknesses of the current housing planning and design process management and organizational structures?
- What should be done in the future for housing productions with respect to design and planning processes and structures?

1.9. Research Design

The research comprises of a holistic understanding by proper designation and use of method to describe the type of data collection that was used, the different data source and their reliability. This method also helps in acquiring theories related to the research questions directly and in context. These theories (by means of literature review) help the researcher in answering the research questions as well as understand the criteria analysis that will be brought later on in the research, in terms of different criterion used in the universal context.

The method also helps in the investigation of the current practice in the local context of Addis Ababa by presenting a background study of what is currently underway or has taken place in certain duration of time. This is then fortified by the presentation of the case study area which shows the application of the project and its implications on-ground. Both the theories and the practices in this case are supported by their background study. The Findings in relation to the theories and practices are then discussed and then measured by the criteria presented for the purpose of analysis. Finally, recommendations are brought up for future practices.

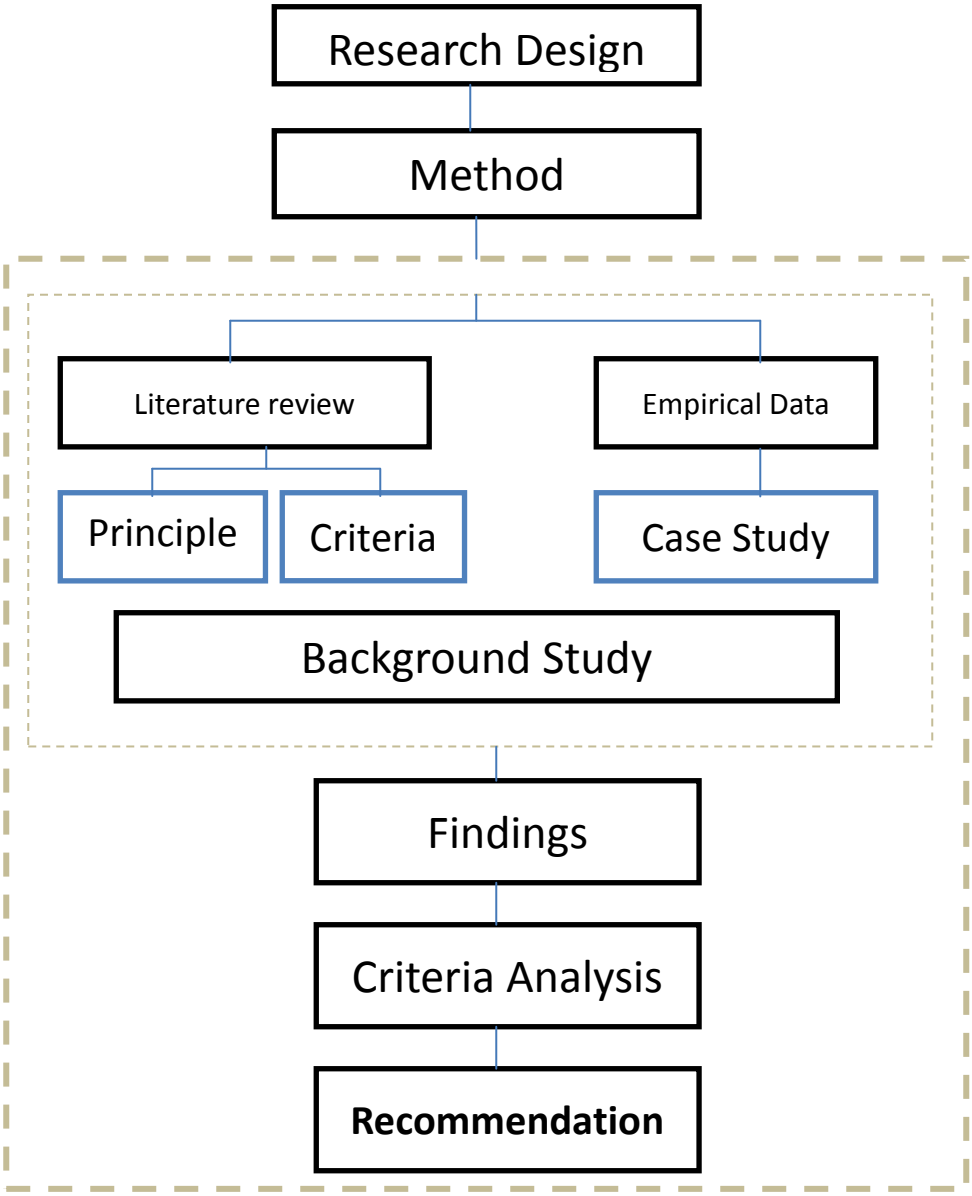


Figure 1.1: Research Design

CHAPTER TWO

Research Methodology

This research has been based on the information compiled from the different bodies associated with the creation and design of the Integrated Housing Development program in Addis Ababa. The methods rely on documents and published material from the internet and key informants, while simultaneously conducted semi-structured interviews from the data collection help fortify the findings in this research.

2.1. Introduction

In developing a research, it is important to identify which method is best suited for gathering which type of data. This is done by first identifying the different methods of data collection and gathering and collection mechanisms. These mechanisms are selected based on the problem statement found within the research and the type of the research question needed answering. The researcher analyses each research question in detail and find the source for the data, where one proposes the best suitable data collection methodology by studying the different methodologies applied throughout the research.

The methodology selected should also correspond to the objectives of the study and the problem itself. For this research, the researcher practiced descriptive and explanatory type of research by using some quantitative and majority of qualitative data and methods. The researcher analyzed the problems persistent in the design systems used in the IHDP realm, stated the objectives of the research and selected the appropriate methodology suitable. The choice of method, data types and resources, data collection techniques, data collection methods and data analysis tools and procedures are hereby stated as follows.

2.2. Choice of Method

The choice of method designed for this research was the Case Study method. This method helps the researcher –gain better understanding of the whole by focusing on a key part" (Gerring, 2007). The case study method can fortify the research which generally intended to be explanatory and descriptive. Case study is a preferred strategy. for better understanding of a phenomenon when, how or why questions are being posed, when the investigator has little

control over events, and when the focus is contemporary phenomenon within some real-life context (ibid).The case study method, in this context, can help track the system in which AAIHDP was developed through, and compare and clarify the major changes that occurred within the processes and the organizations. The AAIHDP condominium housing is scattered throughout the city and this method can trace the changes in actor and planning and design process that occurred within AAIHDP for better understanding as well as.

2.3. Selection of the Case

As discussed in the previous chapter the case for this research includes the case studies form international practices are selected by means of the term ~~-I~~ntegrated" and ~~-M~~ass Housing". The case selection behind for the local case which is IHDP in Addis Ababa, however, was the issue of project lagging. Some of the IHDP projects were not completed within their designated time. And Secondly, Addis Ababa is becoming undeniably overcrowded, relative to other cities that also produce housing under AAIHDP respective of their own population standards. This is therefore another criteria which out Addis Ababa IHDP first. Third, AAIHDP has produced a wide range of condominium houses for 12 years, which makes AAIHDP a candidate for study as it's easier to track and compare changes in actors and processes used in the project.

2.4. Purpose of Data Collection

Each data collection method has been set out to answer the research question accordingly. These data collection techniques help in finding out:

- the co-ordination of each actor and its role in the Housing design community
- the design process and workflow for the housing projects
- the strengths/weaknesses involving selection of such structures & processes

2.5. Type of Data

Primary Data

The type of data is primarily qualitative with some inflection on quantitative data as the collective IHDP sites are great in number. The data for acquiring the identities and tasks of the different actors that took part in the different projects was also taken from semi-structured interviews with key informants that partici pated in the program. The data for identifying the processes and procedures in IHDP also relied upon interviews with the different stakeholders

.

Secondary Data

The Secondary data, such as BPR and IHDP reports, maps, studies and ToR documents necessary for the research was collected from government bodies affiliated with their corresponding functions within IHDP. Reports about organizational structures were retrieved Human resources of the different actors and stakeholders and data related to design and planning process was acquired from specific divisions within the actors‘ organizations. Consecutively, Materials for the literature review was collected from published material online and library.

2.6. Data Collection Techniques

Both primary and secondary data collection methods were used in this instance: For the identification and analysis of case studies, both the systems of primary and secondary data collection such as structured and semi-structured interviews, as well as acquiring secondary written documents are required, whereas references to secondary sources such as written documents and access to internet for published material online and library heavily relied upon for covering and explaining briefly the theories that support the research.

Observation: - the researcher had observed the case as a whole to relate what has been then and is currently underway in the planning and design process. The researcher also carefully analyzed the case by dissecting it into different phases based on similarities and differences found regarding actors and processes in AAIHDP. This technique was referred directly from the research questions asked in their respective sequence and it helped grasp a general knowledge about the research content.

Key Informant Interview: - By means of identifying and interviewing Key informants that participated in the making of IHDP under the layout of semi-structured interview questions, this data collection system directly addresses two or more of the research questions and has helped in achieving the main objective understated. It was given in the form of oral questioning and, with the informant consent, also voice-recorded. These interviews took place with the individuals in the organizations mentioned below.

Questionnaires: - written questions that are open ended and close ended are given to participants in written form and they will include different questions that help in understanding the link between the outcome of the current situations in the design process and their impact.

Mapping- This technique was done by identifying the locations of all the project sites, along with their typologies and corresponding Local Development Plans by means of supported map documents and descriptions taken from concerning bodies.

2.7. Sources of Data

The data sources for this research included all the actors who participated in the project as well as the people, homeowners and renters who have been directly influenced by the outcome of these design processes. Some of the sources include:

- Ministry of Housing and Urban Development(formerly known as Ministry of Works and Urban Development)
- Addis Ababa City Government
- Addis Ababa Housing Development Project Office (AAHDPO)
- Other significant actors in the private sector, such as different private consultants and contractors, who took part in the Housing development project up to date since the beginning of IHDP.

2.8. Data analysis Techniques

First, the data collected regarding the planning and design processes of the case was directly discussed in reference to discussions from literature review and international practices. It was then categorized into different phases based on the pivotal moments where the processes and the actors changed. The different processes were also discussed with regards to selection criteria taken from a universal context which is derived from study in the literature review. The practices, standards and criterion previously used to prepare these international cases was used as a format that helped the research in analysis of each actor and organization, as well as each process or phase with two sets of criteria. Findings derived from the analysis of the research were stated as per the criteria taken and recommendations were then given.

CHAPTER THREE

Literature Review

Introduction

This Chapter briefly discusses the definitions and types of organizational structures and design processes, the link between the two, and their application in the housing/construction industry.

3.1. The Rational of Organization Structure and Design Process

An Organization requires the essences of both structure and process to complete to function properly, be able to complete tasks accordingly and become a complete organization in general. The question of which element is superior and needs to be given more attention within the organization has raised a few questions and bought a paradigm shift. Organizational structure and business processes are the main elements of organizational design. (Shani & Docherty, 2003). Both dimensions are important and necessary even though their focus is polarized. (Hernaus, Aleksic, & Klindzic, 2013)

Henning (1934) and Nordsieck (1931) were among the first who addressed a need for the co-ordination of a static structure and dynamic processes within an organization. (Zur Muehlen, 2002) Many of the authors gave emphasis to the structural side of organizational structure in many studies in the past (Blackburn, 1982) (Child, 1974) (Fredrickson, 1982) (Pugh, Hickson, & Turner, 1968), but in the 1990‘s there appeared a paradigm shift with Business Process Reengineering (BPR) philosophy and the views were more focused on the process part of organizational design later on. (Davenport, 1993) (Davenport & Short, 1990). Since then, many countrieshave used BPR in their organization for effective results.

Nevertheless, Anthony, Dearden, & Vancil (1965) have stated that the structural and process characteristics of an organization are equal in importance, whereas Kosiol (1962) observed their difference as a scientific ploy with an intention toward simplifying organizational analysis (Zur Muehlen, 2002). More recently, Galbraith (2007) metaphorically described the structure as the anatomy of the organization and processes as the organization‘s physiology or mode of functioning.

Jay R. Galbraith, an American Organizational Theorist known for his work n strategy and organization design, on his report about his ―Star Model" creation, says that information and decision processes cut across the organization's structure; if structure is thought of as the anatomy of the organization, processes are its physiology or functioning."

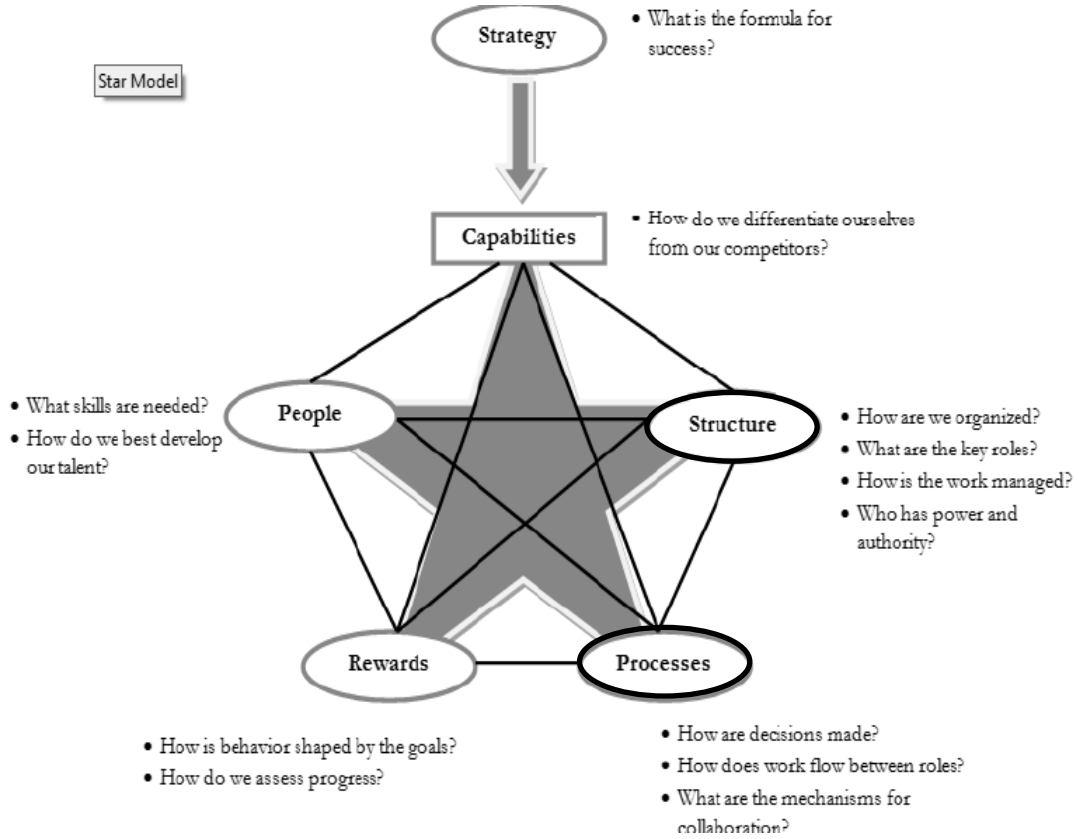


Figure 3.1: Star Model for a good Organizational Design By Kates and Galbraith Source: Hannover Researrch, 2010

As the model above clearly illustrates, successful design must be informed by a company's strategic objectives. In certain cases a company is capable of meeting its objectives and adapting to change through its present organizational structure. If, however, redesign is considered necessary for company progress and competitiveness, several aspects must be carefully considered to ensure that the new organizational configuration is in sync with the company's strategic mission. (Hanover Research, 2010)

Organizational structure is company-specific whereas processes vary depending on their desired outcome. Research confirms that neither processes nor organizational structures can be copied from any company by default because doing so may produce undesired outcomes

and flaws and ~~-m~~ay even affect the entire system of the structure if not considered well." (Kates & Galbraith, 2007). They must be designed from scratch.

3.2. Definition: What is Organizational Structure?

According to a report by Nexus Investment, a company specializing in organizational structures, **Organizational structure** is a framework that the managers devise for dividing and coordinating the activities of members of an organization. Furthermore, the structure defines how tasks are to be allocated, who reports to whom and the formal coordinating mechanism and that will be used. (Nexus Investment, 2015). As Peter Ducker has noted, ~~-S~~tructure is a means for attaining the objectives and goals of an institution. Any work on structure must therefore start with objectives and a strategy."

Organizational structure is a tool for aligning the company's workforce and strategies with their intended result. At the root of any design effort is flexibility. A successful end result creates workflows, incentives, and reporting/ decision making structures that best support a company's strategic mission while allowing the company to adapt quickly to unforeseen events. (Hanover Research, 2010)

3.3. Common types of Organizational Structure

Organizational structure is driven by strategy which influences the organization to have a variety of structural design it for meeting the objectives set beforehand. Numerous international scholars are working on identifying the types of organizational structures. Thus, various literatures identify the several dominant organizational structure types from different perspectives. According to traditional organizational type of bureaucratic and other new forms, dominant organizational structure types include the following: Functional Structure, Divisional Structure, and Matrix structure. The descriptions below are summarized and supported by reference to the current literature.

3.3.1. Functional Structure

This structure refers to ~~-a~~ set of people who work together and perform the same types of tasks or hold similar positions in an organization" (Ledbetter, 2003). Organizations that grow too complex to be administered through a simple structure adopt this functional structure as a means of coping with the increased demands of differentiation (Hatch, 1997). A functional structure is particularly useful when the following conditions are met: (Wyman, 1998)

- Single line of product serving one set of customers
- Small organization or large, single-product business
- Need for depth of expertise and specialization

The following graphic presents a sample of a simplified functional structure with attendant with its own pros and cons.

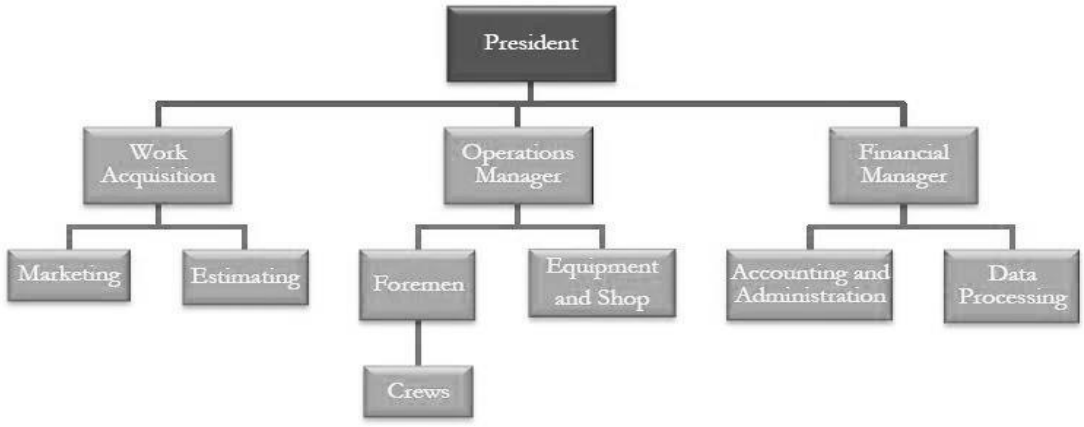


Figure 3.1: Simple Functional Structure

Source: Hannover Research, 2010

Table 3.1: Functional Structure Strengths and Weaknesses

Source: Hannover Research, 2010

Strengths	Weaknesses
Allows economics of scale within functional departments	Slow response time to environmental changes
Enables in-depth knowledge & developmt.	May cause decision making power to pile up top (Hierarchy overload)
Enables organization to accomplish functional goals	Leads to poor horizontal communication among departments
It‘s the best way with one or few products	Results in less innovation and restricted view of Organzational goals

3.3.2. Divisional Structure

It refers to ~~a~~n organizational structure that is divided along some criteria, and most commonly it is geographic location, but there can be product, functional or strategic divisions" (Ledbetter, 2003). Research studies that there are two types of divisional structure which will be discussed on the next page.

Product-Divisional Structure

A product-divisional structure, a benefit for companies moving away from a single product focus, is helpful when their functional structures become less effective for organizing people and processes. As a result, functional departments like HR and marketing will be duplicated under each product division and work solely with their designated product groups. Each product division, then, is a self-sufficient unit, responsible for its product from start to finish. (Hanover Research, 2010)

Wyman assumes that Product-Divisional Structure works best when:

- Product life cycles are short
- There is an emphasis on quick product development and new product features
- The company produces multiple products for separate market segments

The following graphic presents a simple product-divisional structure – modified slightly to reflect the units that may exist in a construction company – with attendant advantages and disadvantages.

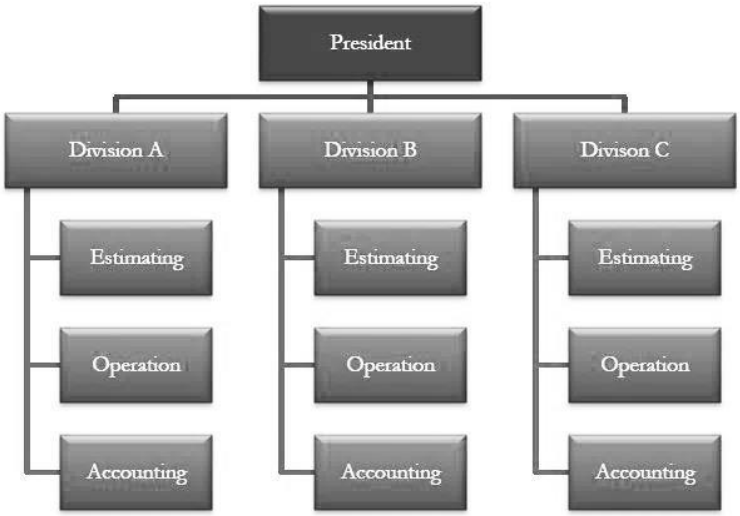


Figure 3.2: Simple Product Divisional Structure

Source: Hannover Research, 2010

Table 3.2: Product Division Structure Strengths and Weakness

Source: Hannover Research, 2010

Strengths	Weaknesses
Suited to fast change in an unstable environment	Eliminates economies of scale in functional departments thourgh duplication
leads to client satisfaction as product responsibility and contact points are clear	Leads to poor co-ordination across product lines
Involves high coordicaion across functions	Eliminates in-depth competence and technical specialization
Allows units to adopt to differences in products regions and clients	Makes integration and standardizaion across product lines difficult
For large organizations with several products	
Decentralizes decision making	

Geographic-Divisional Structure

The geographic-divisional structure, as the name suggests, organizes company functions and processes by geographic region. Primarily useful for organizations expanding into new territories, structuring an organization by geographic region allows companies to focus on distinct groups of buyers (and local politics, customs, market pressures, etc.) outside of their home territories. (Hanover Research, 2010) Like the product-divisional structure, the geographic-divisional structure requires duplication of functions, may limit cross-divisional interaction and collaboration, and can create micro-cultures that place divisional goals above company goals. A very basic geographic-divisional structure resembles the preceding graph, substituting products for geographic areas. Note that the figure below displays a slightly different geographic-divisional structure, with some functional units reporting directly to the president and duplication among other functional units at the division level.

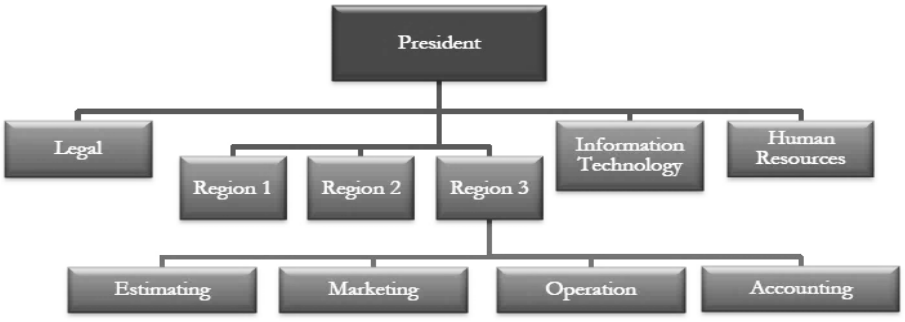


Figure 3.3: Simple Geographic Divisional Structure
Source: adapted from Roper and Jackson, op. cit.

3.3.3. Matrix Structure

It refers to a process that ~~-s~~imultaneously groups people into two ways: by the **function** of which they are a member and by the **product team** on which they are currently working" (Ledbetter, 2003). According to Hatch's organization theory, the matrix structure was developed with the intention of providing the best of both functional and multi-divisional activities. (Nexus Investment, 2015)

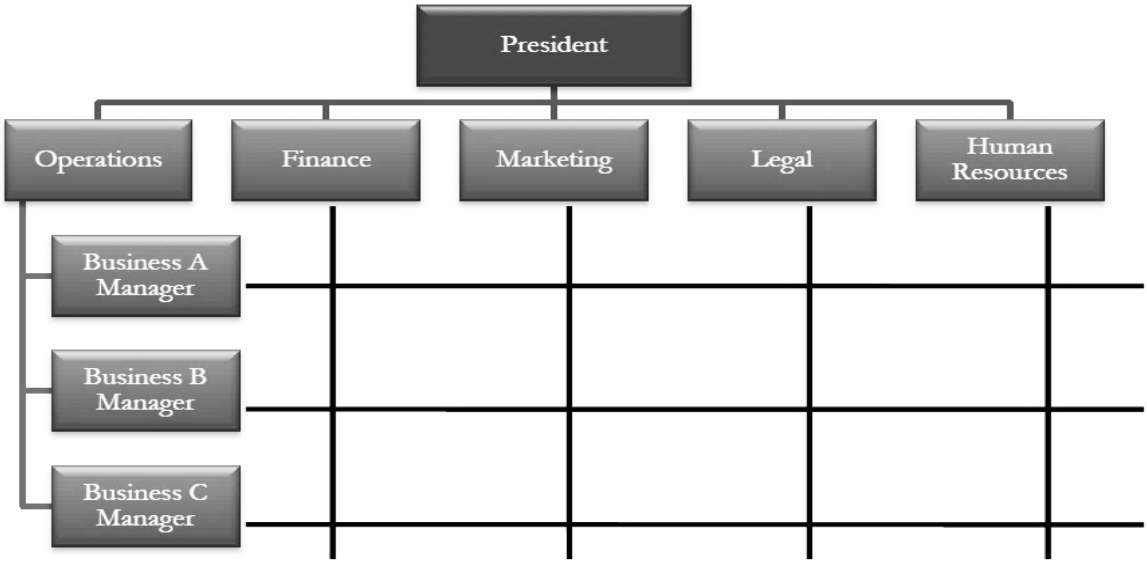


Figure 3.4: Simple Matrix Structure

Source: Hannover Research, 2010

Table 3.3: Matrix Structure Strengths and Weaknesses

Source: Hannover Research, 2010

Strengths	Weaknesses
Achieves coordination necessary to meet dual demands from customers	Causes participants to experience dual authority, which can be frustrating and confusing
Flexible sharing of human resource across product/business lines	Participants need good interpersonal skills and extensive training
Suited to complex decisions and frequent changes in unstable environment	Will not work unless participants understand it and adopt lateral rather than vertical relationships
Provides opportunity for both functional and product/business skill development	Time consuming, involves frequent meetings and conflict resolution sessions
Best in medium-sized organizations with multiple product/business lines	Requires great effort to maintain power and balance

3.4. The Three Organizational Structures in the Housing Industry

Functional Structures can be best fit for smaller companies with separate development and operational schemes. These structures can foster **specialization** of activities to address **specific customer needs**, even though they require extreme level of communication for mobility within functions. Functional structures are sometimes prominent in architectural companies that specialize in singular building designs.

Roper and Jackson, management consultants specializing in the construction industry, argue that —consequently, a **Divisional structure** that embraces both design and construction will prove more user-friendly to external and internal customers as it could be a useful tool in developing individuals to step into more senior roles in the company in the future."[1] A **geographic-divisional structure** has the ability to facilitate relationships with customers in a particular region, while its characteristic decentralization of authority may increase the speed of decision making. This attribute can service companies that are engaged in the production of buildings in a bulk,

The Hanover Research, based on its findings from different cases they conducted on construction companies, states that many organizations within the construction industry organize their operations by product/business or geographic divisions, i.e**. Divisional Structures**, for its specialization skills in the handling of specific types of projects. As divisions tend to duplicate supporting functions, many contracting organizations therefore employ a **matrix design**, seeking to combine the services & advantages of a functional design with a highly focused, relationship-based on service delivery (Kates & Galbraith, 2007)

Organizational structures, mainly Product Divisional and Geographic Divisional Structures focus on the execution of largely produced product. Housing, being a largely produced product itself, requires the combined effort of different companies with their own Organizational structures and goals but with some tool of connectivity with each other to achieve a common goal for the development, design, and completion of projects. The need for partnerships is a relevant tool, not only in defining the processes within a certain company be it lateral or vertical, but also in understanding how decision transfers from one company to another with the chains of the processes related to each other.

[1] Roper and Jackson, Op. Cit. p.8

3.5. Design Process

Processes are the most used set of actions in our day-to-day life, from something as simple as getting up to go to work, to something as complex and advanced as designing and planning a city. In order to understand the term ‗Design Process' first there is a need for the understanding of both terms separately. Both and ―Design" and ―Process" are universal terms and can be thawed within a multitude of professions, from business to product design, to housing itself. There are many definitions to design according to (Ralph & Wand, 2015) who argue that design (in software engineering perspective), or a clear definition thereof, can help organize, share and reuse design knowledge.

Design process is a tool, much like organizational structure, that helps in fulfilling a company's strategies in a well-coordinated, simplified and organized method. In their research, Ralph and Wand state that design's definition varies with its context, and that design is more frequently used as a ―Process" itself first, then as a ―creation" or as a ―Planning" rather than ―Design Process" as the objective of the design itself, which is rarely used in various terms. In its report, the Design Council states that Design can't be treated in isolation from other processes: designers have always needed to interact with commercial functions, with manufacturing and with product or service support (Design Council, 2007).

3.6. The Organizational Design Process

It is known that processes and structures are strongly connected. The implication of one can reflect on the other. Processes require actors that execute them which, in turn, need organization structures. And structures require processes when there is a need for a change and development from within the organization/actor. Organizational design process is a division of a design process that gives emphasis to identifications and transitions from one organizational structure to the next within a company. Management consultancy Oliver Wyman observes that while discussions of organizational design are more the theoretical/academic, one must ask concrete questions that any management must about an organizational design process: (Wyman, 1998)

- What changes will the new strategy require in the organization‘s core work? How will tasks be modified? Will there be new constraints, resources, processes or technologies involved?
- Do the organization‘s people have the skills, interest, characteristics, and capacity to perform the required work in a manner consistent with the strategy?
- Are values, beliefs, behavior patterns, and leadership styles associated with the culture—or informal organization—likely to aid or hinder the performance of the new work?
- How will the explicit structures and processes that make up the formal organizational arrangements affect the new work requirements?

Wyman suggests that in its simplest form, the process involves the following four steps: Preliminary Analysis, Strategic Design, Operational Design, and Implementation.

Phase I: Preliminary Analysis- Conduct structured interviews to identify strengths and weaknesses of the existing organization and clarify issues related to business strategy and organizational design.

Phase II: Strategic Organization Design

- **Design Criteria**: Review information from the preliminary analysis and generate criteria for a new design
- **Grouping**: Generate several design options and evaluate against criteria:
  - Grouping by Output – Product, Service, or Project
  - Grouping by Activity – Function, Work Process, Knowledge or Skill
  - Grouping by Customer – Market Segment, Customer Need, or Geography
- **Linking**: Identify information flow requirements, select ways to facilitate the flow of information to meet the requirements, and evaluate against the criteria.
- **Impact Analysis**: Analyze each option to determine feasibility given the existing leadership skills, power relationships, and work environment.

Phase III: Operational Design- carry out the operational homework necessary to put organization design decisions in place and design work charters, reporting relationships, information flows, etc.

Phase IV: Implementation- develop a strategy for implementing the new design and assess the potential resistance to the new organization.

3.7. Common problems in Structures and Processes

Organizational structures and processes face a different set of flaws in their application if and when they are not done properly. Processes face challenges in the inability for completion in time and poor links between actors, maintaining capacity, balance and flexibility and omission of optimization and monitoring processes. Organizational structures showcase" changes in management and personnel; new product or service initiatives; technological advances; regulatory adjustments; and increasing competition in the marketplace: each factor, or combination of factors, can mean the difference between a vibrant, competitive organization and a dysfunctional one" (Hanover Research, 2010).

Metropolitan council (Metropolitan Council, 2014) mentions its own points of potential problems and constraints and states that with such a complex financial, technical, relational, and programmatic undertaking, any number of unexpected hurdles can arise. The challenge for developers, whether public, private, or nonprofit, is to ensure that they have not failed to anticipate issues such as:

- Funding gaps
- Construction cost overruns
- Inability to honor timeline
- Unanticipated holding costs
- Interest rate fluctuation
- Aligning funding commitments
- Unexpected environmental conditions
- NIMBY-ism (Not In My Back Yard)
- Excessive or exclusionary regulation
- Urban growth boundaries or infrastructure limitations
- Issues with local zoning
- Lot size and density potential
- Noncompliance with funding rules

3.8. Planning Process

Planning, like ―design" and ―process", is a universal concept, can be applied to many instances in the average lifestyle and it is a vital part in designing processes. Planning, in this context, refers to urban and city planning. In planning in the 21st century, the three elements of environmental, economic, and social factors were said to be in need of integration in preparations of plans for a certain city. Many urban planners realize that the environmental, social and economic factors that promote wellbeing are complex.

There are various planning types based on different parameters of time, scale and goals (objectives). Strategic and action plan cover a relatively smaller area and time (1-5 years) than Structural and Master plans (10-15 years). Incremental planning follows process from specific to general whereas structural planning follows paths from general to specific. World Health Organization, in its report ―towards new planning process" discusses that there are two approaches to process: the generalist approach, which is not opposed to specialized thought in planning and the holistic approach, advocated by planning pioneers, looks at the interrelationship between the whole person and his/her environment (European Sustainable Development and Health, 1999).The report also states critical points to be considered in planning as:

- Community participation to set clearer objectives for planning intervention
- Involvement of all stakeholders in the city
- Co-ordination between national plans and policy guidance
- Interaction of urban and economic planning
- Sustainability
- Financial feasibility and subsidiarity

The report had also presented a planning process that can ensure the application of its goals and objectives onto practical terms, the main goal being sustainability. It recommends that all steps need to be considered since they address key issues. This 21step process was compacted into 6 broad stages.[2]

- Getting started: Building Partnership
- Knowing your city: analysis of issues
- Looking forward: common vision

[2] For detail planning process of the 21 steps, refer to Annex 1

- Getting Organized: action planning
- Taking action: implementation and monitoring
- Getting feedback: evaluation and feedback

3.9. Design and Planning Process in the Housing Industry

There exist various planning and design methods practiced around the world. Steino, in his research, states that when dealing with the quality of urban design, there is a strong tradition – among lay people and professionals alike – to focus on its outcomes, be it aesthetic, spatial, functional or environmental quality of the urban environment, the object of judgment for urban design is its product (Steino, 2003). Any product-based design is prepared with its own goals and objectives which, in turn, define the system of design and planning process it shall take. Steino further discusses that in order to understand the task of urban design, it is important not only to consider its product, but also its process. This process is usually neglected since much of the literature worldwide focuses on the product rather than the making of the product. Steino further discusses that in terms of the purpose of urban design, three fundamentally different approaches come to mind: from aesthetics, from framework and from the needs and wishes of people as users and creators of physical space.

In the first purpose, less attention is paid to the process of implementation, which is often regarded as the mere actualization of the design and it‘s widely adopted among many architects. The second one which, like Jonathan Barnett said, emphasizes on ‗designing cities without designing buildings‘ as it focuses on defining framework- spatially, legally, as well as organizationally. The third one, being of plural nature focuses on the human perspective, is ‗highly participatory, and involves little, or in extreme cases no preconfigured anticipations or ideals on behalf of the designer, who acts primarily as a facilitator and supervisor for the actors involved‘ (Steino, 2003).

A well-considered design process is essential to developing good quality designs of buildings and spaces. (Oldham Metropolitan Council et. al, 2008) . There are various types of processes used in the housing industry in practice and, although the content in their context varies, they resemble the process lifecycle provided by BPM (Business Process Management) mentioned above. The following will elaborate two different types of processes in housing realm.

According to a report made by Metropolitan council[3] in the United States, the processes in producing a reasonable housing are stated in their chronological order. In its report, Metropolitan council compares real estate development to other housing delivery types and states that owners/developers typically lead the process and act as the overall coordinator of a wide range of processes involving specialized firms and contractual arrangements. Some development projects are undertaken by a developer who intends to own and manage the project (asset management) after construction, while others coordinate and develop projects that will be sold immediately upon completion or at a targeted future date. (Metropolitan Council, 2014)

Housing development always involves similar major procedural and technical steps. Developers interact with government entities, city planners, architects, surveyors, engineers, contractors, and inspectors, among others. Generally, a development project will involve four or five distinct phases, each involving multiple action steps. (Metropolitan Council, 2014) But it all starts with a basic concept that may originate from several different sources, such as:

- A city interested in developing a particular parcel or within a certain zoning district, where the city owns the property or can help facilitate its purchase
- A property owner seeking to exit the market or sell a property
- A state entity awarding funds through a competitive process to projects brought in by developers, but where neither the location nor project details are known when funding is advertised as available
- A developer searching for a site, who then selects the most ideal location based on market and other research

The particular circumstances and complexity of each project will influence the degree of time, energy, and money necessary to complete all tasks. Typically, however, these will fall into the following phases. (Metropolitan Council, 2014)

[3] The Metropolitan Council is the regional planning organization in the United States for the seven-county Twin Cities area. The Council operates the regional bus and rail system, collects and treats wastewater, coordinates regional water resources, plans and helps fund regional parks, and administers federal funds that provide housing opportunities for low- and moderate-income individuals and families. The 17-member Council board is appointed by and serves at the pleasure of the governor.

Figure 3.5: Planning phases with timelines
Source: Metropolitan Council, 2014

1- Concept/Initial Planning Phase

- Determine target population(s)
- Locate a possible development site (and at times several alternatives)
- Assess local market conditions
- Analyze the local regulatory environment
- Contemplate funding sources
- Develop a strong project concept

2- Predevelopment Phase

- Assemble development team reflecting all needed disciplines
- Due diligence on the site (e.g., performing an environmental review, ensuring clean title.)
- Conduct outreach to local governments, housing advocates, community groups, and neighborhood residents, among others
- Develop a site plan schematic
- Develop a project pro-forma and perform a cash flow analysis
- Obtain site control/enter into a sales contract or purchase agreement
- Conduct a detailed financial feasibility analysis
- Identify funding Sources and prepare alternative financing strategies if necessary
- Obtain conditional financing commitments
- Modify development concept if necessary

3- Development Phase

- Complete working architectural drawings and cost estimates
- Submit applications for funding Sources
- Secure construction and bridge (if necessary) loans, and permanent financing
- Purchase the property
- Obtain all required planning and zoning approvals and environmental clearance
- Assemble bid package for hiring of a general contractor or master builder

4- Construction

- Award construction and other contracts
- Hire construction manager/general contractor
- Oversee completion of construction (including inspections and construction draws)
- Develop a lease-up and marketing plan (if not already in place), including affirmative fair housing marketing plans
- Manage construction close-out
- Begin marketing to prospective tenants

5- Management and Operation

- Identify qualified, experienced management firm if necessary
- Lease out units
- Complete any required compliance reports

With the adoption of its designated goal, the Metropolitan Council identified five desired outcomes that define shared regional vision: towards achieving **Stewardship, Prosperity, Equity, Livability** and **Sustainability.** These five outcomes reinforce and support one another to produce greater benefits than any single outcome alone. Plans, policies, and projects that balance all five of these outcomes will create positive change, while efforts that advance only one or two at the expense of the others may be affected over long term.

The Oldham Metropolitan council in England has a different method for processes when it comes to design and planning. This method is a three-step method involving in **Analysis of the site, Design Development** and **Consultation**.

1- Analysis of the Site

Analysis should include:

- an urban design and landscape analysis of the site;
- an urban design and landscape analysis of the wider context of the site;
- An assessment of technical issues & a review of planning policy affecting the site.

Technical Issues: Sites vary in their complexity, so not all of the technical considerations listed opposite will affect every site. However, it is worth establishing at least an overview of the potential technical issues that may affect development at an early stage so that they can be built into the design process. The Key technical issues include considerations towards infrastructural provisions such as highway, transport, traffic, drainage and services, ecology, heritage, ground conditions, noise and existing buildings. (Oldham Metropolitan Council et. al, 2008)

Planning Policy of the area needs to be studied for the complete development of the design. This includes Regional and National Planning policies.

2- Design Development

Based on the nature of the design, the development will consist of:

- developing and communicating a clear brief(during the early stages of the project);
    - Identification of the site
    - Description of the type of development required (housing, Office, service…)
    - a description of the desired quality and image
    - targets for sustainability – e.g. Code for Sustainable Homes Level 5; and
    - Budget for the project, and the timescale for completion.
- establishing a clear set of design principles and/or a development concept for the development; and
- Developing and testing a design informed by the brief, site analysis, design principles and development concept.

Once a clear initial Brief has been established and the analysis of the site undertaken, a set of design principles can be set out to guide the design of the proposed development, which is expressed as a series of bullet points. A **development concept** will take these principles and demonstrate how they could be applied to the site.

Developing and testing the design: explores sketch options to test out the ways in which the site may be developed. The complexity and range of options will of course vary according to the proposed development and the nature of the site: the bigger the site, the more the options and principles[4].

- Does it reflect the design principles and development concept?
- Is it technically feasible?
- Does it stack up economically?
- How could it be improved?

3- Consultation

Consultation is important for the following reasons:

- checking **with the local authority** that all issues have been taken on board, within the correct planning policy and have an appropriate approach to the design
- building **support from officers** by involving them early in the design process – this helps officers understand the scheme thoroughly;
- **letting local people know** what is going on, so helping to reduce rumors about the scheme; and where appropriate,
- **Involving people who will be affected by the development** in the design process can lead to a real sense of ownership.

Approaches to Consultation

Large scale projects such as regeneration schemes have their own special needs, and a good consultation process will normally be integrated with the design process itself. (Oldham Metropolitan Council et. al, 2008) For example:

- Initial consultation with local people should be led out to form part of the ‗analysis' stage of the project. SWOT analysis of the local area as seen through the eyes of local people can help to identify problems that outsiders may not be aware of.
- For consultation to be meaningful, people need to have a genuine input into the design and decision-making process. Involving local people in looking at options for the area is one way of doing this, and this can form part of an ‗options testing' stage.

[4] It can be useful to share the process of developing and testing options with local planning authority officers and, where appropriate, local people as part of a consultation process.

- Requesting feedback on final draft designs prior to submission for planning helps to ensure that local people see the outcome of the consultation process, and have an opportunity to provide feedback. Less intensive consultation may be more appropriate for schemes that do not affect people‘s lives so significantly. Again, consultation will need to be tailored to the specific situation.

Examples include:

- Where the local area is particularly sensitive (e.g. in a conservation area), it can be helpful to demonstrate to local people how the design responds to the character of the place. The design work on site and context analysis, development concept, and final designs should form a strong rationale for the development. This can be used in a leaflet or at an exhibition to invite local people to comment on a scheme prior to submission.
- **For a small infill development**, discussions with the occupants of neighboring buildings about the nature of the development can help to allay concerns. Informally sharing information about the design prior to submission for planning permission is also useful.

The first 5-step planning and design process is framework-oriented, where the participation of the people ultimately low. Designs are left to be prepared by the professionals and it‘s only informative for the people set to live in the design. The main focus is also on the design output as the goals, objectives and strategies are focused on provision of ―fair housing”. The second 3-step process is people oriented. The local people are aware of the design output since its inception. They even have a key place in the decision making process that evidently shapes the design output.

3.10. Measuring Criteria of Processes in the Housing Industry

The Metropolitan Council in the United States that produced a 5-step design process had also created a criterion for measuring their design once they had placed their goals, objectives and strategy (fair housing) respectively and produced their design process afterwards. They made sure that the criteria covers grounds on how to produce a fair housing for all with the target of its goals. The detailed description of the five outcomes expected from the housing to be built is as follows. The housing to be delivered should have:

Stewardship:

- Manage, maintain, preserve and expand the region‘s existing housing stock and housing choices
    - preserve the existing housing stock
    - Selective infill housing
    - historic preservation, live/work units
    - appropriately designed accessory dwellings, and adaptive reuse

*There are several distinct types of housing preservation such as:

1. *physical preservation of housing:* The physical upgrading of housing, ranging from moderate to substantial rehabilitation;
2. *preservation of a federal subsidy that creates affordability:* Securing/ extending long-term commitments from property owners to continue to participate in housing programs
3. *Preservation of housing affordability:* Establishing or continuing rent and income restrictions making units affordable over the long term.

- Address how ~~“n~~aturally occurring” or unsubsidized affordable housing meets the region‘s housing needs.
- Leverage housing investments with its existing infrastructure
- Create/preserve housing affordability around emerging transit investments.

Prosperity:

- Plan for the range of options to enhance regional competitiveness
- Recognize the role of homeownership in creating wealth and prosperity
    - Meaningful short- & long-term strategies to diversify in homeownership.
    - Shared understanding of the gap and increased cultural competency.
    - New financial tools to open doors to homeownership.
    - Unique ownership models (e.g., community land trusts and tenant-owned coops can play a role)
    - Shared understanding that narrowing the gap benefits everyone
- Expand opportunities for households to reduce their combined costs of housing and transportation
- Encourage redevelopment & infill development to meet the region‘s housing need

Equity:

- Create viable housing options that give people in all life stages and of all economic means viable choices for safe, stable, and affordable homes
- Use housing investments to build a more equitable region
    - Sustained authentic public engagement with all residents
    - increasing housing choices for low- and moderate-income households
    - adding affordable housing in higher-income areas
- Advance fair housing

Livability:

- Provide housing choices for a range of demographic groups, not simply housing developments that offer a place to own or rent
- Does the local housing stock:
    - Provide a range of sizes, from studios and one-bedrooms to units with three, four, or five bedrooms that accommodate larger families as well as multigenerational living?
    - Vary among housing type: single-family detached to multistory multifamily?
    - Offer housing options for seniors at varying stages of independence?
    - Include multiple tenure options: ownership, renting, or cooperative-ownership?
    - Serve a range of incomes?
    - Incorporate flexible design and reflect special attention to accessibility?
    - Adapt to changes in demand, preferences, or lifestyle?
    - Create attractive places with aesthetic and architectural diversity?
- Align investments to support place-making, transit-oriented development, and walkable places

Sustainability:

In the Metropolitan Council (Metropolitan Council, 2014) report, Housing contributes to environmental sustainability in three ways:

1. Compact residential development patterns (community or neighborhood level).
2. Environmentally-sensitive building design & construction techniques (building level).
3. Lifestyles and conservation habits of residents (occupants).

The goals in sustainability include:

- Promote residential development patterns that contribute to reducing harmful emissions, increasing water sustainability, and growing resiliency to the impacts of climate change
- Encourage and promote environmentally-sustainable and healthy buildings and construction techniques

Each of the above goals identifies and states the actors‘ role, local opportunities & Local responsibilities. The five outcomes describe the ―why" of the Housing Policy Plan as the council identifies three set of principles for ―how" the Council carries out its housing policies to advance those outcomes: **Integration, Collaboration** and **Accountability.**

Integration:

- Incorporate housing policy into the full spectrum of regional issues
- Integrate housing into transit-way planning and development
  - Evaluation of corridor-specific affordable housing needs and supply.
  - ―Plans and policies to preserve and increase affordable housing such as:
    - Inclusionary zoning and/or density bonuses for affordable housing.
    - Employer-assisted housing policies.
    - Voluntary or mandatory inclusionary housing policies.
    - Rent or condominium conversion controls.
    - zoning that promotes housing diversity
    - affordability covenants
- Adopted financing tools and strategies to preserve and increase affordable housing like:
  - Target property acquisition, rehabilitation, and development funding for low-income housing within the corridor, including
    - Low Income Housing Tax Credits.
    - Ongoing affordable housing operating subsidies.
    - Weatherization and utilities support program.
    - Local tax abatements for low-income or senior housing.
    - Local or state programs that provide mortgage or other home ownership assistance for lower-income and senior households
  - Established land banking programs or transfer tax programs
  - Local or regional affordable housing trust funds

  - Targeted tax increment financing or other value-capture strategies for low-income housing.
- „[Evidence of] developer activity to preserve and increase affordable housing." (Federal Transit Administration, New and Small Starts Evaluation and Rating Process: Final Policy Guidance, 2013)

Collaboration:

- Provide a regional perspective on housing policy
- Promote the alignment of local comprehensive plans with state and local consolidated plans
- Expand technical assistance to and share best practices with local governments to support development of a mix of housing options

Accountability:

Accountability focuses on measuring and managing progress toward outcomes (Metropolitan Council, 2014).

- Adopt a data-driven approach to measure progress
- Measure local progress toward meeting the region's affordable housing goals
- How many new housing units, both owner-occupied and rental, meet the Council's criteria of affordability?
- How many existing housing units are affordable, including both owner-occupied and rental, and subsidized and unsubsidized units?
- What is each local jurisdiction's Housing Performance Score?

3.11. Summary of the Literature Review

There are many suggestions as to how structures and processes go hand- in-hand, since there was a global emphasis on structure study up until recently that produced more research that focused more on processes which are just as important, if not more, in the study. But it has only been recognized that they are equally important for a better strategic organization.

There are three types of organization structure: *Functional, Divisional and Matrix*. *Functional* is specific towards the company's taskforce where every unit within specializes under its own partition. *Divisional* is more suited for companies that produce short-term products in multiple locations, hence *Product Divisional* (by product) and *Geographic Divisional* (by location) types exist within this structure type. *Matrix* groups units both by the function that they serve and by the product team in which they work. Different product teams work simultaneously on the same task but in different product team which makes this structure difficult to maintain. Most Housing/Construction companies tend to use divisional structure.

Processes vary in type based on their designated goals and objectives: for *aesthetics, framework* and for *people* who can design their environment to their own liking. The *organizational design process* focuses on how to make structural changes within organization that could have a *lateral* or *vertical workflow.* Planning process shall consider many factors such as time, project scale and the desired outcome when it's designed accordingly. Key factors such as participation, interaction, co-ordination and integration should also be considered.

Processes in the Housing industry, even though they are mostly company-specific, have showcased three dominant types. The first is a 5-step process that has a sequence *Concept →Pre-development→ Development→ Construction→ Management*. The second one, a 3-step process, follows *Analysis of the site→Design development→ Consultation*. The first one is a framework-oriented and the latter is a people-oriented design process.

The criteria for analyzing the processes can be measured by three considerations: **Integration, Collaboration** and **Accountability.** The outcomes of these processes inflect in the housing designed lies on the question that they have achieved their predestined goals in the specified timeframe. This mechanism can be summarized and aimed towards achieving **Stewardship, Prosperity, Equity, Livability** and **Sustainability.**

3.12. International Practices (Design and Planning Process & Organizational Structures)

Studies of the different international practices throughout the world helped in explaining how different countries have brought up different managerial structures and design processes for their own production of housing. The two key words here are ~~"I~~ntegrated" and ~~"M~~ass Housing". The following will look at some of the projects and heir structures as well as their design processes. As there was no evident case that showcased both topics, they will be discussed separately within the context of different cases.

3.12.1. New Delhi: India IHSDP Project

India is one of the fastest growing nations in the world. As per the 2011 census, the country population of India grew at a CAGR of 2.8% resulting in the increase level of urbanization from 27.81% to 31.16%. This growing concentration of people in urban areas has led to problems of land shortage, housing shortfall and congested transit. (Haymak, 2012)

With the several policies adopted by the Central government for the housing sector, from the first National Housing Policy in 1988 to the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in 2005, the main aim was to bring up sufficient affordable housing for the people of India. JNNURM sought to have about 1.5 million houses for the urban poor in 65 mission cities. There were about 5 major schemes that were practiced to meet the required goals (with their own specific goals) such as:

1. Basic Services for the Urban Poor (BSUP)
2. Integrated Housing Slum development Programme (IHSDP)
3. Affordable Housing in Partnership (AHIP)
4. Interest Subsidy Scheme for Housing the Urban Poor
5. Rajiv Awas Yojana (RAY)

The Integrated Housing Slum Development Program

Integrated Housing & Slum Development Programme (IHSDP) aims at combining the existing schemes of Valmiki Ambedkar Awas Yojana (VAMBAY) and National Slum Development Program (NSDP) under the new IHSDP Scheme for having an integrated approach in ameliorating the conditions of the urban slum dwellers who do not possess adequate shelter and reside in dilapidated conditions. (JNNURM, 2009) (Ministry of Housing and Urban Poverty Alleviation, 2009)

The main objective of the revised strategy of urban renewal including providing basic services to the urban poor (BSUP) is to ensure improvement in urban governance so that 5 (ULBs) and parastatal agencies become financially stable with enhanced credit rating and ability to access market capital for undertaking new Programs and expansion of services and public-private participation models for provisioning of various services would also become feasible. (Ministry of Housing and Urban Poverty Alleviation, 2009)

To achieve this objective, State Governments, Urban Local Bodies and parastatal agencies will be required to accept implementation of an agenda of reforms. (Ministry of Housing and Urban Poverty Alleviation, 2009) The sharing funds will be the ratio of 80:20 between Central Government & State Government/ ULB/ Beneficiaries. A minimum of 12% beneficiary contribution is stipulated, which in the case of other weaker sections is 10%. (Haymak, 2012)

Actors and Their Roles

The State Government may designate any existing institution as nodal agency for implementation of the scheme.

The nodal agency will be responsible for the following:

- Inviting project proposals from ULBs/Implementing agencies;
- Techno-economic appraisal of the projects either through in-house expertise or by outside agencies through outsourcing;
- Management of funds received from Central and State Governments;
- Disbursement of the funds as per the financing pattern given in the guidelines;
- Furnishing of utilization certificates, in accordance with the provisions of GFRs, and quarterly physical & financial progress reports to the Ministry of Urban Development;
- Maintenance of audited accounts of funds released to ULBs and implementing agencies

Urban Local Bodies and implementing agencies- elected by the state government and are in charge of the IHSDP project. They study area and design proposals.

The composition of the *State Level Coordination Committee* (SLCC) will be decided by the States. SLCC will ensure the following:

- Examine and approve project reports submitted by the local bodies/implementing agencies taking into account the appraisal reports;

- Periodically monitor the progress of sanctioned projects/ schemes including funds mobilization from financial institutions.
- Review the implementation of the scheme keeping in view its broad objectives and ensure that the programs taken up are in accordance with the guidelines laid down.
- Review the progress of urban reforms being undertaken by ULBs/ implementing agencies.

The CSC - examine and approve the projects relating to Housing and Integrated projects on housing and infrastructure development, submitted by the State Nodal Agencies on the recommendations of the State Level Co-ordination Committee.

The reconstituted composition of Central Sanctioning Committee (CSC) is as follows:

- Secretary, Ministry of Housing and
- Urban Poverty Alleviation – Chairman
- Secretary, Ministry of Urban Development – Member
- Secretary, Ministry of Finance (Department of Expenditure) … – Member
- Principal Adviser (HUD), Planning Commission – Member
- Secretary, Ministry of Environment and Forests – Member
- Secretary, Ministry of Social Justice and Empowerment – Member
- Secretary, Ministry of Health and Family Welfare – Member
- Secretary, Department of School
- Education & Literacy, Ministry of HRD – Member
- Joint Secretary and Financial Adviser, Ministry of UD/HUPA – Member
- Chief Planner, Town and Country Planning Organization – Member
- Adviser, CPHEEO, Ministry of Urban Development – Member
- CMD, Housing and Urban Development Corporation Ltd – Member
- Joint Secretary (JNNURM) & Mission Director, Ministry of Housing and Urban Poverty Alleviation – Member-Secretary

Funds will only be provided to those towns cities where elections of the local bodies have been held and elected bodies are in position. State may allocate funds on the basis of total urban slum population of the city/town to the total state slum population.

Procedures

The design process is as follows:

1. Election of ULBs by state Government
2. ULBs and implementing agencies will prepare checklist and studies the areas affected submit detailed project reports to the designated State Level nodal agencies for appraisal.
3. The State Level nodal agency will forward the appraised projects to Ministry of Urban Employment & Poverty Alleviation for consideration of CSC/State Level coordination Committee, as the case may be.
4. SLCC meets as often as required but shall meet quarterly to review the progress of ongoing projects and for sanction new projects.
5. The State Level Co-ordination Committee will examine and approve the projects relating to providing only basic amenities/ improvement of infrastructure to the slum dwellers.
6. The scheme will be implemented through a designated State level nodal agency.

Outcome of the design

The IHSDP prepares villa –Kucha" (Thatched) housing units not less than **25 sq. m** area and preferably two room accommodation plus kitchen and toilet to be constructed as per the standards. These units will be equipped with low cost latrines. The neighborhood will also comprise of community centers and other amenities related to the site's environment, (Thoubal Municipal Council, 2008-9) (JNNURM, 2009). IHSDP is an on-site upgrading project, which means that there was no preparation for production of an LDP or a neighborhood design of the site. The neighborhoods were preserved in their location but received an upgrade to the units.

Special points

Housing funds are shared. The sharing of funds would be in the ratio of 80:20 between Central Government & State Government/ULB/Parastatal. States/Implementing Agencies may raise their contribution from their own resource or from beneficiary contribution/ financial institutions. In case Externally Aided Project (EXP) funds are available, these can be passed through as ACA to the State Govt. as funds contributed by State/ULBs/FIs.

3.12.2. South Africa Integrated Residential Development Program

One of South Africa‘s towns, Cape Town, current housing and associated infrastructure backlogs can be ascribed to the high rate of urban growth experienced over the last twenty years. With a threatening Urban sprawl and Informal Settlements around the corner, Cape Town needed a quick solution to its current housing situations. (Department of Human Settlements, 2009)

In accordance with the National Government‘s Housing Policy, which aims to address and normalize the country‘s housing shortage, the City of Cape Town has therefore set itself the target of providing housing opportunities to the almost 400 000 families within its jurisdiction who currently live in inadequate housing. The housing sector aims to increase employment and individual wealth, encourage households to save, increase the demand for consumer goods and services, and impact positively on the health of households. The City‘s focus over the next five years is therefore on accelerating housing provision and on ensuring that land utilization is well planned, managed and monitored. (South Africa Gov, 2008)

To achieve this, the City has adopted the national **Breaking New Ground plan (BNG)** for the development of sustainable human settlements and has also aligned itself with the Provincial Government‘s Western Cape Sustainable Human Settlement strategy (Isidima). These two instruments signal a paradigm shift away from traditional approaches to the provision of housing to a holistic approach aimed at developing and improving integrated human settlements. Breaking New Ground BNG plan comprises the programs listed below, that have a direct bearing on the City‘s provision of housing as they are cascaded downwards for implementation at local level:

- Integrated Residential Development Program
- Community Residential Units Program
- Upgrading of Informal Settlements Program
- Social Housing Program
- People‘s Housing Process
- Emergency Housing Program
- Funding for land
- Policy on the adjustment of the subsidy amount to cater for extraordinary development conditions and the required precautionary measures

Among these programs and strategies, The Integrated Residential Development Program and its development regarding its process for design and its organizational structure will be further discussed below.

The Integrated Residential Development Program

The Integrated Residential Development Program, one of the new programs among the many options Cape Town considered, has been introduced to facilitate the development of integrated human settlements in well located areas that provide convenient access to urban amenities, including places of employment. The Programme also aims at creating social cohesion. (Department of Human Settlements, 2009)

The introduction of this program pertains to the reasons that low income settlements continued to be located on the urban periphery without the provision of social and economic amenities. The existing stance of housing policy instruments also focus primarily on the development of subsidized housing but not on area-wide settlement planning scale and the integration of a range of housing types and price categories, together social amenities. (Department of Human Settlements, 2009)

This programme, which replaces the project linked housing subsidy program, provides a tool to plan and develop integrated settlements that include all the necessary land uses, housing types (including gap and rental housing) and price categories, to become a truly integrated community. Funding will be made available based on the ‗total project cost'. This development program focuses solving settlement inefficiencies through the development of integrated human settlements that are compact-settlement-oriented and provide a range of housing and socio-economic opportunities to those who live therein.

In addition, the programme also makes provision for the creation of non-residential stands such as Institutional stands e.g. police stations, schools and clinics, Business and commercial stands, Stands for non-profitable community services e.g. churches and crèches/nursery schools; and Stands for public use e.g. parks and community facilities etc.

This Programme will assist people who:

- Lawfully resides in South Africa (i.e. citizen) of the Republic of South Africa or in possession of a permanent residence permit. Certified copies of the relevant documents must be submitted with the application).

- Legally competent to contract (i.e. over 18 years of age or legally married or legally divorced or declared competent by a court of law and sound of mind);
- Neither the applicant nor his/her spouse has previously benefited from government assistance;
- Has not owned fixed residential property; and
- Has previously owned fixed residential property, such a person may only qualify for the purchase of a vacant serviced site.

In addition to the above the following criteria must also be satisfied:

- Persons must be married or habitually cohabit;
- Single persons must have financial dependents;
- Single persons without financial dependents such as the aged, military veterans, etc. may be assisted;
- Households must earn a monthly income in the range as annually announced; and
- Persons who have benefited from the Land Restitution Programme may also be assisted.

Important considerations

Plans for projects undertaken with the scope of the IRDP must be based on approved housing chapters of Municipal Integrated Development Plans and priorities and reservation of funds for project development agreed to between the MEC and the Mayors in terms of the multi – year housing plan developed as part of an approved IDP. All procurement processes must occur within the prescripts of relevant legislation and in a fair, equitable, transparent and competitive manner. (Department of Human Settlements, 2009)

The Actors and their Roles

Municipality- which assumes the role of the developer, applies for funding from MEC, also undertakes all planning and project activities.

MEC-Member of Executive committee reserves and distributes funds and assesses and adjudicates various aspects of the project process and approves project.

Provincial Government- may assume the role of developer where a municipality does not have the required capacity to fulfill this role.

NHBRC- the National Home Builders Registration Council signs up projects and monitors

Project team- comprises of:

- **Land Surveyor:** Base map
- **Town Planner:** Layout Plan
- **Engineer:** Availability of services reports
- **Environmental Practitioner:** EIA application
- **Geotechnical Engineer:** Geotechnical investigation

Procedures

*For detailed illustration setup of the process, see annexes 1 and 2

1. The developer will submit a project application to the MEC making use of *pro forma* procurement documents, agreements, and/or contracts when applying for a project and the implementation thereof.
2. MEC Receives Provincial Housing Subsidy Allocation from National
3. Municipalities apply for reservation of project funding it to approved IDP and agreed priorities
4. MEC confirms reservation of project funding per municipality and requests project descriptions
5. Municipality calls for land availability
6. Adjudication of land proposals in relation to IDP's and selection of priority land
7. Municipality secures land, undertakes feasibility study, prepares project descriptions and compiles acquisition agreements
8. MEC adjudicates, makes conditional approval of project funding against selected land parcels and project descriptions including funds for housing subsidies and facilitates and determines variation amounts
9. Municipality requests project enrollment with NHBRC and NHRBC enrolls project[5]
10. MEC confirms subsidy project approval in project agreement with Municipality and concludes MOU with relevant parties
11. Adjudication of land proposals in relation to IDP's and selection of priority land
12. Finish up of Contractual Agreements by means of Procurement Method.[6]

[5] If NHRBC declines request and the enrollment seems non- pliant, MEC analyzes the reasons to take remedial action and the procedure restarts from step 5.

a. Turnkey: One contractor or where ad-hoc specialist is required, 3 phases are provided: Town Planning, Installation of Services and Construction of Houses.
b. Traditional Preplanned: What is the in-house capacity?- Ad hoc contracts with specialists as and when required
c. Development Contract: Uses community contractors where two types of contracts allowed: for Installation of Services and Construction of Houses

13. **Feasibility process**: The Housing Chapter in IDP includes identification of the need for housing and a status quo so as to quantify the need.
14. A core team is appointed through a set of contractual agreements to develop a market analysis and finalize the development scope.
15. **Planning process[7]:** Identified Land ➔ Legal Development Status➔ secure ownership of land(if required)➔Statutory Assessment➔Physical Investigation➔ Source base Documents
16. Production of Populate Base map, the layout and the design of the Township and distribution of the layout to the Project team will be carried out, followed by preparation and submission of application. This is done by a team comprising of Land Surveyors, Town Planners, Engineers, Environmental Practitioners, and Geotechnical Engineers.
17. **Statutory Advertisement**: comments are obtained about the design after it runs through advertisement and circulation of application under statutory advertisement.
18. The final documentation is prepared for approval after it passes comments as a good design by the approval of the township.[8]Approval documents comprise of:
    i. Approved layout plan /subdivision plan
    ii. Approved Conditions of Establishment / Conditions of approval
19. Post Approval Phase: after approval, the project commences close out phase of:
    a. Discharge conditions of establishment / conditions of approval by the **Team**
    b. Calculate approved layout and obtain approved General Plan / subdivision plan from Surveyor General by the **Surveyor**
    c. Open Township / Subdivision register at the Registrar of Deeds and compile and handover of deeds to beneficiaries by the **Conveyancer**

[6] Procurement Method has 3 procedures within: Turnkey strategy, Traditional Preplan, and Development Contract
[7] Land is identified into Greenfields and Brownfields, whereby Greenfields are considered for IRDP and Brownfields are for IHSP and takes a different process
[8] If the comments given are negative, the design will amend application and restart from step 16.

d. Local Authority Publishes approved township in Provincial Gazette by **proclamation of the township**

20. By amending TPS, vesting public land and transferring other land, site is prepared (when necessary) and people are relocated.

21. Beneficiaries' subsidy process: Subsidy Application approval➔ Allocation of houses➔ Occupation of houses and title deed handover to beneficiaries.

22. Handover of Project: Documented proof of all the close-out phases during project life cycle, preparation of final drawdown and submission of the drawdown to MEC for initiation of the Payout process.

23. Implementation process: Construction which involves

a. Engineering Services design by the approval of the township
b. Obtain clearance certificates Completion and handover of services to council (both during close out phase)
c. House Construction and building inspection
d. Completion of top structure and occupation certificates (both during close out phase)

24. Allocation of houses (links to step 21)

3.12.3. Ghana Mass House Building Project

The Mass House Building Projects in Ghana (MHBP) have seen various types of actors that managed the projects starting from 1951 to present but are said to have had discrepancies with the management systems in general. (Ahadzie & Amoa-Mensah, 2010)

Clearly, a theoretical approach towards appreciating the project management options in use and potential innovations that has been introduced over the years could help stakeholders to come to a consensus on a plausible pragmatic model for the effective management of future housing projects. (Ahadzie & Amoa-Mensah, 2010)

Project management inefficiencies, in many instances, have led to time and cost overruns of more than 100% in the implementation of these projects (Edmonds and Miles, 1984; Ofori, 1989; Konadu-Agyemang, 2001). Poor project management practices have in the recent past also contributed to the abandonment of Mass House Building Projects (MHBPs), notably the prefabricated housing projects in 1950 and 1978 respectively (Ofori, 1989).

Current Housing Status in Ghana

In Ghana, the shortage of housing continues to be one of the most critical socio-economic challenges facing the country. (Ghana National Development Plan, 2008) Alternatively some experts as well as the Government of Ghana‘s own projection have suggested that an annual delivery stock of 150,000 is what would be needed if the situation is to be arrested. Paradoxically, annual delivery is purported to be close to 37,000 house-units (Amoa- Menash, 2003)

Unbelievably, resource mobilization and processing for these housing-units took about five years. Eventually, physical construction commenced in 2006, and quite disappointingly, not a single structure is ready for occupation to date. (Ahadzie & Amoa-Mensah, 2010) Since the late 1980s, the GoG‘s policy direction has been to play the role of facilitator in housing delivery rather than the traditional role of direct provision whereas several private sector initiatives in housing delivery have been implemented or facilitated over the years including the formation of the Ghana Real Estate Developers Association (GREDA).

GREDA is to help perfect the dismal housing deficit especially through the adoption of best practices in construction and project management. However, housing supply has not increased any better, and there is also no indication that project management practices of these projects has received any knowledge-based improvement. (Ahadzie & Amoa-Mensah, 2010) Aside from the other factors that are the cause for the housing shortage, bad management is also mentioned quite frequently.

National Affordable housing projects initiated in 2000 as a wake-up call to the housing industry and for key players of the Ghanaian Construction Industry (GCI).

Different Project Managements for MHSB

Some of the earliest and notable Ghanaian MHBPs were implemented using pre and post-independence state agencies like the Gold Coast Housing Corporation and later the State Housing Company (SHC).

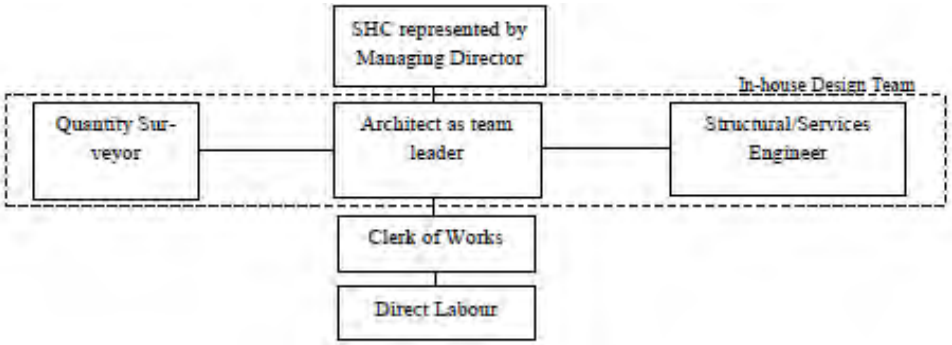


Figure 3.6: Typical organizational structure of the SHC on MHBPs in the late 1950s

Source: Ahadzie , 2007

Under the GoG's direct housing provision program, project management was mainly traditional. The SHC engaged direct labor (artisans and laborers) on full-time employment for the execution of these projects. The Architect was responsible for both the design and supervision of the project, from beginning to end.

By the 1960s, registered building contractors had become major players in the GCI. The engagement of contractors often on ~~-s~~erial contracts" became the practice in the management of the construction of housing projects. A Contractual relationship existed between the property developer (i.e. SHC) and the contractors engaged, with the architect playing a supervisory role. (Ahadzie & Amoa-Mensah, 2010)

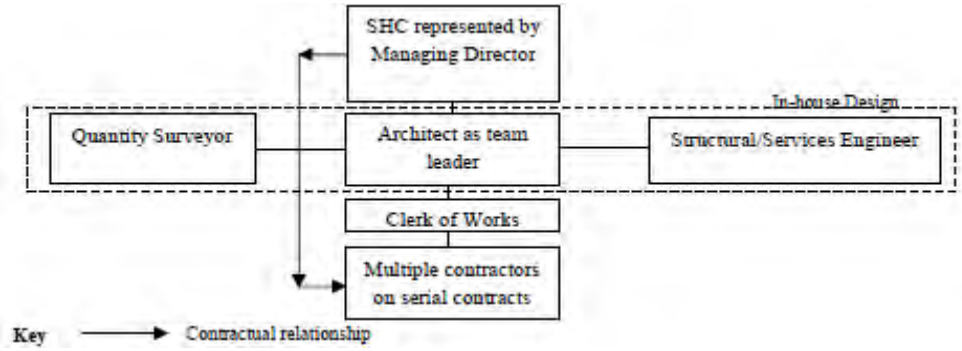


Figure 3.7: Typical organizational structure of the SHC involving the use of multiple contractors on serial Contracts

Source: Ahadzle ,2007

By late 1970s, speculative housing had been introduced in the Ghanaian market by some private and quasi–government organizations such as the Social Security and National Insurance Trust (SSNIT). These organizations normally did not operate an in-house design team. Hence, ~~-e~~xternal consultants" were often engage to manage the design aspect of the project on behalf of these organizations.

These consultants normally comprised the design team of built environment professionals led by an architect and perform by terms under the supervision of the consultants, contractors were appointed to take contractual responsibility for the management of the construction process. (Ahadzie & Amoa-Mensah, 2010) Should there be disputes; the consultants could be held responsible for only lapses in the design whilst the contractor could be held responsible for only lapses in management of the physical implementation (Hughes & Murdoch, 1992). This has the conventional system in executing mass housing in Ghana since the 70‘s.

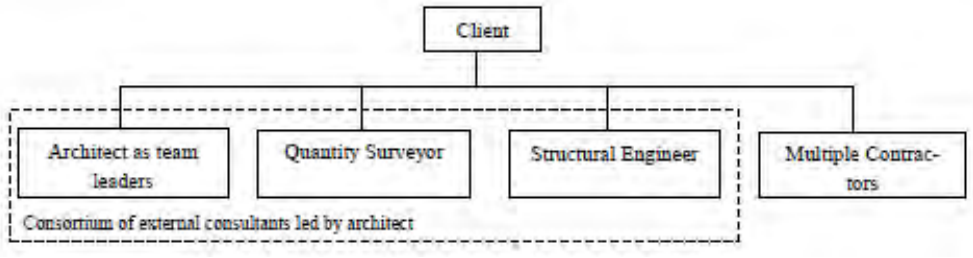


Figure 3.8: Typical organizational structure involving external consultants and multiple contractors
Source: Ahadzie (2007)

Since the 1990s, the expansive role of the private sector such as GREDA has reversed to the direct labor engagement first practiced by the SHC. (Ahadzie & Amoa-Mensah, 2010). As Contemporary property developers prefer the in-house design system, unlike SHC, they often have their own laborers that work on a labor-only-sub-contractual basis.

The traditional management practice of appointing consultants and contractors to take responsibility for design and management of construction respectively is still used in Ghanaian construction practice. And it‘s conclusive that MHBPs executed in the past under these traditional systems were often fraught with management problems contributing to the rampant failures in meeting performance targets, in which case the contractors have been blamed and criticized for the poor performances and having limited knowledge in the application of requisite management techniques. (Ofori, 1989)

3.13. Lessons Learned from International Practices

India

Organizational structure- While the state government is in charge of the administration, much of the work to be done is left for the nodal agency and the ULBs and implementing agencies which creates an unbalanced power distribution.

The existences of the SLCC help in keeping track of the projects and monitor the workflow whereas the CSC monitors the projects provided by the SLCC and the state nodal agencies, insuring a double proof mechanism against project flaws. There is an involvement of many stakeholders except the local communities which resembles that of the second type of urban design.

Design and planning process- The procedures in the project carried out are not clear in terms of sequence and arrangement.

South Africa

Organizational structure- MEC handles the project by means of monitoring the project that is carried out by a project team it hires which shows that there is a trend in monitoring the projects. **Design and planning process**, for the ease of executing the IRDP, South Africa has brought 8 different housing provision schemes under BNG and put IRDP into one of the divisions thereby placed it into special consideration.

The workflow is clear and considerate of other options and variables such as the involvement of the local communities on site and on the design although it is not participatory, it‘s rather informative for the people. Town planning aspects and the level of involvement of the different actors are thoroughly considered as well. There is an indication of trial and error before the application of the projects which serves as a double proof mechanism against project flaws. The project gives emphasis to subsidy process for the benefit of the occupants.

Ghana

Organizational structure- in preparing the design, the SHC shows shift from producing mass housing projects as a self-sustaining in-house design team to a mechanism that hires external consultants with contractual arrangements for the projects. This, and the fact that there is no intermediate controlling management body, has brought up the failure in keeping up with the housing demand.

Within the organizational structure, there is no division for the inclusion of community, participation or monitoring of the projects post-occupancy. Contractors and consultants take the blame for the works done regardless of the management flaws in the first place.
Design and planning process- much of the design work load relies on the consultants and contractors.

CHAPTER FOUR

The Addis Ababa Integrated Housing Development Project (AAIHDP)

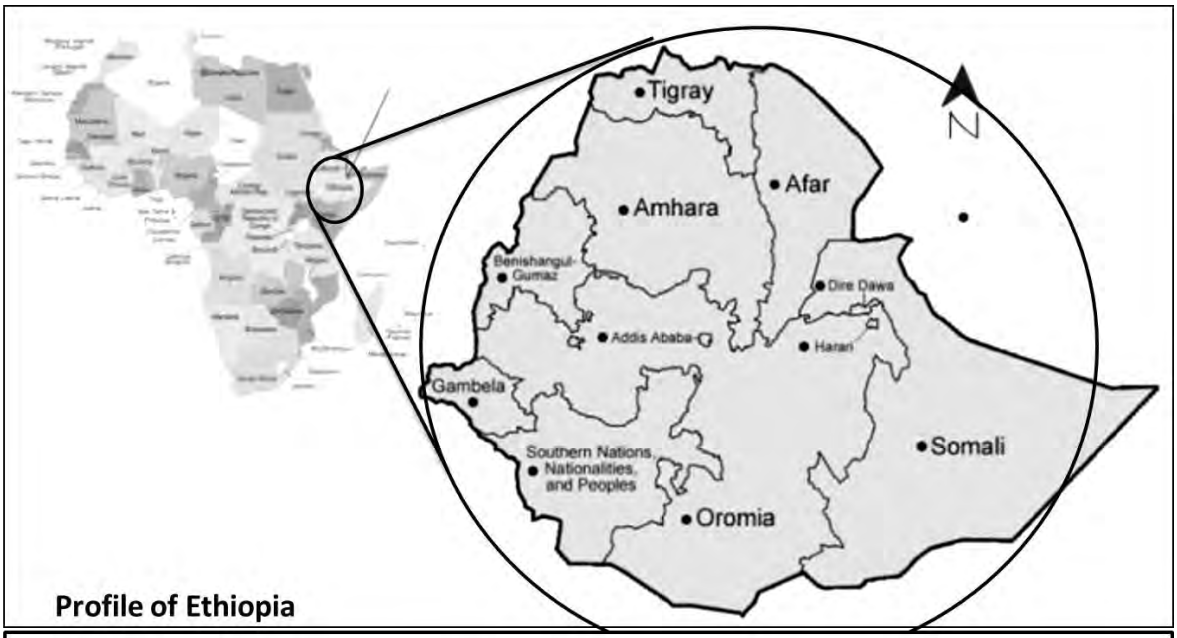
This chapter discusses the background study to Addis Ababa Housing and points out the challenges that the in the previous systems had faced. It describes the housing stance in Addis Ababa as it introduces the Addis Ababa Integrated Housing Development Program as well as the goals and objectives of AAIHDP and its current status.

4.1. Introduction

Shelter is the most important human need after food – decent shelter is the key to become a human being. Already today three billion people – half of the world‘s population – live in urban centers; one third of them in slums. UN –Habitat states that we are already in the middle of a housing crisis. Slums will grow at an accelerated pace if not annually 35 million new housing units will be made available up to 2030. (Ministry of Works and Urban Development, Integrated Housing Development Program Volume II: Urban Considerations, 2006)

Since 2005 Ethiopia has been implementing an ambitious government-led low- and middle-income housing program: The Integrated Housing Development Program (IHDP). The initial goal of the program was to construct 400,000 condominium units, create 200,000 jobs, promote the development of 10,000 micro - and small - enterprises, enhance the capacity of the construction sector, regenerate inner city slum areas, and promote homeownership for low-income households. Even though the five-year program nears completion and documentation of the program is timely. (UN-HABITAT, 2011) Not much can be said about the program actually meeting its goals.

4.2. Contextual Background



Profile of Ethiopia

Location – Eastern Africa, West of Somalia	Addis Ababa*, Afar, Amhara, Binshangul Gumuz, Dire-dawa*, Gambela Peoples, Harari People, Oromiya, Somali, Tigray, Southern Nations, Nationalities and Peoples
Geographic Co-ordinates – 8 00 N 38 00 E	
Capital City - Addis Ababa	
Current Population - 96,633, 458	
Administrative Divisions - 9 ethnically based states: and 2 self-governing administrations*	Source: Index-mundi fact book, 2016

4.3. History of Housing in Ethiopia

Addis Ababa has seen its fair share in the evolution of housing since the liberation of the Italian regime in 1941. The population continued to grow at a faster rate after wards, with the response of a subdivision of existing lots and residential buildings to expand the supply of affordable rental dwellings (Index Mundi, 2015). The housing built was as a response to the demand for housing for the urban poor. As a result the houses were poorly built, substandard, did not have proper foundations and basic facilities such as private toilets, kitchens or connections to water lines (Balcha, 2014).

During the first half of the twentieth century land and housing in Ethiopia were controlled by a select few individuals and groups who owned and tightly controlled land and housing development. Housing supply was led by the landowning elite with less than one percent of the population owning more than 70 per cent of the arable land, on which 80 per cent of the

peasants were tenants (Ministry of Works and Urban Developmnt , 2010). While government urban housing and land strategies were debated and documented at length they did not materialize into built projects to address the severe housing demand. (UN-HABITAT, 2007)

Generally speaking, there was no public guidance or control over the housing development in Addis Ababa during the first 10-15 years after liberation. Most of the houses didn‘t have permits in the early 1970; only a quarter of the housing units produced in Addis Ababa had municipal permits. Until the 1974 revolution broke out there was not an alarming housing shortage though the houses were small and substandard. Without formal housing sector output the pre-revolutionary Addis Ababa had an occupancy rate of four per dwelling. The housing types during 1974 showed its own setbacks in terms of quality and quantity, and a mind policy issue regarding ownership of housing. (UN-HABITAT, 2007)

In 1974, the land and housing situation significantly changed as a result of the political revolution that saw the overthrow of Emperor Haile Selassie by the Soviet supported junta, the ‗Derg‘. In July 1975, Proclamation No. 47: ‗*Government Ownership of Urban Lands and Extra Houses*‘ nationalized all urban land in an effort to force a fairer distribution of wealth across the country (Teshome, 2008) (Balcha, 2014). The nationalization brought significant reduction in the rental price for low-cost rental housing of between 15 and 50 per cent for occupants paying below ETB 300 (USD 23). In Addis Ababa, the rent of 80 per cent of the city‘s population was reduced by 30 per cent (Kebede & Jacob).

Post 1974 though, the Derg regime brought up a drastic policy change with nationalization of all urban land and with it came public ownership of rented houses, subsequent reduction of the monthly rent payment on the low income tenants. The 1975 proclamation allowed citizens to own only one residential house per household but there was no restriction on the number of business which could be held by individual or a group (Balcha, 2014). The sub-standard housing continued to flourish within the city even though the government tried alternative methods for provisions of housing, such as co-operative housing with the underside of ―sites and services" but that didn‘t put a dent on the housing quality and demand.

During the late 1980s, the ‗Derg‘ loosened its control of housing supply by allowing private house owners and tenants of public premises to sell and exchange their houses although in reality the government devolved very little control and maintained its position as the key driver of housing supply. Proclamation No. 292 of 1986 specified that ―*residential buildings could be produced only by state enterprises, municipal governments, housing cooperatives and*

individuals who build dwellings for their personal consumption", effectively excluding large-scale private sector housing developers to address the large demand.

When the regime changed in 1991 and the urban population in the city started an exponential growth, the new government decided to thinking of new ways to bring about a better housing solution that is inclusive of the low income strata and considerate of the economic growth. The integrated Housing Development Program was born in 2004.

In the four plan years of 2006/07 to 2009/10, it was planned to construct 400,000 housing units through which more than 200,000 job opportunities could be created for urban dwellers being embraced in about 10,000 Micro and Small Scale Enterprises (MSEs) of various construction and production trades, out of which the construction of more than 150,000 housing units was completed and 175,000 job opportunities were created. Moreover, a total of about six thousand small enterprises have also been participating in the program (IHDP), a fact which has a high contribution for the speeding up of urban development.

Various strategies such as capacity building of new and existing contractors, construction professionals and members of implementing agencies have been devised and implemented on due course of the implementation of the program so as to improve capacity limitations vis-à-vis the construction industry. In relation to this, for the housing development and various public development projects, capacity building pertaining to logistics and supply through importation of industrial products such as cement, reinforcement bar sanitary and electrical materials in bulk purchase have also been undertaken so as to make the houses to be constructed be more affordable. In addition to this, trucks and machineries, agro stone equipment was also supplied (Ministry of Urban Works and Development, 2010)

When congestion and urban sprawl became a problem in Addis Ababa, with whole neighborhoods in the center of major cities being cleared for urban development, the urban renewal programs have the twin objectives of promoting urban growth and providing improved housing for the urban poor. On the one hand, the clearing of areas without high-value buildings is viewed by developers as freeing urban space for the construction of office blocks, shopping centers and real-estate development. (Tiumelissan & Pankhurst, 2013)

The city authority of Addis Ababa has currently given increased attention to urban development by replacing poor residential areas with condominium houses and modern apartment complexes. Different documents (the Office for the Revision of Addis Ababa Master

Plan (ORRAMP) 2002, the Integrated Housing Development Program (IHDP) 2006, the Addis Ababa City Administration (AACA) 2007) explain that the program of urban redevelopment aims at achieving an improved living environment for the residents and a better image (beautification) of the city in order to enable an exploitation of its economic potential. (Abebe & Hesselberg, 2013)

4.4. Definitions and Terminology

In identifying the different housing projects throughout the world, it‘s important to identify the meaning of different housing terms and their implications. **Mass Housing** is defined as any system of housing which contains multiple domiciles for separate and discrete family units Ione building. Usually, but not exclusively, high rise buildings such as apartment blocks, blocks or flats, tenant buildings etc. (Answers.com, 2013)

Condominium housing is a name given to the form of housing tenure where each resident household owns their individual unit, but equally shares ownership and responsibility for the communal areas and facilities of the building, such as hallways, heating systems, and elevators. There is no individual ownership over plots of land. All of the land on a condominium site is owned by all homeowners. Usually, the external maintenance of the roof and walls are undertaken by a Condominium association that jointly represents ownership of the whole complex, employing strict management to ensure funding from each homeowner. This association consists of representatives of all condominium residents who manage the site through a Board of directors, elected by association members.

IHDP also known as Integrated Housing Development Program is a program dedicated to bringing housing for income groups that lack the shelter privilege, while empowering them to have better economic stands. The Ministry of Works and Urban Development of Ethiopia describes the purpose of **Integrated Housing Development program (IHDP)** as follows:

> –The Integrated Housing Development Program, combined with increased provision of land, infrastructure and services are intended to contribute to achieving MDG Goal 7, Target 10: *To halve, by 2015 (EC 2007), the proportion of people without sustainable access to safe drinking water and basic sanitation* and Target 11 – *By 2020 (EC 2013), to have achieved a significant improvement in the lives of slum dwellers (2007)*.” (Ministry of Works and Urban Development, 2006)

One of the main aims of the IHDP is the clearing of ‗slum' areas and the re-housing of their residents. Condominium housing is the type of building characteristic of this program, consisting of multi-story apartment blocks. This form of housing was promoted as a response to a growing shortage of land and housing (Mihretu, 2005).

4.5. Significance of IHDP

Many problems that were identified critical by UN-HABITAT standards were stated in order to produce objectives for IHDP in the housing sector. These problems include unemployment, lack of social and physical amenities, urban sprawl and congestion that eventually leads to poverty. These problems were stated to have appeared, not only in Ethiopia but also, constantly throughout developing countries which led to UNHABITAT bringing a need for a better strategy (UN-HABITAT, 2011). AAIHDP was presented as a solution to previous, current and possibly future housing inflictions in Ethiopia.

According to a published report by UN-HABITAT, the following are the reasons for the need of IHDP in Ethiopia. Since the Ethiopian Integrated Housing Development Program is an ambitious Program that directly addresses the pressing low-income housing challenge. The Program is significant and worthy of documentation for four principal reasons (UN-HABITAT, 2011).

1. Large scale

The IHDP is a large-scale approach to addressing the current housing deficit, the poor quality of the existing housing stock, and the future housing needs due to continued urbanization. Ethiopia is one of few countries in Africa that has recently implemented a Program at such an ambitious scale. The large scale contrasts the prevailing approach of small-scale project based slum upgrading and housing cooperative schemes.

2. Pro-poor

The Program allows low- and middle-income households, who typically live in precarious housing situations to access improved housing. Through the construction of durable, fully-serviced housing units the Program greatly improves their living conditions, security of tenure, and access to basic services.

Importantly, the Program has facilitated access to credit for the low-income sector of the population, through the Commercial Bank of Ethiopia, where previously there was very limited opportunity for low-income households to secure credit for improved housing.

3. Slum prevention and access to homeownership

The Program marks a radical departure from previous government-owned rental housing approaches to that of private homeownership. The Program highlights government and local authority commitment to addressing housing affordability for the low-income sector of the population and improving the living conditions of the low-income urban dwellers to meet the MDGs and reduce urban slum prevalence rates in Ethiopia.

4. Integrated approach to housing and economic development

The Program recognizes the opportunity for housing to stimulate the economy, create employment, and improve the capacity of the construction and financial sectors. The adoption of cost-effective construction techniques and systems, notably pre-cast concrete elements, have reduced construction costs (by up to 30 per cent) compared with conventional systems, improved the speed of construction, and facilitated the development of small and medium enterprises to produce construction elements. Furthermore, effective quantity surveying and construction management systems have helped reduce construction costs and material wastage, resulting in a program that is extremely cost-efficient.

4.6. Current Status of IHDP

According to documents prepared by AAHDPO communication office department in 2016, 108,482 houses were transferred to the people up to the year of 2013. From 2012-2013, the construction of 73,000 houses was started and all of which was to be transferred within the following three months. In 2014 and 2015, 50,000 houses in each year were started. Currently, there are a total of 276,015 houses. The following table shows the detail of housing completed in each year since the initial project of IHDP in gerji area (with 750 model houses built within).

Number	Year of Beginning of construction	Housing amount no.
1	2004/15-2009/10	81,226
2	2010/11	17,171
3	20011/12	44,876
4	2012/13	39,126
5	2013/14	52,245
6	2014/15	41,331
Total		276,015

Table 4.1: number of houses built under IHDP

Source: AAHDPO Communication Affairs Support Work Process

4.7. What is expected of IHDP?

Community Driven- Community participation is a key in any planning. Community members must be involved in initial project meetings and residents consulted on unit design, programs, and planning. Participatory activities will keep the energy high and provide residents with a meaningful role in project development. An inclusive, people-driven process will gain acceptance from the businesses, neighborhoods, and politicians affected by the project. Broad community support is essential to ensure the residents‘ success (Urban Plan Institute, 2012).

Developed Partnership- An ideal partnership provides benefits to both partners, with the pairing creating an entity that is stronger than its individual parts. Affordable housing developers routinely partner with a variety of different organizations (Urban Plan Institute, 2012). While IHDP considers the multitude of benefits that it gives to the end-users, the matter of having different actors work together to achieve the final output must still be taken into consideration, along with the benefits of each actor in the process.

Social Integration- Low- and moderate-income families do not differ from other families in their desire for housing with access to basic amenities and advantages. Accordingly, developers should site housing projects to maximize economic and social opportunities for its residents as well as to allow for quality-of-life amenities, including access to good schools, safe streets and parks, and public transportation options. (Urban Plan Institute, 2012). This social integration can be brought up with design solutions and special considerations that facilitate such social interactions.

4.8. Presentation of the Data

The bulk data that emanated from facts about organizational structures and design and planning processes in the IHDP was the product interviews with the Key officials and team members of each of the actors that took part in the design and construction of IHDP houses. There were scheduled visits to people with tasks that were/are directly involved with the making of IHDP since the inception of the project. They were asked about the general tasks of their division, as well as specific tasks that were indebted to them, and the systems they used a better perception on the procedures. The organizational structures were found from the managerial department of each actor in the IHDP, and the design processes were found by linking the procedures by input from the actor.

4.9. Major Actors in IHDP

The dominant player in housing is the **state**, manifested through its various arms such as **regional governments**, **districts**, and **kebeles**. The state controls the majority of the accommodation and influences the supply of new housing through active involvement in material production and importation, land supply, and housing finance. According to the report done on IHDP by UN-HABITAT, and studies made by interviews with key informants that took part in the design and implementation of all of the Condominium projects in Addis Ababa were as follows:

- **A.A.H.D.P.O** (Addis Ababa Housing Development Project Office)
- **CBE** (Commercial Bank of Ethiopia)
- **Addis Ababa City Administration**
    - **A.A.U.P.I** (Addis Ababa Urban Plan Institute)
    - **A.A.U.D.I** (Addis Ababa Urban Development Institute)
- **MoHUD (Ministry of Housing and Urban Development)**
- **GTZ** (German Technical Corporation)
- **Private Consultants and Contractors** such as
    - **MH Engineering**
    - **MGM Consult**
    - **PACE Consult,**
    - **Habtamu International, Etc.**
- Local people/community

4.9.1. Addis Ababa City Administration (AACA)

AACA has been the managing agency for the IHDP in Addis Ababa since its birth in the pilot project, and is responsible for the selection of new sites; the allocation of government resources; the extraction of funds from the city‘s budget to finance construction; the acquisition of bonds from the Commercial Bank of Ethiopia (CBE) to pay for all other factors including the infrastructure costs and design-team costs; and the compensation of all households displaced by inner-city renewal. (UN-HABITAT, 2011) The City Administration first created **Addis Ababa Housing Agency (AAHA)** for management of unit lots produced within IHDP, and then created

the **Housing Development Project Office (AAHDPO)** under its own division **Bureau of Works and Urban Development** specifically to manage the implementation of the housing program.

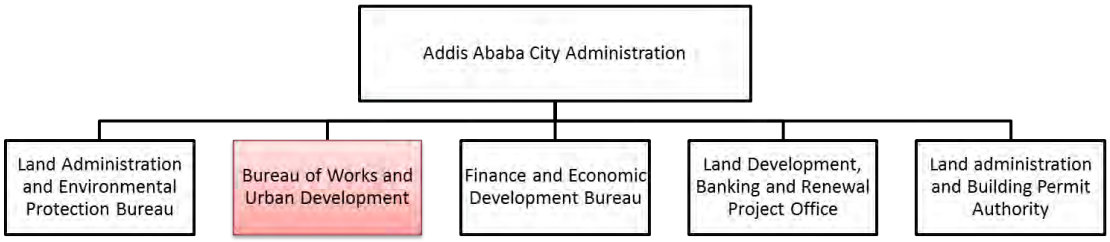


Figure 4.1: Addis Ababa Administration Organizational Structure

Source: The Ethiopia Case of Condominium Housing: The Integrated Housing Development Program-UNHABITAT ,2011 G.C.

After restructuring of its Organizational Hierarchy, the Addis Ababa city administration has two key divisions under its more sophisticated divisions that play an important role in the making of IHDP: **A.A.C.P.I** (Addis Ababa City Plan Institute) and **A.A.U.D.I** (Addis Ababa Urban Development Institute), despite the timing of their recent interference in the projects, are currently in charge of productions of Local Development Plans.

Organizational structure: Addis Ababa Administration

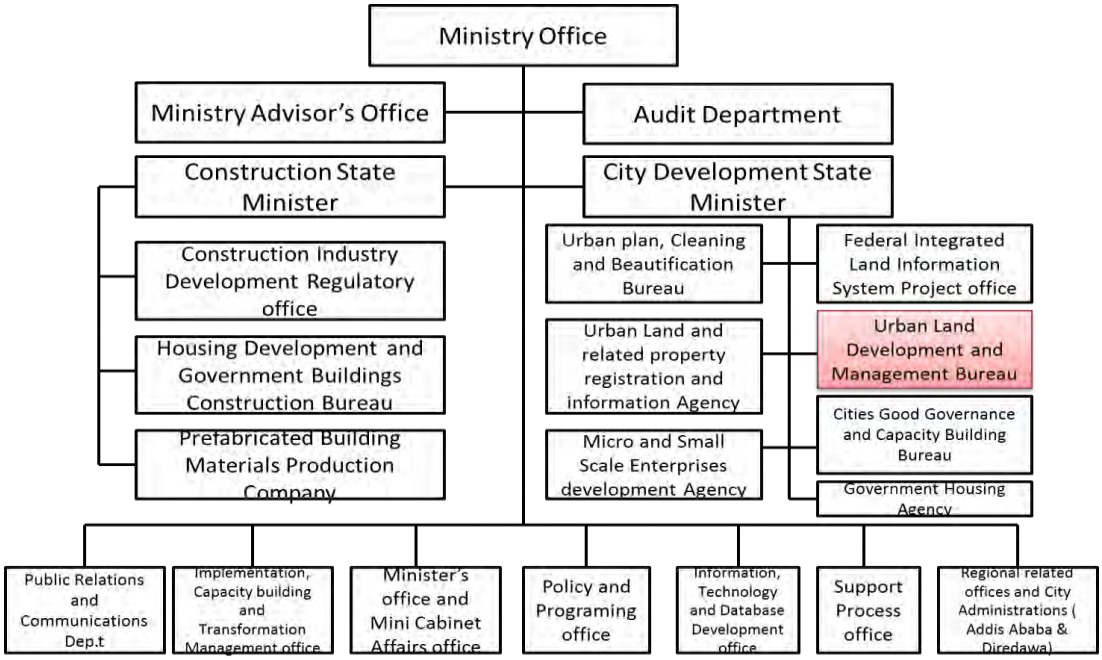


Figure 4.2: Organizational structure of City Development State Ministry

Source: Urban Land Development and Management, Urban Plan Institute Operational Manual, 2011)

The Urban Land Development and Management Bureau mainly conduct the role of land related matters such as acquisition, allocation, banking and transfer. The three major departments under the bureau are currently related to all land related affairs regarding the IHDP in Addis. (Urban Plan Institute, 2012)

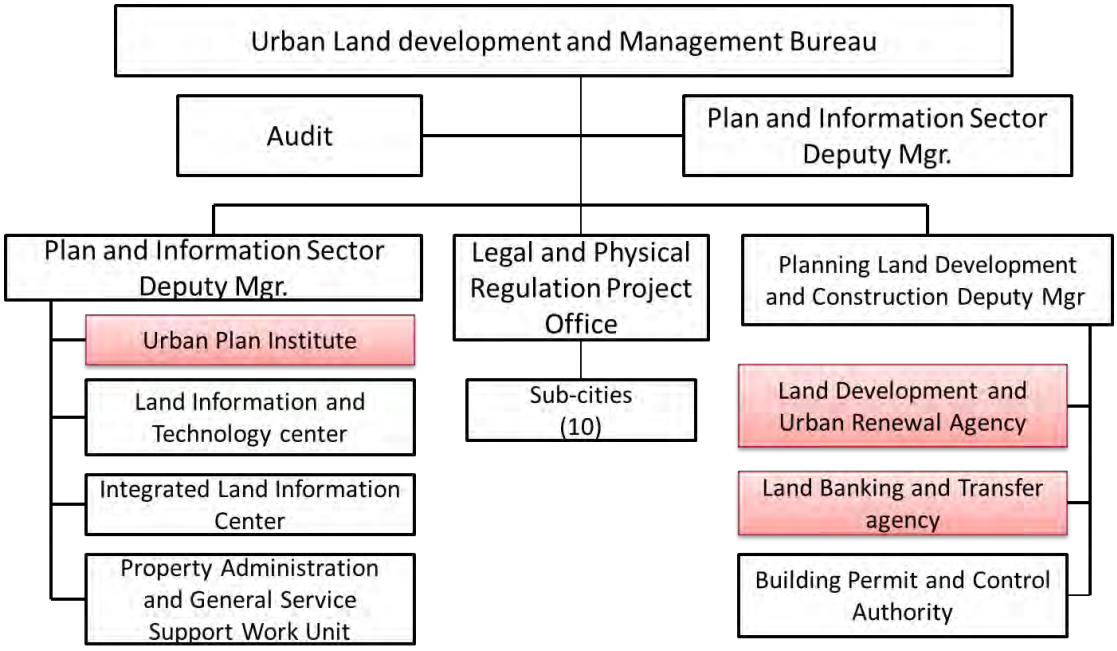


Figure 4.3. Urban Land Development and Management Organizational Structure

Source: Urban Land Development and Management, Urban Plan Institute Operational Manual, 2011)

Land Development and Urban Renewal Agency- accepts all requests for land for housing from A.A.H.D.P.O, searches for available land and requests for LDP and NHD from Urban Plan Institute.

Urban Plan Institute- an institute that prepares LDP on a quarterly basis for Addis Ababa looks up the request and prepares LDP (and NHD if required) for the project. This Institute started making LDP for IHDP since 2006.

4.9.2. Ministry of Housing and Urban Development (MoHUD)

The Ministry of Housing and Urban Development, having changed its title thrice from the former name **Ministry of Works and Urban Development** since during the initialization of IHDP's pilot project, to Ministry of **Construction and Urban Development**, to **Ministry of Construction, Housing and Urban Development** since 2004 during the introduction of GTP, deals with the housing program at large. According to a UN-HABITAT publication, the Ministry provides support and direction at national level whilst a Bureau of Works and Urban

Development in each region has been set up to coordinate the specific needs of the area (UN-HABITAT, 2011). Currently known as the **Ministry of Housing and Urban Development**, this government body provides rules and regulations for urban design and building typology, as well as some maintenance and project follow-up for projects in IHDP.

Under the Housing Development Bureau in the MoWUD there are four Directors: one to manage housing finance; one for the implementation mechanisms; one for capacity building and one for research and design.

Organizational structure: MoHUD

MoWUD had 5 major sub-divisions in the realm of Planning and Urban Development, One of them being the Housing Development Bureau (Project Office) that was responsible for all Housing related matters including the production of the IHDP. The following divisions put in a red box are as directly affiliated with the making of IHDP.

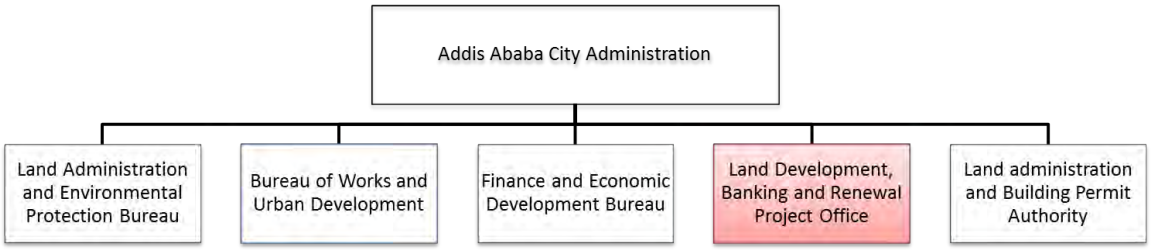


Figure 4.4: MoWUD Organizational Structure

Source. ***The Ethiopia Case of Condominium Housing: The Integrated Housing Development Program-UNHABITAT ,2011***

MoWUD has since long transformed in terms of Organizational Hierarchy and changed its name to MoUDHC in 2004 (with the three major departments of Housing, Urban Development and Construction), and currently to MoHUD in 2008 when the construction department has independently taken its own office leaving Housing and Urban Development together under the ministry. Although MoHUD hasn‘t fully implemented its new organizational structure, the IHDP was undertaken with this governmental body under two changes in its organizational structure so far.

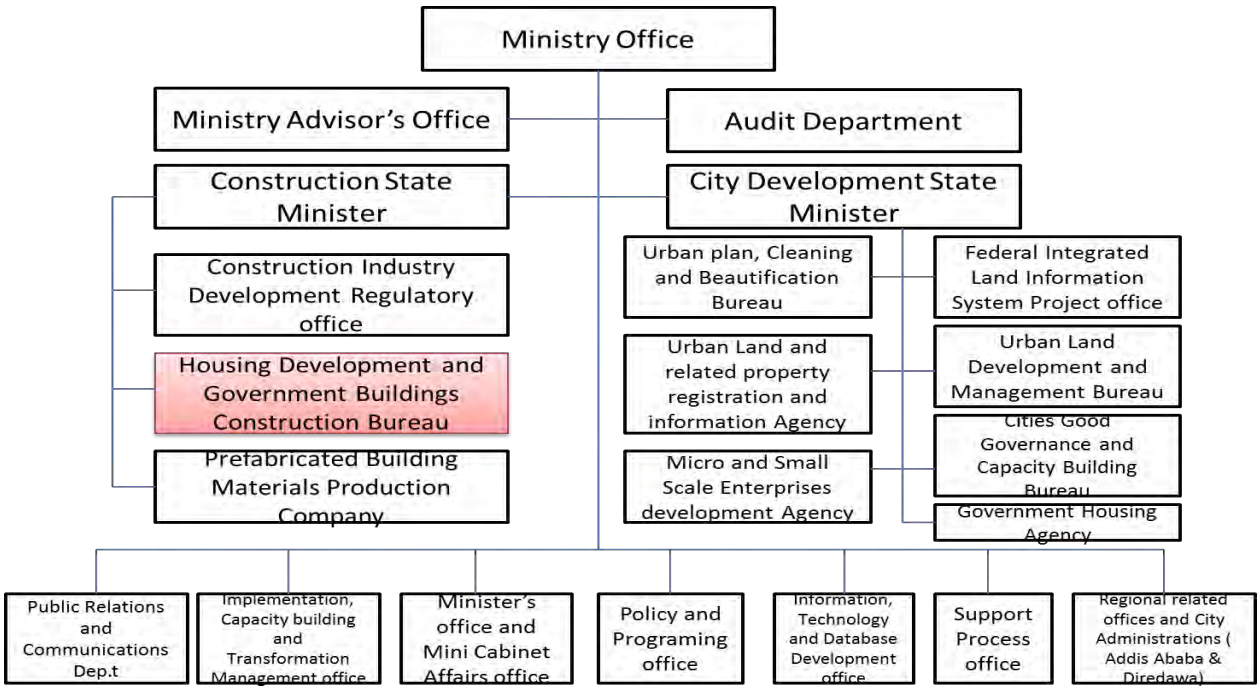


Figure 4.5: Ministry of Construction and Urban Development Organizational Hierarchy
Source. ***MoUDHC- HR office, 2011***

Ato Tadesse Yemane, Department Head of the Housing Development and Government Buildings says that the Ministry has kept in contact with the A.A.H.D.P.O for better assistance and control of all the projects carried out with the support of the 8 divisions it withholds: 4 divisions within **Operations Sector** and **Capacity Building Sector** each. Under the Capacity Building sector, there lies:

- **Strategy and Legal affairs Office**
  - Prepares rules and regulations regarding building height, room size proportions, etc.
  - Has prepared rules and regulations for IHDP twice since the pilot project in 2002.
- **Housing Development, Finance and Transfer Office**
  - Supports with finance bonding, where it communicates with Commercial Bank of Ethiopia and makes easier route for payment for end-users
- **Construction Materials Research and Support Office**
  - Researches and brings up alternative construction materials
  - Researches and suggests ergonomic construction machineries
- **Urban Housing Information Administration, Monitoring and Support Office**
  - Monitors Houses built after completion and checks for maintenance requirements and other needs by communicating with Social Security Community electives

Whereas Operations Sector holds:

- **Housing Projects follow up, evaluation and feedback Office**
  - Inspects projects by site supervision which is carried out per site per month
- **Design Preparation, Implementation and Monitoring Office**
  - Gives support for design preparation
  - Supports contract administration between consultants and AAHDPO
- **Construction materials Provision and Capacity Development Office**
  - Provides material supply and Logisics
  - Regulates proper distribution of materials and machineries
- **Federal Governmental Offices Construction Project Office**
  - Ensures construction of governmental offices

4.9.3. Addis Ababa Housing Agency

The Addis Ababa Housing Agency (AAHA), which was established under the transitional Addis Ababa City Administration (AACA), was the responsible body to develop the first pilot projects at Gerji. The same office handled additional 10 sites developed in selected sub-cities. The preparation of land for 102 sites was also handled by the same office. Other tasks of the institution include registration and administration of houses owned by the city administration. At this stage, the grand housing came with tasks ad responsibilities that required more capacity. This led to the formation of a separate office to handle the housing development, the AAHDPO, in May 2004. Since the formation of AAHDPO, the AAHA has been mainly engaged in transferring the completed houses to recipients (Kifle, 2008).

4.9.4. Addis Ababa Housing Development Project Office (AAHDPO)

The Addis Ababa Housing Development Project Office was then set up to ensure the successful delivery of the three main processes in the IHDP in Addis Ababa: the **design**, the **construction**, and the **housing transfer and administration**. One of the reasons for introduction of AAHDPO into the system was the failure of AAHA to do its task and the disparity between the lists of owners posted on newspapers and the available finished houses, an instance where more than 1000 winners were denied whereas the houses they have won had been issued to others (Kifle, 2008). Ten sub-city branch offices of the AAHDPO were set up around the city to facilitate the construction of condominium units equipped with their own Housing Transfer Offices, each clustering several sub-cities.

Housing Development Project Offices are currently found to be operational in implementing this extensive undertaking in totally 56 cities and towns nationwide and particularly in the regions of Oromia, Amara, South Nations Nationalities and Peoples, Tigray, Harari, including the metropolitan cities of Addis Ababa and Dire Dawa (Ministry of Urban Works and Development, 2010)

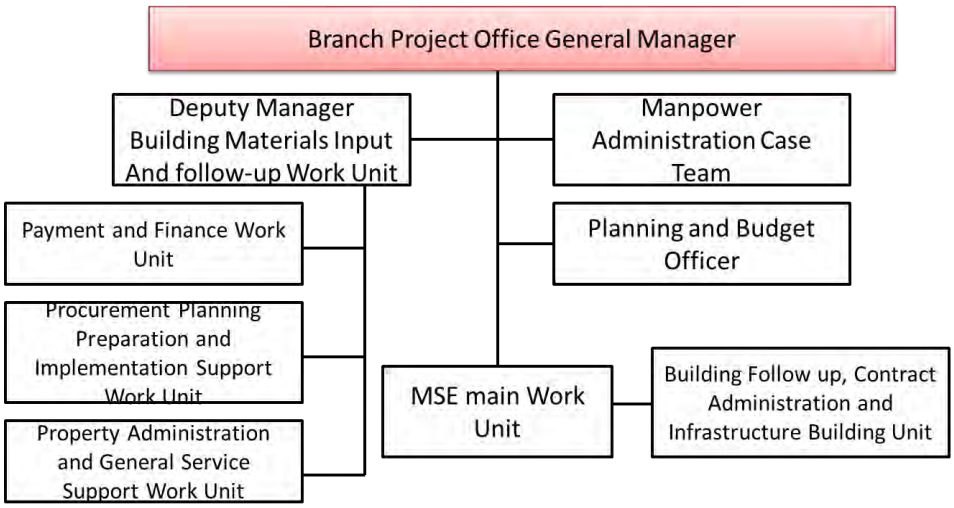


Figure 4.8: AAHDPO Branch Office Organizational Structure,
Source: AAHDPO, 2011

AAHDPO has undergone three organizational transitions for the purpose of simplifying co-ordination of the housing projects. It was first a singular office that had to branch out its alias offices to every sub-city, with a total of 10 branch offices that work in coordination with the main office. It had also undergone some structural changes from HDPO (Housing Development Project Office) at the beginning, to HCPO (Housing and Construction Project Office) by the end of 2011, and back to HDPO at the end of 2015. AAHDPO currently holds about 20 project offices that carry out equal tasks as the office, and work together if necessary.

4.9.5. German Technical Corporation (GTZ)

In 2003, GTZ investigated the technology of prefabricated building materials needed to implement a low-cost housing Program, through their bilateral Program. The last project they were involved in was handed over to the government in March 2010, marking the completion of their contract. Whilst the organization was acting as an implementing body, they engaged a project manager to administer both the finance and construction aspects of the Program.

4.9.6. Commercial Bank of Ethiopia (CBE)

CBE is a government-owned bank, whose mandate is to provide finance for commercial purposes. In 2006, facilitated by the MoWUD, the CBE agreed in Memorandums of Understanding with the five involved regional states and the city of Dire Dawa to purchase bonds in order to enable the regions to finance the implementation of the IHDP. The city of Addis Ababa, after exclusively using the cities own budget during the first years, also started selling bonds to the CBE to finance all factors of the Program, including construction costs. The Bank provides funding through its **Credit Division** for the total cost of the Program‘s implementation in Addis Ababa and in the regions, and not on a site-by-site basis. (UN-HABITAT, 2011)

4.9.7. Private Consultants and Contractors

Consultants and Contractors were, and still are, a significant set of actors in the housing design and construction process in IHDP. There have been known involvement records of AAHDPO with more than 50 Private Consulting and Contractor companies for the production of the design for LDP‘s, NHD‘s and typologies, along with their construction. Most of them have already acquired awareness through the capacity building program provided by AAHDPO‘s and AACA‘s Capacity Development program packaged with incentives for the startup of the projects. Some of them that are currently working on projects throughout Addis Ababa are mentioned henceforth:

Sub- City	Name of Consulting Office	Specific Site
Bole	GET Consult	Yeka Ayat 2
Gulelle	Yohannes Abay Consulting	Mekanissa Kotari
	AT-CON Engineering	Kara kore and Degenet
	JDAW Consult	Jemo 3 (Batch 3 & 4)
Akaki Kality	Gatmets Consult	Gelan 3
	JDAW Consult	Gelan 3
Nifas Silk Lafto	Wide Eng. Consult	Koye Fiche
	Beles Consult	Koye Fiche
Lideta	PACE Consult	Lideta2, Baasha Wolde, Meskel Inter
	Habtamu Inter.	Bole Arabessa
	K2N Consult	Bole Arabessa
Kolfe Keraniyo	Nomy Consult	Yeka Ayat 2
Yeka	MGM Consult	Yeka Ayat 2 and 3
Project 13	Acute Consult	Yeka Abado
	PACE Consult	Yeka Abado
Project 14	MGM Consult	Yeka Abado
	PACE Consult	Yeka Abado
Project 15	SG Consult	Bole Arabessa
	Berhan Tegegn	Bole Arabessa

Table 4.2: Addis Ababa Housing Construction Project, Consultants and their respective supervision sites.
***Source: AAHDPO, Construction Department (2014*)**

Discussed below are some of the consultants &contractors that took part in various IHDP projects.

4.9.7.1. MH Engineering (MH Engineering)

MH Engineering is a large Ethiopian architecture firm composed of 80 architects, civil engineers, structural engineers, electrical engineers, and quantity surveyors, was responsible for the concept design of the pilot condominium project in Ethiopia and a succession of 31 schemes thereafter, 13 of which were under the management of GTZ, and the remaining 18 are under the management of the AAHDPO. MH Enginering supervised for new condominium

projects, but has stepped back from their role as the lead design team so as to enable newly established companies to take on the responsibility. (UN-HABITAT, 2011)

4.9.7.2. MGM Consult

MGM consult is a level 2 consulting office comprised of architects and engineers. It has taken significant part in the IHDP by its specialization in the development and modification of building typologies. MGM has produced L1 and modified A1, A2, E1, E2, L1, and L2 typology plans for one of Yeka Abado and is currently assisting AAHDPO with the modification of G+7 building units in Bole Arabssa. Design and modifications include architectural, sanitary, structural and electrical designs, door/window and roof schedule. MGM has also been a part of the contract administration and site supervision task for Yeka Abado by provision of 100 contractors for the site.

4.9.7.3. PACE Consult

PACE Consult is a level 3 consulting firm that has been taking part in the production of LDP‘s and NHD‘s in sites such as Jemo II and III, Gelan III, Lideta I and II, Basha welde, site design of Bulbula Arabssa I and Genet Menafesha and typology designs of L3 type condominiums. This consulting office had also taken part in contract administration and site supervision various project sites in AAIHDP.

4.9.7.4. Habtamu International

This Grade 1 consultant firm, among many firms that participated in the construction of IHDP, has taken part in the design of LDP and NHD, some typology modifications, contract administration and supervision some of the 40/60 sites such as the Bole Arabssa site by forms of signed contracts and agreement with AAHDPO.

4.9.8. Local People

There have been no known involvement of the local people in the planning or design processes that were carried out during any AAIHDP project, but they were part of the housing puzzle. IHDP has been the sole cause for the launch of over 150 MSE‘s by the end users with special consideration given towards production of raw-materials for the construction of the housing itself. The system pre-devised also promoted and encouraged business development by the end users in the form of incentives and capacity building.

4.9.9. Saving Houses Development Enterprise (40/60 sites)

The Addis Ababa Saving Houses Development Enterprise is another governmental organization which produced saving houses, otherwise known as 40/60 housing project, and was formed in 2012. Its office was formed by AACA with hopes of including the middle income groups within the program exercising the term of cross-subsidy experimented before in the pilot project and the 103 sites on a larger scale. Its organizational structure resembles that of the branch offices in AAHDPO within sub-cities and is as follows:

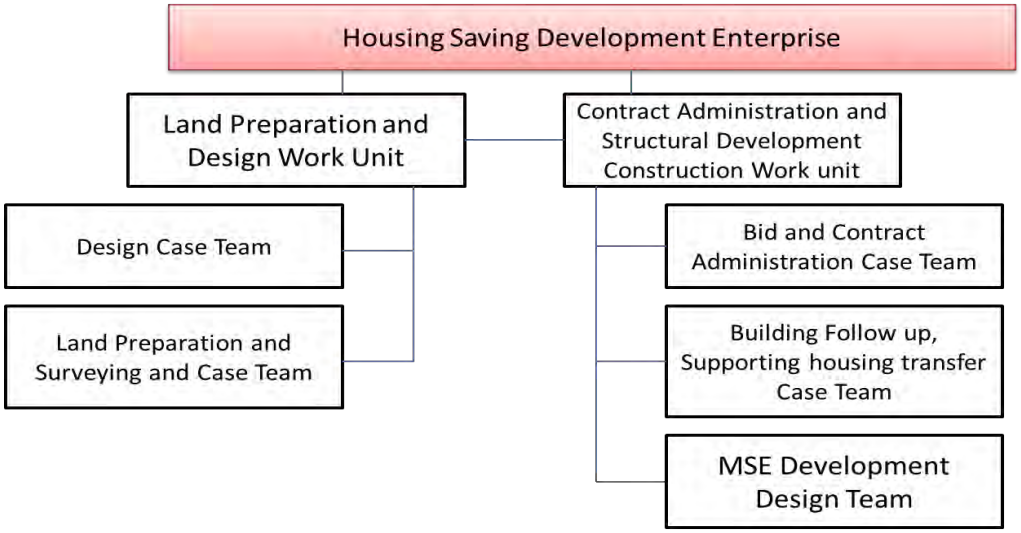


Figure 4.9: AASHDE Organizational Structure.

Source.: AASHDE, Flexible Design BPR report by, 2014

4.10. Organization and Management

Organizing of housing development project offices was conducted both at regional and city/town levels, except Addis Ababa since it was a pioneer city of the program before it was bench marked and scaled up to regions, due to the fact that that there were no housing development program implementing agencies in the regions for the coordination of construction management, land and infrastructure preparation, design follow-up as well as logistics facilitation. (Ministry of Urban Works and Development, 2010)

Housing development implementing agencies have been organized and aligned with the Federal, Regional and city/town tiers having a clearly established responsibility in such a way that it facilitates integration and collaboration. In all regions the IHDP has been implemented being coordinated by steering committees as well as management boards at regional level while by the same committee led by city Mayor at city/town level. (Ministry of Urban Works and Development, 2010)

For the reason that a standstill of the housing development program has been observed during the previous project year, there is a need for revitalization by strengthening the linkage between the leadership of various levels and the regional and city/town level steering committees as well as boards of the IHDP. Moreover, it is imperative to identify and resolve similar problems which the 10 new universities construction projects are facing. (Ministry of Urban Works and Development, 2010)

4.11. Design Processes in IHDP

The Integrated Housing Development Program, in its broad sphere and variety of nature fitting towards different sites and sizes, has undergone many different design processes throughout its lifespan. It has involved many actors for the startup to the execution of the projects as well. AAHDPO has had a means of categorizing these projects into rounds that are pertaining to the time they were prepared and implemented, which adds up to 18 rounds on a current count and plus.

For the purpose of the research, theses rounds are further clustered into phases that are similar in the process that was taken to produce them and the different actors that were involved in the making of the projects.

The Different Phases throughout the making of IHDP mount to:

- The Pilot Project
- The Infill Sites
- The Expansion sites
- The Renewal Sites
    - 20/80 and
    - 40/60
- 10/90 housing projects

The transition of these projects is relative in a way that some of the actors that took part in the previous project also took part in the beginnings of its successor, meaning that the phases overlap with each other. Some of the IHDP projects also have processes have special changes than the process mentioned below. This is due to different factors such as the introduction of a new actor or a process and difference in process flow. Majority of the processes are clustered and described in the following sites.

4.11.1. The Pilot project

The Pilot project of IHDP was located at Bole Gerji area. With the initiative idea by the then Mayor of Addis Ababa, Dr. Arkebe Equbay, and the collaboration of consultants, governmental and non-Governmental organizations, and the project was implemented onto a vacant site.

The Pilot project, which accommodates 754 families, was completed within eight-months-time at the Gerji site. The Prime Minster inaugurated the first multi-storied housing July 2004 underlining that it was just a start and the project shall reach the corners of the city (Kifle, 2008).

The main stakeholder for the planning and implementation of these plans is the project office, AAHDPO. In the same way, the planning process for housing development within the city shall follow the same route. The neighborhood planning and design manual that was prepared by the planning department of the city administration in Sep 2006 forwards different phases of the process. (Kifle, 2008)

Major Actors for the project were:

GTZ - in charge of the Local Development Plan and Neighborhood design[9]

- Design for affordability considerate of finishing materials and room size.

MH Engineering- with the initial help of Architect Fasil Giorgis, made typologies, and specifically did the structural design for the building blocks. Precast beam was chosen for its time efficiency qualities.[10]

Addis Ababa City Administration- provisions the land and other available resource for the design.

A.A.H.A- does project handling, follow-up and supervision

MoWUD- provision of standards, rules and regulations, Capacity building, research and design

The design

1. AACA researched IHDP strategies and different amenities for housing
2. AACA hired GTZ for project analysis and plan development.

[9] German students were also given the opportunity to participate in the design preparation (summit project) under GTZ and their inputs were considered. Their designs mostly involved making the housing provision to gravitate towards ~~g~~reening" the environment, their building height was limited to G+3 and they countered the density necessities. The interior designs' typology was also more open and spacious that tended to detailed kitchen design & open spaces in neighborhood designs.

[10] The design was also standardized and modularized. It was also modified to adapt the different sites it was to be constructed on within the framework of the same typology.

3. GTZ produced LDP and NHD, and then hired a private consulting company (MH Engineering) under its own for structural layouts and typology design.
4. MH Engineering carried out typology design
5. AAHA allocates units to end-users.

4.11.2. The Infill Sites

Once the Gerji pilot project was completed, it was decided that more projects could be carried out. Therefore, 102 other sites were selected and developed until end of 2006 (Kifle, 2008). This refers to the sites that were chosen for the project to take part throughout the city that target vacant and pocket spaces within the city, hence the name Infill sites. There were approximately 103 sites that disseminated throughout Addis Ababa with known Neighborhood and Typology designs. The reason for the selection of these projects partly rose from the output on the pilot project that resulted in increment of demand and the need for housing, as well as the need to achieve Ethiopia‘s millennium development goals by provision of shelter for the mass.

The main Actors were:

Addis Ababa City Administration- allocation and provision of land for the projects, the land administration bureau approves the land on a plan format that shows the coordinates of the boundary and its area.

A.A.H.D.P.O- According to the former head of land preparation department at AAHDPO, the project office identifies feasible sites, prepares a plan format and requests the land from the land administration for the preparations of NHD and Typology plans for the projects[11]

MoUDHC- provision of rules and regulations for buildings, monitoring and follow up

Private Consultants and Contractors – worked with Construction and supervision of the building blocks. Some also took up design of a couple of typologies.

CBE- giving credits

MH Engineering and GTZ- took part in the startup projects but left to other contractors & consultants.

[11] As the sites were small, able to accommodate less than 10 building blocks, there was no need for the preparation of LDP‘s. This is also the crucial time when HDPO needed to expand to the 10 branch offices within each Sub-city when more projects were executed.

According to a report made by ORAAMP in September 2006, the design process or phases in the preparation of these projects are as follows:

Phase-I Preparation phase (definition of interest and housing program) where objectives and goals are decided, target groups and housing demand are put. This is due to the fact that the areas are not issued legal title deeds.

Phase-II Site selection in search of sites with occupied with Kebele centers, Government-owned plots, vacant land and playgrounds

Phase III- **Investigation and analysis** of the natural and manmade features of the Planning and action area. This was not done for the 102 sites due to the urgency to produce many houses, thereby putting more focus on the quantity than observation of formal planning procedures, social and spatial measures. (Kifle, 2008)

Phase IV- **Develop conceptual plan** where ideas are brought up and stakeholders are involved in discussions to prevent problems at the implementation stage. The stakeholders are:

- Addis Ababa Infrastructure and Building permit Authority
- Addis Ababa Water Supply and Sewage Authority
- Addis Ababa Road Authority
- Ethiopian Telecommunication Corporation
- Housing Agency
- Addis Ababa Urban Planning and inspection Department
- Sub-city and Kebele managers at the project site
- Land Administration and Development Authority

(Source: Neighborhood planning and design manual, 2006)

Phase V- **Preparation of the neighborhood plan and design** as per the conceptual plan and the existing analysis report. (Kifle, 2008)

Construction

Capacity building: Training and assigning credit facilities for micro and small scale industries and training for the contractors were given so as to get into the construction business. Only Grade 6 Contractors were assigned to the design, construction and supervision task,

selected by the construction department of AAHDPO. Both the MSE development divisions at MoHUD and AAHDPO as well as one of the contractors hired for construction that was interviewed state that machineries were lent and some materials such as reinforcement bars, gravel, cement and HCB were given to them as a start-up incentive.

Typology

In light of construction by consideration of affordability and cost, the first designs mostly comprised studio type units with the possibility of a one and two-bedroom type. One and two bedroom types were given out for more cost and studio types for much less by a means of cross subsidy. The registration was open for all income groups: Majority signed up for 1 to 3 bedrooms. For some occasions where relocation is much needed, the studio types were distributed as per the affordability of those who are to be relocated.

Senior Design expert at AAHDPO, W/ro Shewabirhan Belachew, states the design process as follows:

1. AAHDPO requests for land for the projects to Addis Ababa Administration.
2. Addis Ababa City Administration cross checks for free open spaces via its Land Development, Banking and renewal Department division, looks up stock and provides empty sites within the city for AAHDPO.
3. Soil Test- tender documents for soil tests are prepared by AAHDPO and outsourced. This procedure is done before rainy season
4. Rules and regulations for the projects i.e. building height, unit area and such are provided by **Strategy and Legal affairs Office** under **MoWUD**
5. Typology and NHD Preparation as well as Infrastructural design for building blocks is simultaneously done by the AAHDPO staff.[12] Two presentations per design, involving key stakeholders, were carried out to filter good designs.
6. Once designs are completed, Consultants are assigned by the Supervision department to place blocks on the site.
7. Site-work (locating the blocks on the site) is done by AAHDPO, construction department which then hires and introduces selected contractors that took training in its Capacity Building Program to the site.

[12] HDPO Staff had a complete studio of Architects, Urban Planners, Structural, Electrical, sanitary team capable of providing Physical Infrastructures for the sites.

8. After completion of the projects, lots are prepared by AAHDPO by means of their sub-city branches.
9. The lot for acquiring a unit is computerized and systematized in a way that presents the occupant with the type of bedroom that he/she wants and the location of his/her choosing. The lot is processed centrally but is later presented to the tenant a per his/her sub-city preference.
    a. Data input is made using computer software as per the residents‘ choice of bedroom type and location of the site. This was done in all the sub-cities, under every department of AAHDPO.[13]
10. Urban Housing Information Administration, Monitoring and Support Office monitors the houses built after completion and checks for maintenance requirements and other needs by communicating with Social Security Community electives.

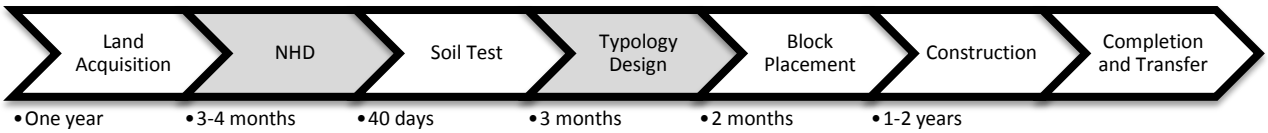


Figure 4.10: Infill Sites Design Process[14]

4.11.3. The Expansion Sites

Expansion, meaning to increase of something in size, number, or importance, (Cambridge Dictionaries, Cambridge University Press, 2016) and fringe which translates to the outer marginal extreme part of an area, a group or activity (Cambridge Dictionaries, Cambridge University Press, 2010), refers to the projects that were implemented at the outskirts of the city. This phase, like the ones before it, has involved as participation of many consultants in the design, and as a result presented many typologies. As the majority set of projects were of a bigger magnitude, much work needed to be done on their LDP and the NHD first by the form of tender documents and bids to private consultants.

Former manager at AAHDPO, W/ro Tsedale Mamo says that the Typologies were made in the same manner of tender and bid to private consultants but after the LDP (that fully integrates all social and physical amenities) and NHD were finalized and accepted. She states that these

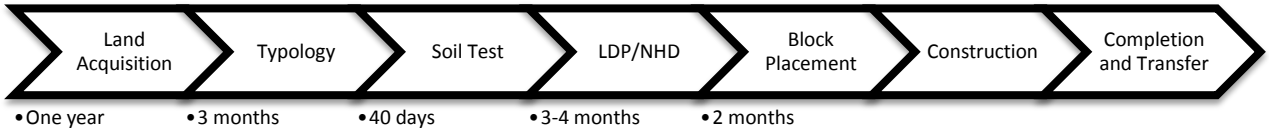
[13] When the lot system receives some unclaimed housing units by any chance, the lot remains and is brought up on the next round of the projects to come so that all housing units are eventually taken.
[14] NHD and Typology design timelines overlap with the timeline for Soil test.

typos were variant of heights and mass of units, ranging from G+2 up to G+4 for previous and G+7 and G+11 for recent projects.

The process is as follows:

1. AAHDPO requests for land for construction of houses to AACA.
2. AACA searches for vacant land within the borders of the city, with its Urban Renewal and development division, and gives land.
3. AAHDPO then, by terms of Bid document and outsourcing, accepts good typologies for the site. There is a possibility of adapting previous successful typologies from AAHDPO database depending on the outcome. There is also the occurrence of two or more typologies in one site.
4. AAHDPO outsource by terms of Bid document (to private contractors) for preparation of LDP and NHD (urban design if necessary)**.**
    a. Requirements such as building height, density and room sizes and typology designs will be provided in the tender documents as the per rules and regulations provided from the Strategy and Legal affairs Office under MoUDHC.
    b. Two presentations per design, involving key stakeholders, are carried out to filter good designs Juries and presentations on a quarterly basis.
5. Soil Test- tender documents are prepared by AAHDPO and outsourced. This is to be finalized before the rainy season.
6. Consultants assigned by the Supervision department place blocks on the site.
7. AAHDPO requests infrastructural designs from A.A.W.D.A.C and E.E.P.C.O. The final LDP and Typology designs are sent to them.
8. Once infrastructural designs are brought to AAHDPO, AAHDPO integrates both onto site.
9. Construction is carried out by selectees of contractors under the Construction department of AAHDPO.
10. Upon completion of a project, Urban Housing Information Administration, Monitoring and Support Office monitors the houses built after completion and checks for maintenance requirements
11. The lot for acquiring a unit is computerized and systematized and a Data input is made using computer software as per the residents‘ choice of bedroom type and location of the site. This was done in all the sub-cities, under every department of AAHDPO.

12. AAHDPO at the sub-city level requests for title deeds for housing units from Land Administration and Building Permit Authority department from the same Sub-city. The division prepares title deeds and sends it back to AAHDPO branch office.
13. The branch office prepares contractual agreement between occupants and CBE so that they can pay 20% of the unit cost and title deeds are given to CBE for collateral. Meanwhile, occupants live in their designated units.
14. Once an occupant completes the payment, he/she can request for his/her title deeds back through AAHDPO for title deeds from CBE.
15. Urban Housing Information Administration, Monitoring and Support Office instigate follow-up and other needs by communicating with Social Security Community electives during post occupancy period.



5.11.4. The Renewal Sites

As the development of the Housing construction progressed with hints of urban sprawl and congestion and many deurbanized to the neighboring cities for settlement, the idea for renewing the core areas of the site with housing and valuable social amenities was brought up. The intent was to integrate work with the LDP‘s that the AACA provides that give emphasis to urban renewal in general. Such projects pertaining to this goal were found to be massive and in need of special design program.

With the increment of projects with a larger magnitude and numbers, there was a need for more offices for handling the projects. Currently there are 20 branch AAHDPO project offices handling the projects, with 10 more project offices given numbers aside from the 10 branch offices. In occasions where the project is large, projects from two or more Sub-cities work together on a single site.

This also counts for the time (later on in the development of these renewal sites) when different saving strategies were considered, rather than the first 20/80 strategy which involved the occupant to produce for 20% of the cost, regardless of the fact of how much occupant can actually pay. The previous projects, based on the payment requirements, were all considered as 20/80 projects by default.

The new payment system however requires the occupant to have a validated bank account solely for the purpose of saving the required amount until completion of construction and pay the rest with down payment later on. CBE at this stage, not only gives credit but also prepares a special bank account for each occupant. Such systems were divided into three options as per the capacity of the tenant: 10/90, 20/80, and 40/60 condominium housing. The minimum cost/month expected of each type varies in numbers just as well.[15]

The Design Processes for the renewal sites is presented here below for illustrative purposes:

1. AAHDPO requests for land for the construction of houses to AACA.

2. AACA, through Land Development and Renewal agency, looks up for places that are in need of urban renewal and requests for Urban Plan Institute to prepare LDP and NHD (urban design if necessary).[16]

3. Soil Test- tender documents are prepared by AAHDPO and outsourced.

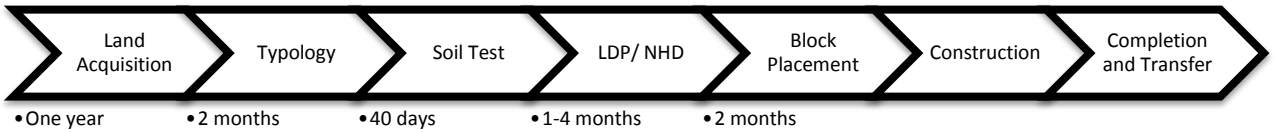
4. Typology Preparation by terms of Bid document and outsourcing.

5. Consultants assigned by the Supervision department place blocks on the site and begin construction.

6. AAHDPO at the sub-city level requests for title deeds for housing units from Land Administration and Building Permit Authority department from the same Sub-city. The division prepares title deeds and sends it back to AAHDPO branch office.
7. The branch office prepares contractual agreement between occupants and CBE so they can pay 20% of the unit cost and title deeds are given to CBE for collateral. Meanwhile, occupants live in their designated units.

8. Once the occupant completes payment, he/she can request the title deeds back through AAHDPO for title deeds from CBE.

[15] 10/90 and 20/80 projects resemble the Expansion sites (with an exception of some 20/80 sites for renewal sites), 40/60 projects resemble renewal sites location wise. Location is also considered as an incentive for middle-income groups to invest in condominium housing.
[16] UPI makes LDP on a quarterly basis with or without request, and it is only recently that it has taken HDPO‘s request for land to consideration to bring forth the design HDPO requires firsthand before its other projects upon that request.



Although the commonly known ‗10/90', ‗20/80' and ‗40/60' sites were given their name with regards to the payment mechanism expected of the occupants, 10%, 20% and 40% of the unit cost are to be saved by the occupant in a his/her own special bank account for housing.

4.11.5. Saving Houses Development Enterprise (40/60 sites)*

Design Processes for the 40/60/ saving housing sites differ slightly from the renewal sites, and it's as follows:

1. AASHDE requests for land for construction of houses to AACA.
2. AACA, through Land Development and Renewal agency, looks up for places that are in need of urban renewal and requests for Urban Plan Institute to prepare LDP and NHD (urban design if necessary).[17]
3. Soil Test- tender documents are prepared by AASHDE and outsourced.
4. AASHDE prepares terms of Tender and Bid document for the production of the typologies. So far only **one documented set of typology remains variant of height** (G+7,G+9 and G+11 buildings with the same type of floor plans were produced with ETG consult as the producer)[18]
5. Consultants assigned by the Supervision department place blocks on the site and start construction.
6. **AASHDE requests for title deeds** for housing units from Land Administration and Building Permit Authority department from throughout the concerned Sub-cities. The division prepares title deeds and sends it back to AASHDE office.
7. AASHDE office prepares contractual agreement between occupants and CBE so that they can pay 40% of the unit cost and title deeds are given to CBE for collateral. Meanwhile,

[17] LDP and NHD are made in house at HSDE with the criteria that the sites do not exceed 10Ha.If they do exceed that area limit, they are made by the UPI.
[18] In the event that the typologies were deemed unfit for the site, there was change in the architectural design with minor adjustments in the structural design of the typologies. Contractors and consultants like Habtamu International Consulting architects and Engineers Office took part in this process.

occupants await their designated units while they continue to save on a monthly basis.*priority is given to occupants who pay 100% or 40% in one payment.

8. Once an occupant completes payment, he/she can request the title deeds back **through the sub city administration** for title deeds from CBE.

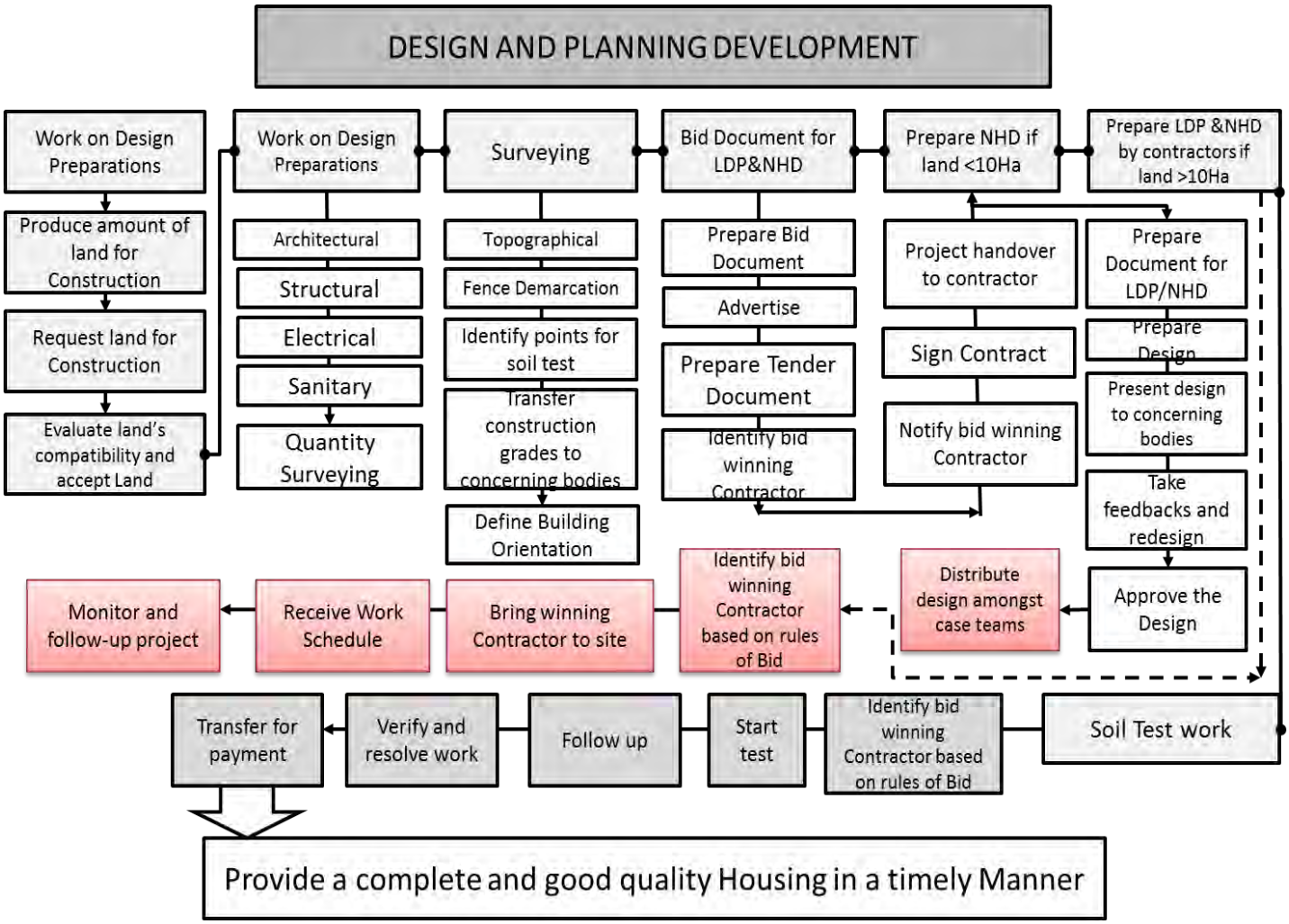


Figure 4.11: Standard Design AND Planning Specification for a developed land and housing

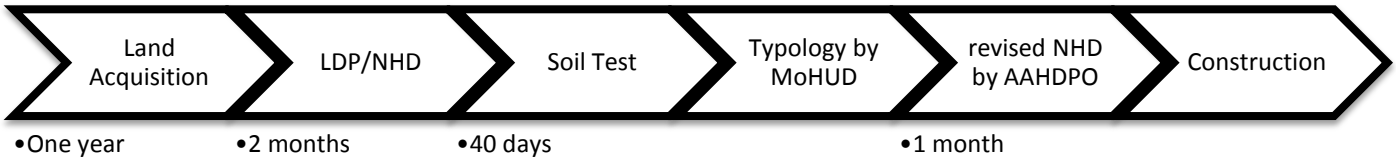
Source: *Flexible Design BPR report by AASHDE*, 2015.

4.11.6. 10/90 projects

The 10/90 project sites, much like the 20/80 sites are mainly handled by the office of AAHDPO. These projects had shown changes in planning process in terms NHD and typology designs and the actors that took part in them. They were introduced in 2012 under the condition of the need for provision for housing for the low-income group. 10/90 sites were introduced onto four expansion area sites, Koye Fiche, Yeka Abado, Bole Arabssa and Kilinto, and integrated with 20/80 unit designs in which the neighborhood design was produced by AAHDPO with typology designs that were pre-given by the Ministry of Housing, Urban Development and Construction.

The G+2 buildings, which are designed with studio type units 29sq.m in size each, are comprised of D2 typology designs to accommodate the population which couldn‘t afford other 40/60 or 20/80 units. It is stated that 960 units were previously transferred whereas 24,300 have just finished construction and are on the process for transfer to the population that saved up for acquiring them.

The process that was carried out for the 10/90 housing units similar as that of expansion areas up to the development of the Local development plan production but takes on a different approach where the typology is provided first by the MoHUD. AAHDPO then produced the NHD for the four sites by integrating them onto the pre-designed LDP. Afterwards, consultants assigned by the Supervision department placed blocks on the site and start construction and the process continued in its similarity with that of expansion areas.



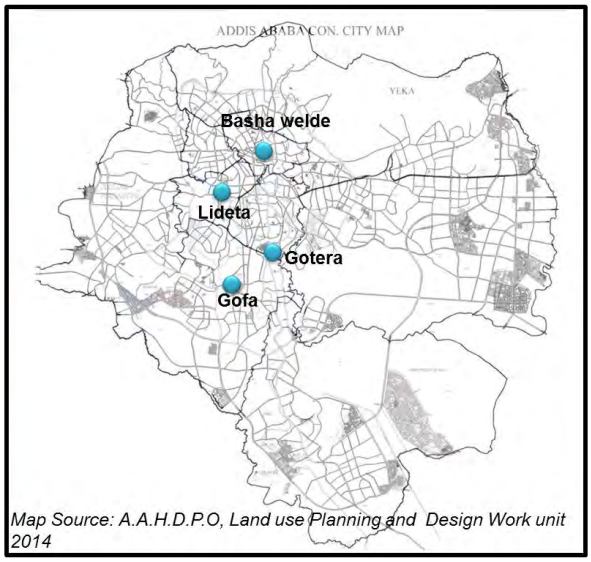
To summarize, the involvement of the actors and their corresponding tasks throughout all the different phases in IHDP can be summarized as follows:

Development phases	Processes	Sub- Processes	Actors
Project inception and planning	Land Acquisition	Request for land	AAHDPO
		Land Provision	AACA(Land Development and Management Bureau)
	Building and Land use Rules & Regulations		MUDC/ Ministry of Housing, Urban Development and Construction (MoHUDC)
Design	ToR Preparation		AAHDPO
	LDP and NHD preparation by considering: - Relocation on nearby - Densification - Mixed settlement - Efficient land use - Participation and Integration	1. Preparation Phase	AAHDPO /AACA (Urban Plan Institute)
		2. Site Selection Conceptual Plan	AACA
		3. Investigation and Analysis	Consultants and contractors
		4. Concept development	Consultants / AACA (UPI)
		5. Neighborhood plan preparation &design	Consultants and contractors / AACA (UPI)
	Typology Design	ToR and Bid winning	AAHDPO/ consultants and contractors
		Design & presentation	
	Construction		Consultants and contractors
	Supervision		Consultants and contractors
Occupation	Finance		CBE
	Assign Unit lots		AAHDPO (sub-city branch)

The Renewal Sites

Main Actors
- AACA
- HDPO (HCPO)
- C&C
- CBE
- MoUDC

Special Points:
- .HDPO outsourced typology modifications.
- C&C - designs and construction
- MoUDHC provided rules and regulations, follow-up and monitoring, construction material research.



Outcome: intensive relocation and site clearance, repetitive typology, larger sites compared to infill sites,

Legend
- Relative site. locations

Figure 4.15: Renewal site projects summary

Phases	Processes	Sub- Processes	Actors
Project inception and planning	Land Acquisition	Request for land	AASHDE(Addis Ababa Saving Housing Development Enterprise)
		Land Provision	AACA(Land Development and Management Bureau)
	Building and Land use Rules & Regulations		MoHUD/ Ministry of Housing & Urban Dev.
Design	ToR Preparation		AAHDPO
	LDP and NHD preparation by considering: - Relocation on nearby - Densification - Mixed settlement - Efficient land use - Participation and Integration	1. Preparation Phase	AASHDE /AACA (UPI)
		2. Site Selection Conceptual Plan	AACA (UPI)
		3. Investigation and Analysis	AACA (UPI)
		4. Concept development	AASHDE/ AACA (UPI) / consultants and contractors
		5. Neighborhood plan preparation &design	AASHDE/ AACA (UPI)/ consultants and contractors
	Typology Design	ToR and Bid winning	Consultants and contractors AASHDE
		modification & presentation	
	Construction		Consultants and contractors
	Supervision		Consultants and contractors
Occupation	Finance		CBE
	Assign Unit lots		AASHDE

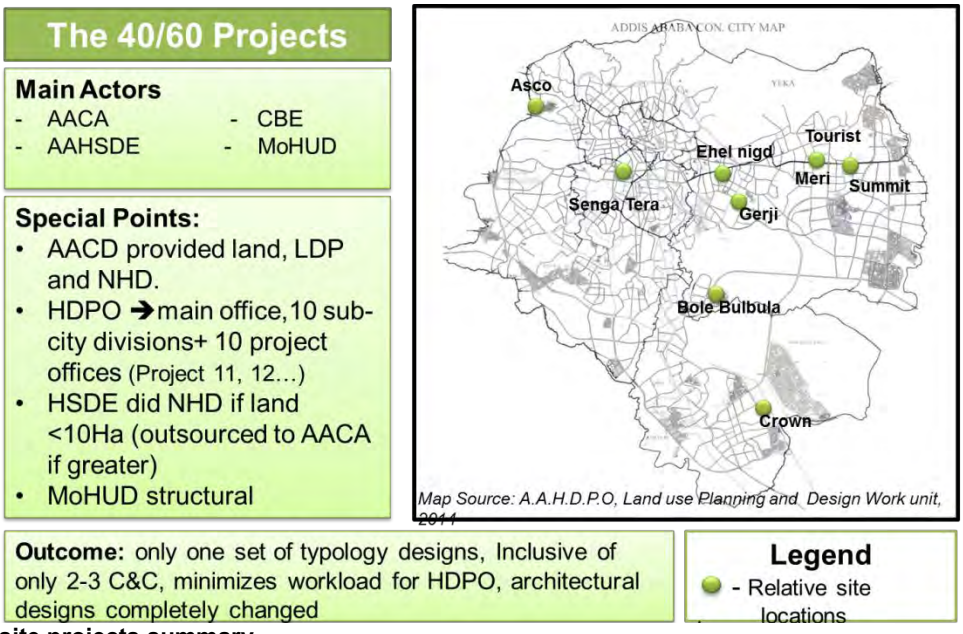


Figure 4.16: 40/60 site projects summary

Phases	Processes	Sub- Processes	Actors
Project inception and planning	Land Acquisition	Request for land	AAHDPO
		Land Provision	AACA(Land Development and Management Bureau)
	Building and Land use Rules & Regulations		MoHUDC/ Ministry of Housing, Urban Dev.& Construction
Design	ToR Preparation		AAHDPO
	LDP and NHD preparation by considering: - Relocation on nearby - Densification - Mixed settlement - Efficient land use - Participation and Integration	6. Preparation Phase	AAHDPO /AACA (UPI)
		7. Site Selection Conceptual Plan	AACA / consultants
		8. Investigation and Analysis	Consultants and contractors
		9. Concept development	Consultants and contractors
		10. Neighborhood plan preparation &design	Consultants and contractors MoHUDC
	Typology Design	ToR and Bid winning	Consultants and contractors AAHDPO
		modification & presentation	
	Modified NHD		AAHDPO
	Construction		Consultants and contractors
	Supervision		Consultants and contractors
Occupation	Finance		CBE
Post Occupation	Assign Unit lots		AAHDPO

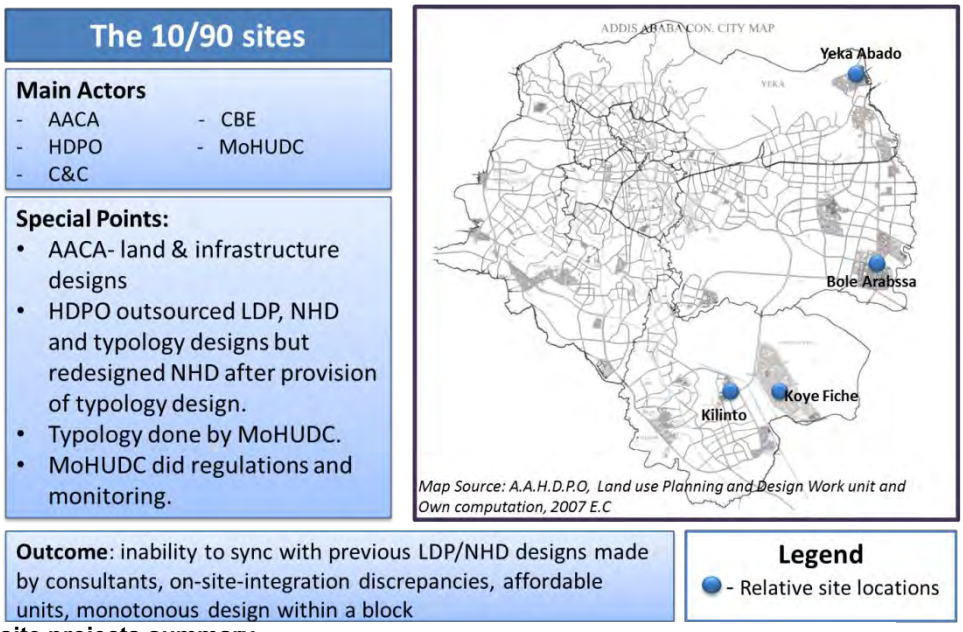


Figure 4.17: 10/90 site projects summary

4.12. The Design Outcome and Its Implications

The Pilot Project- housed situations where there was more room for material and room size research. Typology experiments with G+2 and G+3 blocks were brought up and simplified designs were introduced. As it was oriented towards the low-income groups, it was later recognized to be fewer units than needed due to ample space within the unit. The LDP and NHD were made by a NGO which encouraged flexibility in experimental design and production. The site was a selected vacant site and the LDP provided ample space in between blocks and provided G+3 blocks that reduced density.

The Infill Sites- brought up variety of typology designs, derivative of lessons from the pilot project. The projects were also inclusive of consultants and contractors with constructions, and designs were co-ordinated well due to the better implication angle for AAHDPO. AAHDPO intended infrastructural designs, typology and neighborhood designs as well. But building blocks were bound by the little area they occupied and the housing provision was still not enough.

There was no need for designs of LDP since these projects were a set of blocks, not exceeding 10 in number, developed on empty sites within the city. The NHD prepared by AAHDPO were physically considerate and of the immediate neighboring sites giving room for site preservation. There are also reduced complications with the setup of infrastructure provisions.

The Expansion Area Sites- brought up more typology options and took up a greater land space which was of good use for mass production of housing units. The inability of AAHDPO to synchronize plans with the actors that did infrastructure designs and the consultant and contractors had problems with project delivery on time. Since the sites were selected based on vacancy of land, there was little/no need for relocation. They also paved way for renewal schemes in a way that some occupants in slums that need renewal were given housing units so that the renewal sites can be easily cleared.

LDP and NHD were more flexible in production and design since almost all of the sites were placed on a vacant land. Their location in proximity to the city center was far and had an impact on transport cost for the occupants. There was no encouragement for infill development. Segregation in income groups due to a constant increase in rent is visible. The LDP and NHD can encourage competitiveness with neighboring jurisdictions of the city with regards to their location but can also promote migration and further

The Renewal Sites- brought up intensive relocation and site clearance, which lies in question with the entire project cost. The sites also suffer from repetitive typology schemes rather than new ones. The sites resemble planning and design systems to infill sites, but at a larger scale.

The LDP and NHD prepared were considerate of linkage and integration with the rest of the city in road networks. They provide better access and are in a closer proximity to the center of the city. As land prices increase with their proximity to city centers, the cost of a single unit rent shows an increment when in comparison to sites in expansion areas. These cost fluctuations were not considered, as the units still targeted low-income groups. In the process of renewal though, the neighborhood designs were not considerate of their immediate surrounding neighborhoods.

The 40/60 sites- There is no definite way to identify how the unit-lot will be provided to the occupants in demand since no unit was transferred to any occupant yet. Radio and television announcements have been made that the housing that was completed is set to be distributed to the occupants who have managed to pay the unit cost in full. Other announcements on the social media have denounced the previous typologies by stating problems of inappropriate space usage and provided a new set of design modifications. Hence, architectural designs were completely changed, with minor modifications to the structural designs, since the initial designs had -complications" with space misuse.

Figure 4.12: Two typology options for a typical 40/60 housing

Source: -40/60 saving housing devt program brochure- CBE, 2013

The provided housing unit options have housed only one set of typology designs till now (G+7, G+9 and G+11 format but with same floor plans) designed by and only inclusive of a select few consultants and contractors. Furthermore, the first set of typologies had 3 units per

floor included a maid‘s room whereas the second set omitted that quality so as to increase the number of units to 5 units per floor.

The LDP and NHD of almost all of projects are closer to the city center as well as per the goal of the AASHDE, except one site (crown site) which was constructed on an expansion area. Location was one of the incentives given to the occupants as an encouragement to buy a 40/60 unit and crown site lacks that attribute due to its location.

The 10/90 sites- all the units that were designed within every single block of a 10/90 building are studio units. This lack of diversity in units lessens the housing choices that future tenants are given, and it further enhances the pre-existent monotony in the condominium realm. But it increases affordability of the units while reducing the construction time that other 40/60 and 20/80 would normally require for construction.

The revised neighborhood designs showcased situations where blocks were placed in a grid like manner with reasonable space in between them. Contrary to previous NHD‘s that composed of designs with reasonable open space within the proportion of their land use, the new NHD for the 10/90 blocks lacked open space designs and proportions relative to their building height. Moreover, they were placed in poor integration with the previous LDP and NHD made for the expansion areas in which they exist. This matter made the provision of infrastructural facilities somewhat difficult.

Currently there are a total of 276,015 housing units that have been finalized /to be completed within projects throughout Addis Ababa. The following table below shows the different typologies selected for sites in Addis Ababa. These sites were further classified into rounds that they were initiated.

Rounds	Subcity	Location in Subcity		Typologies	No. houses
Pilot	BOLE	Bole-Gerji			750
Round 1- 103 sites	ADDIS KETEMA	• 18 Mazoria • Addis Ketema • Ammanuel • Dilachen •	• Gebs Meda • Mesalemia • Tsehay Gebat 1 • Tsehay Gebat 2	C1 C4 C5	
	AKAKI KALITY	• Cher'aliya • Commet Transport	• Kality Gabriel • Orto Total	B2, C2, C4, C5	
	ARADA	• Ras Desta • Police Club • Worwda 9 police Station • Ethiopia Tikdem • Unity College • Yekatit 12 (Greek) • 3rd Police Station • Atekilt Tera/ Hamle 19 • Somale Tera1 • Jan Meda	• Piassa Kebele 10 • Serategna Sefer • Qey baher • Arada Tourist • Press Agency • Abuare Den Lemat • Arada Shell • Ginfillee • Good Sheppard	C1 C2 C4 C5 T18	
	BOLE	• Gerji 1 • Gerji 2 • Adwa Park • Bole Michael	• Bole Ring Road • Gerji 5 • Japan Embassy	B1 C1	
	KIRKOS	• 01-19 Kebele • 18-34 Kebele • Amalgameted • B-Meda • Bulgaria • Teb Menja Yaj • Dandiboru	• Kirkos 1 • Kirkos 2 • Kirkos 4 • Lagare • Libe Fana A • Libe Fana B • Meskel Flower	B1 C5 B2 C6 C1 T16 C2 T18 C4 UM	
	KOLFE	• GTZ site • ASCO • Kolfe Keraniyo K.15 • Kolfe Keraniyo K.06	• Keraniyo 1 • Keraniyo 2 • Keraniyo 3 • Mikiley Land • Reppi 1 • Reppi 2	N.A	
	LIDETA	• Balcha Hospital • Balcha Meda • China Embassy • Deqe Mehari Garage • Frehiwot • Lideta Millefoni	• Kebele 03 • Mechare 1 • Mechare 2 • Hollad Embassy • Millefogle	B1 B2 B3	

Round	Subcity	Location in Subcity		Typologies	No. houses
1-103 sites	NEFAS SILK	• Batu 1 • Batu 2 • Batu 3 • Batu 4 • Batu 5	• Lafto 1 & 2 • Mekanissa Korre • Mekanissa 1 • Mekanissa 2 • Nefas Silk Shell	B1 B2 C3	
	GULELE	• Chilot, Kebele 08 • Gulelle 1 • Gulelle 2 • Israel Embassy	• Kebele 12 • Menen 1 • Menen 2 • Tsion Hotel	C4 C5	
	YEKA	• Adwa • Eyesus • Biruh Tesfa 1 • Biruh Tesfa 2 • Enderase • Kotebe EEPCO	• Yeka Signal • Yeka 1 • Yeka 2 • Mirt zer • Yeka Michael 1 & 2	T16 T18	
2		Mikiley Land		B2, C4, C5	
3		Gofa, Gotera			
4	**SEFAS SILK**	Jemo 1		M1, M2,, T16 T18	
	AKAKI	Gelan 1			
	BOLE	Bole Ayat			
5	AKAKI	Gelan 2		A1, A2, E1, E2	
		Jemo 2			
		Summit 1			
6		Summit 2		A1, E1, E2	
7		Lideta		L1, L2, L3	
8		Yeka Ayat 2		A2, L1, E1, E2	
		Kotari Mekanisa			
9		Gelan3		C1, C2, C4, C5, B2, T16, T18	
10		Yeka Abado		A1, A2, E1, E2, L1, L2	
		Tulu Dimtu			
		Basha Wolde Chillot		L2	
		Genet Menafesha		A1,E1, L1, L2	

Table 4.3: Housing rounds with respective typologies,
Source: ***AAHDPO, 2016.***

4.13. Examples of Design/Planning Processes in IHDP Projects

To further study the procedures mentioned above, two sites within Addis Ababa were selected as examples understanding the planning and design process. The two selected project sites are Yeka Abado III (Kolfe Sub-city) and Bole Arabssa (Kirkos Sub-city) project sites. These projects, being initiated two years apart, fall under the categories of two of the phases in IHDP: Yeka Abado III an expansion area project, and Bole Arabssa a 40/60 project.

4.13.1. Project Site 1- Yeka Abado III

Yeka Abado III is an expansion site which was initiated as Yeka Abado under the Kolfe Sub-city Housing Project Office in 2011. The project comprised of an LDP, a NHD and typology design, all of which were made by different consultants and contractors throughout the process. Even though the project was initialized by Kolfe Sub-city Housing Project Office, the office then split the site into three and submitted the two divisions to two housing project offices; Project 13 and Project 14.

Yeka Abado III comprised of a design of approximately 129,000 units within the boundary of Project 14. As the site was split after the preparation of the LDP and NHD, the project was a work of typology modification, contract administration and supervision with the collaboration of different consultants and contractors, The LDP and NHD of the project site were done by BET Consult, whereas typology modifications were carried out by

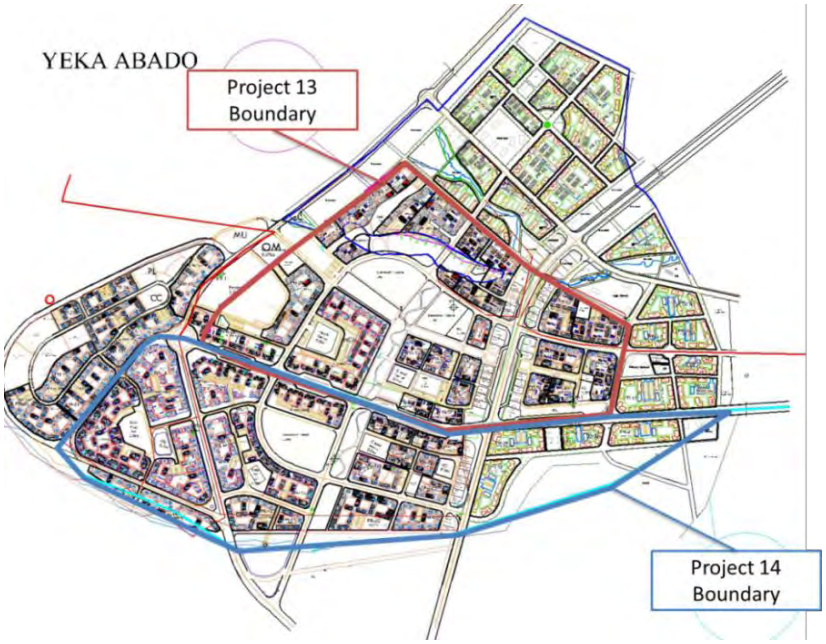


Figure 4.12: Yeka Abado Site with demarcated boundaries

Source: AAHDPO, 2014

The procedure taken for the site was as follows:

1. AAHDPO requested for land for construction of houses to AACA.
2. AACA searched for vacant land within the borders of the city, with its Urban Renewal and development division, and gave available land.
3. AAHDPO outsourced by terms of Bid document (to private contractors) for preparation of LDP and NHD; BET Architects consulting office won the bid and produced the LDP and NHD in a time of 2 months.
    a. Requirements such as building height, density and room sizes and such were included in the tender documents by AAHDPO as per rules and regulations provided from Strategy and Legal affairs Office under MoHUDC.
4. Soil Test was carried out by means of the approximate location of blocks of the site as per the LDP. Tender documents for the soil test were prepared by AAHDPO and outsourced.[19]
5. AAHDPO then, by terms of Bid document and outsourcing, accepted good typologies for the site. MGM Consult took the role of the typology development by winning the bid.[20] The typologies that were implemented on the site were A1, A2, E1, E2 and L1.
6. Blocks were selected by AAHDPO from Project 14 site boundary and outsourced by Tender and Bid documents. Consultants that won the bid, such as PACE Consult, Moges Desta Consult and Acute Consult were assigned by the role of Contract Administration and Supervision by the Supervision department of AAHDPO.
7. Typology designs for 10/90 projects were provided to AAHDPO by MoHUDC and AAHDPO did the NHD for the projects and provided consultants and contractors working on the site with the new design modifications.
8. AAHDPO sent a request for infrastructural designs from A.A.W.D.A.C and E.E.P.C.O with attachment of the final LDP and Typology designs.
9. Infrastructural designs were brought and integrated onto the site by AAHDPO.
10. Construction is carried out by selectees of contractors under the Construction department of AAHDPO.

[19] By the time of the soil test, the project was divided into three sites among the three project offices.
[20] MGM Consult has produced and modified a significant amount of typologies for HDPO along with architectural, structural, sanitary, electrical designs, bill of quantity and door/window schedule. The typology design modifications by MGM include A1, A2, E1, E2, L1 and L2 that were made since beginning of 2007 up to 2012. When repeated onto another site, these typologies were modified to suit the design and were better perfected in terms of space usage and quality. Modifications were done by MGM itself and/or by the consulting office in charge of the site during contract administration and supervision.

11. Upon completion of a project, Urban Housing Information Administration, Monitoring and Support Office monitors the houses built after completion and checks for maintenance requirements

The Outcome of the Design and Planning Process

Currently AAHDPO maintains communication with the consultants and contractors and there is an instance of consulting offices providing a progress report to Project 14 on a weekly basis and to AAHDPO main office on a monthly basis.

Since the project is an expansion area project, much of the units were designed on a somewhat empty site although there were physical preservations of existing buildings in the production of the LDP. The LDP was complete of social services such as schools, communal halls, playgrounds, parks and a *Tabot Madera.*[21]The conceptual development of the LDP was focused on the neighborhood being a self-sufficient industrial neighborhood, with inclusion of spaces for MSEs. The LDP initially included expansion areas within the project site but it was later used for construction of more condominium blocks to suffice the density requirement, and became spatially inflexible for future constructions. Typologies still remain spatially inaccessible for seniors and people with disability.

The project provided variety of typology designs that are suited for the site and seem indifferent to segregation but their affordability issue remains in question and could eventually lead to social segregation based on who can finally afford to live in the units. The typology designs are inclusive of a range of unit size, from studio type to 3-bedroom type but the project is focused on multistory housing provision system. Some of the typology designs for blocks adjacent to local and collector roads provide rental options where there is a provision of shops on the ground floor.

[21] Tabot Maderia- a religious resting place for holy ruin of an Orthodox Christian Church.

4.13.2. Project Site 2- Bole Arabssa (40/60)

Bole Arabssa Site was initialized in 2014, as one of the project sites of the 40/60 scheme. It is located in Kirkos Sub-city with a design for 675 blocks and a total of 20,072 units.The design and planning processes for the 40/60/ saving housing sites differ slightly from the renewal sites, and it's discussed below:

1. AASHDE requested for land for construction of houses to AACA.
2. AACA, through Land Development and Renewal agency, gave land that was in need of urban renewal for AASHDE. AASHDE then prepared TOR for request of LDP and NHD.[22]
   - 2.1. Habtamu International Consult won the bid and took over preparation of LDP and NHD and took over project on June 20, 2014.
   - 2.2. The office surveyed the site, prepared slope analysis and supportive documents for design preparation.
   - 2.3. Layout plan, Parcel and Block arrangement was prepared.as well as Land use, with road network links and a socio-economic report for the LDP was prepared.
   - 2.4. The LDP and NHD were presented to and approved by UPI.
3. Soil Test- tender documents were prepared by AASHDE and outsourced.
4. AASHDE prepared terms of Tender and Bid document for the production of the typologies.
   - 4.1. Typology modifications done by Bereket Tesfaye Consult, OTT & MGM consult.
5. The site was divided into four parcels and TOR was prepared for contract administration and supervision of the parcels to different consultants and contractors.
   - 5.1. Habtamu International and K2N won bids for contract admin and site supervision.
6. Consultants assigned by the Supervision department place blocks on the site and start construction.

The Outcome of the Design and Planning Process

Typologies are currently being modified during construction of others is being carried out on the four zones of the site under the supervision of Habtamu International and K2N Consult.

[22] Carrying capacity and typology design are given by AASHDE

CHAPTER FIVE

Discussions, Findings and Recommendations

5.1. Discussions on Planning/Design Processes and Organizational Structures

Despite the multitude of actors that participated to solve the shortage and increased demand in the housing program, two facts still remain unsolved: the lagging of projects and the lack of quality in the housing provided. Since the beginning of AAIHDP, the pilot project seemed promising where mass housing is provided to solve the need for affordable housing units. The IHDP has shown characteristics that place it under the category of design that was framework-oriented. In other words, IHDP has given much of the emphasis to specific design framework: spatial, legal and otherwise. This has given much less emphasis to the inputs of the people who will soon live within the units.

The pilot project, in its singularity, still struggled with issues of management where the units couldn‘t be provided for their designated occupants by AAHA, and the need for creation of another organization was apparent. When AAHDPO was formed it was with the intention of management and proper distribution for the housing units. The pilot project had also encouraged a diverse set of actors: private, non-governmental and governmental and its participatory nature is one aspect to be encouraged in the planning process.

In the case of the Infill sites, AAHDPO did a lot more than management as the organization designed various typologies with their respective neighborhood plans and was in charge of co-ordination with infrastructural designs. In other words, it handled the entire project, from inception to management, for the housing set. This had brought complications in the management area as well. The participation of private sector in this exercise continued where the first prominent actors such as MH Engineering and GTZ ceased their participation. This was also around the time when MoWUD changed its structure to accommodate the construction sector and AAHA which was initially under MoWUD had phased out.

In expansion area sites, AAHDPO had more project burden since the sites selected were larger in scale and also required LDP‘s (with larger sites came more potential units in need

5.1.1. Organizational structure of the actors

At the beginning of the IHDP, AACA had 5 divisions; each had its own department head and a common set of sub-processes such as finance and human resource division which indicates that AACA had a product-divisional structure. When the city was divided into 10 sub-cities and the BPR was introduced into the system, AACA provided divisions on a sub-city level and the product-divisional structure changed into a geographic-divisional type due to the fact that these sub-divisions were located in sub-cities throughout the city. Much of the tasks such as land lease system and condominium transfer were co-ordinated at a sub-city level. Recently, these tasks are co-ordinated at a sub-city and at a central level which makes AACA assume the matrix organization structure.

MoWUD however, hadn‘t showcased organizational structure type changes within its own structure. When IHDP was initiated the ministry of works and urban development had a functional setup with 13 separate offices of different functions within it. One division which was the Addis Ababa Housing Agency was involved in the housing delivery of IHDP. When AAHA phased out, the ministry added the construction sector within its organization (another functional division). The ministry then added another function to accommodate housing sector, during which time the structures shifted for better integration and co-ordination but still retained the structure in a way that no two sub-divisions (sub-processes) were duplicated. When construction sector became independent in 2015, the ministry withheld urban development and housing sectors within it. All these specializations and specific characteristics of the organizational structure of the ministry resembles as that of a **function** type organizational structure from beginning of IHDP until now.

Actor	organizational structure Type (before 2007)	organizational structure Type (2007- 2011)	organizational structure type (after 2011)
AACA	Product Divisional	Geographic Divisional	Matrix
MoHUD	Function	Function	Function
AAHDPO	Product Divisional	Geographic Divisional	Matrix
AASHDE	-	-	Product Divisional
Consultants contractors	-	-	-

Table 5.1: Organizational structure shifts of some of the Actors

AAHDPO is an organization that existed since after the pilot project and had shown three structural changes throughout the making of IHDP. When AAHDPO was formed, it was a singular office which had two divisions within it; the design department and the construction department and followed the product-divisional structure type. It later placed offices under each sub-city within AACA sub-cities which shifted the structural type to geographic-divisional type. The central office was in charge of design and construction while the sub-city divisions handled support functions such as transfer and building material. During the later stages, AAHDPO's structural changed when it added more project offices in close proximity to construction sites. This structural change is visible in cases where consultants/ contractors answered to respective project offices as well as the main office itself which shows that AAHDPO's current structure is a matrix structure type.

5.1.2. Design and planning processes in the phases

The planning and design processes in IHDP are now compared and discussed with respect to two planning processes discussed in the previous chapter.

Phases	LDP	NHD	Typology	Infrastructure	Construction
Pilot Project	GTZ	GTZ	MH Engineering	MH Engineering	MH Engineering
Infill Sites	-	AAHDPO	AAHDPO	AAHDPO	Consultants Contractors
Expansion Sites	Consultants Contractors	Consultants Contractors	Consultants Contractors	EEPCO, AAWDCA, ETC	Consultants Contractors
Renewal Sites	ACCA	ACCA	Consultants Contractors	EEPCO, AAWDCA, ETC	Consultants Contractors
40/60 sites*	AACA/ AASHDE	AACA/ AASHDE	Consultants Contractors	Consultants Contractors	Consultants Contractors

Table 5.2: The Actors who worked on different designs for IHDP

All of the consultants and contractors that were interviewed have stated that AAHDPO/AASHDE (government) is the client for their work and that they have been working to deliver the project for the objective of completion and project delivery in time.

The process that was used in the pilot project had been inclusive of a multitude of actors which carried out the planning process in a way that resembles the five-step-planning method of

the metropolitan council. The end-users were not involved in the planning process. The process used in the making of the infill areas was that of preparation of NHD and typology design since LDP was not required. Since the design and planning process was carried out by one actor (AAHDPO), it featured application of most of the technical requirements which are present in the first design process used by the American metropolitan council. The NHD and typology designs were made simultaneously, contrary to the default process of preparation of the overall design before detailed design. Moreover, the process shows no indication on whether the tenants and occupants adjacent to neighboring sites were informed of their developments in the planning phase.

The processes used in the making of the expansion sites had involved the private sector in the design and planning process. This process had not only the actor variety but also brought a change in the sequence of LDP, NHD and typology preparation. Typology designs were given first priority and were given to private consulting companies after completion, as a prerequisite in the ToR for production of LDP and NHD‘s. Also, the time given for completion of the LDP and NHD‘s was reduced from four months to one month during the making of the latter expansion area and early renewal area projects.

The 10/90 sites had shown a new process sequence in which and there was a project overlapping caused by the fact of preparing typologies and then NHD‘s after acquiring LDP, NHD and typology designs, thereby avoiding the common tradition of designing from LDP to NHD to typology. The timing in which these 10/90 designs were introduced into the site (during the construction phase) also affected the design and planning process which should have been carried out and completed before the implementation phase.

The same issue that is seen in renewal sites can also be seen in the 40/60 projects. 40/60 projects have shown resemblance since the ToR and Bid document being won and taken over by only a handful of consultant and contractors, which can bring about a project overload on the consultants and contractors in the production of LDP‘s, NHD‘s typology designs/modifications and also a monotonous design output.

5.2. Planning and Design Processes Measured by Criteria

The Measuring Criteria for design and planning processes for each site made within IHDP varies in accordance with the actors that took part in the making and the processes that were taken. For this following discussion, the cases of 40/60 Bole Arabssa and the 20//80 Yeka Abado were selected. These criteria were done for both of the sites and have been acquired from a measuring criteria adopted by the metropolitan council in United States, and interviews and questionnaires and interviews with the different actors that took part in the projects. The criteria for the processes that both the examples have used are discussed below:

5.2.1. Integration

The LDP designs of both of the project sites have been integrated with major arterial roads and neighborhoods in the area and have a good linkage within the site parcel as well. Yeka Abado‘s site had discrepancies regarding the integration of the 20/80 neighborhood design with the 10/90 block neighborhood design since the designs came in during the construction phase. Both the cases of Bole Arabssa and Yeka Abado, in their massive scale-nature, have not considered the linkage on a regional scale although their designs have been developed on well-thought local links with adjacent neighborhoods. Yeka Abado site is considered a 20/80 site which implies that it is more affordable and therefore accessible and inclusive of various income groups that can afford the unit. Furthermore, there are no known rent/condominium controls for both the sites.

5.2.2. Collaboration

Neither of the two sites provides a regional perspective on housing policy, which could also be a flaw in the national policy regarding such matters and failure in inclusion of regional integration as a requirement in the ToR provided. The organizations in charge of the design and planning of both of the projects have relatively good technical assistance from actors of other linked organizations (E.g. team experts from AACA and MoHUD have participated in the design and planning output by giving constructive technical consultation) but there is less sharing of best practices among the local governments. Yeka Abado is under AAHDPO whereas Bole Arabssa is under AASHDE but there is no apparent link between or sharing of best practices in between the two organizations of AAHDPO and AASHDE.

5.2.3. Accountability

Yeka Abado is a result of different trials in design and planning and has shown improvements with regards to typology and site integration. Even though Yeka Abado, in comparison to Bole Arabssa, is preferably a better candidate for affordability, it is still difficult to identify which units (both owner-occupied and rental) are affordable to the end-user, with the current issues of fluctuation of land price and financial capacity of the occupants, remain still unanswered.

The design outcomes of both the selected sites are discussed below in relation to the criteria of stewardship, prosperity, equity, sustainability, and livability aforementioned.

5.2.4. Stewardship

Both of the sites had the primary objective of providing housing for the mass population which can be seen as a good attempt to expand the region‘s existing housing stock. Furthermore, Physical preservation of housing was limited for both of the sites since they were located in the outskirts of the city where there is little or no construction on the existing site. Regarding preservation of federal subsidy, the strategy used on both sites instigates securing long-term commitments from the owners by means of encouraging them to save for their housing unit. In issues of preservation of housing affordability, there have been known facts of owners rent out their units due to issues of affordability in living in previous condominium units. The same case might be plausible within these two sites in the future if situations of affordability are not given solutions in time.

5.2.5. Prosperity

Prosperity, in this context, is an objective used to bring about regional competitiveness and short and long-term strategies to diversify ownership in terms of finance, type (private, public, shared), and unique models (community land trusts, etc.). Much thought hasn‘t been given to this multitude of ownership opportunities for both the sites of Bole Arabssa and Yeka Abado. With regards to expanding household opportunities, infill development and redevelopment, both of the sites were built on an expansion area which implies that there was no need for infill development or redevelopment on the site. But their location has a potential to consecutively produce a cultural competency with neighboring cities which are in close proximity to the sites.

5.2.6. Equity

The LDP, NHD and typology designs of the site of Yeka Abado can be assumed as affordable for people of all economic status in comparison to the designs of the Bole Arabssa site. This is due to the objective of the designs in which the first is a 20/80 site targeting middle income groups whereas the later project is a 40/60 project targeting high income groups. There exists the question of affordability for both sites since the potential chance of low and middle-low income groups on the sites is scarce. Needless to say, both sites lack equity with balancing and advancing fair housing.

5.2.7. Livability

The site of the 40/60 Bole Arabssa consists of units from 1 bedroom to 3 bedroom types within each block and the 20/80 Yeka Abado carries types from studio to 3 bedroom types. Yeka Abado provides more variety to housing options than Bole Arabssa. Although the provision of housing for the range of incomes applies for both the sites, Yeka Abado promises the more affordable option in this case. Neither of the sites has provided single detached housing variety within the site, which accounts for efforts in fulfilling the density requirements for both areas.

The ownership for both sites is defined where a resident owns the unit with saving and paying full cost for it. Other types of ownership such as co-operative ownership, rental options have not been considered by the actors. Moreover, both the designs consisted of site designs that deem aesthetic and creative but the same cannot be said for the building blocks since they are similar to each other as per the typologies selected.

5.2.8. Sustainability

The LDP designs in Yeka Abado show that there was a provision of places for MSE‘s as a contribution to the working and self-sustaining trend for the residents. These encourage and promote environmentally sustainable neighborhood. There is also the mention of use of the Agrostone building material (on both sites of Yeka Abado and Bole Arabssa) which is stated as an environmentally safe building material according to different researches on the material.

5.3. Summary of Findings

All in all, the summary of the findings regarding the actors who took part in AAIHDP and the design and planning processes the actors used to produce AAIHDP is conclusively discussed below:

5.3.1. AAIHDP

Integrated Housing Project is a large and complex housing provision approach. International practices such as India and South Africa tried to minimize its complexity by providing a housing policy and stating their goals, and then practicing in different programs that facilitate on-site upgrading and renewal schemes. On both instances, the Integrated Housing Project was placed as one of many projects for housing, with specific its own set of objectives, actors and a simplified process for that specific project. In the case of IHDP in Addis, the project itself had many types of schemes within, such as infill, Greenfield development (expansion areas) and renewal schemes, making it difficult to maintain and keep up with the project itself.

AAIHDP resembles a framework-oriented design and planning process. This means that the AAIHDP gave way to participation a multitude of actors except for inclusion and the participation of the local communities in the design and planning process. In the case of the Infill sites, renewal sites (or any site that has occupants in the neighboring sites need to be included in the discussions before making of the projects, of which there was no indication.

5.3.2. Actors in AAIHDP and their roles

The role of the government was allocation of funds and facilitating the project in the initial pilot project but took a complete control over the design and planning process in condominium housing under its AAHDPO division when working on infill sites. AAHDPO then took on the role of ~~-d~~eveloper" where it included external actors to its design production in the expansion areas and renewal sites. The government is currently working on projects side-by-side with private contractors and consultants in the design prospect, participating in the design making procedures when necessary. Such instances are seen on 40/60 sites where private consultants and contractors still have the tasks of preparation of LDP's and NHD's but AASHDE makes LDP's and NHD's in-house for a land less than 10 Ha.

The core actor that remained a constant influence throughout the making of AAIHDP set up was the governmental organization AAHDPO. Other governmental (AACA, MoHUD, AAHA), non-governmental (GTZ) and many private (MH Engineering, MGM, etc.) actors remained

active throughout different timelines within the production of AAIHDP. Some level of ~~-c~~ommunity participation" was spotted since MSE's have been and still are encouraged to take part in provision of construction materials and they have been providing so since the pilot project. However, there is no guarantee that the same people who participate in material for a certain site will necessarily acquire a house unit on that same site; Units are distributed by a lot-system by registration and (quite recently)saving capacity.

The introduction of BPR into the system in 2011/12 contributed to a structural change in two of the actors' organizations. AAHDPO which originally had a product-divisional nature in 2005 had morphed to adopt a geographic-divisional structure in 2007.This was due to the fact that AAHDPO had opened several branch offices under each of the sub-city administration for better control and handling of the projects within their respective sub-city. However the increased demand in housing, the introduction of new projects that were bigger in scale and the introduction of the BPR into the organizational system had caused AAHDPO to restructure into the matrix organizational structure. AAHDPO still faces challenges of project overload.

In instances of the organizational Structures such as ones of MoHUD, and the division of AACA which is Urban Land Management and Development there exists duplication of effort, i.e. two or more divisions take on one task. Both of the divisions under MoHUD take on monitoring the projects of AAIHDP. This occurrence appeared even though both MoHUD and Urban Land development divisions had a function type organizational structure.

There was an attempt by MoUDHC in 2011 to hire an independent Consultancy Service International Consultancy firm for the procurement of Management Consultancy Service to improve Construction Project Management by means of tender. Aside from many responsibilities requested on the tender document, this independent consultancy was expected to analyze existing strategies, compile lessons from different programs and projects and develop a concept and plan which can be later used as a manual. Although the outcome of this attempt is unknown, the current MoHUD partially assumes the role of monitoring within two of its sub-divisions: the Urban Housing Information Administration, Monitoring and Support Office and the Design Preparation, Implementation and Monitoring Office. The lack of consistency and manpower to cover all grounds on monitoring all the projects is visible since there are only 5 people present with each of the divisions.

During the production of the infill sites, AAHDPO already had a team of skilled professionals with minimum of 5 years in experience with production of NHD, typology and other related designs. When outsourcing was heavily practiced, ToR documents also provided the requirements for the workforce in the office of consultants and contractors which qualify for the production of LDP's NHD's and typology designs. The minimum requirement for participation in typology for a single professional is 8 years (4 for some cases). The offices that are expected to qualify are grade 3 and above consulting offices which is considered one checking mechanism as the level/grade of a consulting office relies upon the level of experience in its employees. But a complete checking mechanism on whether all the professionals in a certain consulting office are available for the production of the designs is yet to be devised.

5.3.3. Design and Planning Processes in AAIHDP

In the pilot project, the design processes followed the step of site analysis→ LDP and NHD preparation (by GTZ)→ typology preparation (by MH Engineering) →Construction→unit allocation (by AAHA). AAHDPO was in charge of the infill area projects and carried out planning and design processes with the similar procedure (there was no need for LDP design). In the case of expansion areas and renewal projects, the actors who took over LDP, NHD and typology preparations were the private consultants and contractors by terms of reference and bid winning, Recently UPI is said to have taken over the preparation of LDP and NHD's for AAHDPO. However, evidences in the examples of Bole Arabssa site show that preparation of LDP's and NHD's by the private sector was existent even during the time UPI had also taken over that task. Moreover, during the later years in the AAIHDP much less thought was given to analysis of site due to time shortage.

Design and planning process can take two directions such as in examples of Incremental and Structural planning. AAIHDP, in its framework- oriented planning nature, should assume the process that puts NHD and LDP designs before the typology design in all of the 5 phases mentioned. In the case of infill sites, NHD and typology design were done simultaneously.

Late in the phase in projects in renewal sites typology design modifications were equally produced as LDP and NHD's (By that time, AAHDPO had a large database of typology designs to a point where the production of new typology designs was evidently reduced and modification of typology to fit the site was prominent.) In recent cases, such as those of the 10/90 sites, a second neighborhood design was prepared after the addition of typologies and it was set onto a pre-designed neighborhood plan of the expansion sites during their construction phase.

A design manual made by GTZ for the pilot project and other similar projects had stated that any condominium site shall be allocated near river-banks for sanitation purposes. The site selections in AAIHDP, however, had followed two governing reasons: the space within the city, or lack thereof and the increasing demand for housing which eventually led to shortcut schemes in providing a larger mass of housing for the city. In other words, the site selection seems to target and follow the availability of open spaces within the city.

Studies in the literature suggest that the average time required for a certain project to be developed from the start, completed and delivered is 24-60 months (2-5 years) depending on the scale of the project and other factors. This has an estimated time of 6 months- 2 years given for the planning and design process. The infill sites in AAIHDP projects took 3-4 months per project on average, whereas the large-scale projects are said to have been given 6-7 months (sometimes to a year due to failure in delivery on time) for planning and design. LDP and NHD preparations require more time since they are larger in scale and are done by the combined effort of different actors.

UPI is said to have set a 3-month-period preparation and completion timeframe for LDP‘s and NHD‘s of a certain site. ToR documents given to private consultants for LDP and NHD preparation indicate an allocated time of 4 months during early projects such as Jemo II but it was reduced to 1month for recent projects such as Bole Arabssa and Koye fiche. Similarly, the ToR for typology preparation allocated a time of 60 days for completion of work and outputs. Regardless of the fact that LDP‘s and NHD‘s are relatively larger tasks that require more time and accuracy, recently they were have been given half of the time given for typology designs. This has a profound implication on the output of the LDP and NHD design.

5.3.4. Strengths and Weaknesses in AAIHDP

Pilot Project shows strengths in areas such as participation of many different actors, emphasis on the design and planning process input of the private sector that led to preparation of plan and design manual that paved way for future designs. The singularity of the project also helped in paying attention to the project in detail and with care. Weaknesses are failure of AAHA in its tasks, and there were complications with meeting objectives of making the housing target the specified income group.

The strengths seen in Infill area sites are: site selection that encouraged preservation of the surrounding, simultaneous preparation of typologies and NHD‘s that reduced planning and design process time (good for fast production of designs). The introduction and function of

AAHDPO, and the fact that most of the projects were completed in-house which shows better co-ordination in the production of the designs. The weaknesses are that the participation of other actors in the planning and design process was limited. Infill areas didn‘t leave room for expansion units were limited.

Expansion area sites have strengths in being bigger in scale for accommodation of more units relative to infill area projects. The inclusion of the private sector in the design and planning process and provision of more time to preparation of LDP‘s NHD‘s and typology designs was a positive remark. AAHDPO‘s new geographic divisional structure also eased project control over projects in sub-city a scale. Weaknesses found in this phase include the selection of the sites which made the projects farther form the city center, and made transportation costly for the residents.

Strengths found in Renewal Sites include being large scale projects with site selection in good proximity to the city center. The participation of the private sector is still existent and sites were Weaknesses are reduction of the time required for preparation of LDP and NHD‘s from 4 months to 1 month on average, resulting in leaving little/no room for proper analysis, planning and design. The production of new typologies was also limited and design was focused on the modification of existing typologies onto site. In the renewal scheme, there is no indication on whether the local community that was relocated was set to come back and live to the original site that was delivered. This can raise questions on whether the ~~r~~enewal” is being carried out properly.

The strengths seen in 40/60 sites are the planning type‘s informative nature and its encouragement for local community to develop the saving trend. Also, the AASHDE as an independent organization helped with ease of project overload on AAHDPO. The function of AASHDE working side-by-side with the private sector in the production of LDP, NHD and typology designs is a positive attribute. The weakness in the processes is the inclusion of only a few consultant companies narrowed the diversity in design ideas and have caused/are causing project overload and time extension.

The 10/90 sites exhibit similar strengths and weaknesses as that of expansion areas. They do, however, show additional strengths of providing affordable units for the low income groups in a short period of time. They have weaknesses of design monotony and small unit areas. There are also signs of poor integration of the neighborhood design of the 10/90 building blocks with the 20/80 blocks.

5.3.5. Other Important Considerations

The importance of integrating policies onto any design and planning process is as important as setting the goal and objectives in the planning and design process for a project. The ~~"~~top-down" approach IHDP followed, which goes to show that planning and design processes involved stakeholders and not the people who will live in the houses, was a strategy- based planning system which resulted in omission of the provision of a defined housing policy before statement of the strategy, goals and objectives.

In any project management, the three elements of cost, time and quality need to be given equal thought for a balanced and efficient design output. Since the inception of the AAIHDP, the main focus had been on the production of cost-efficient housing units which left the issues of quality and time unattended. The issue of time had always been a problem in delivering projects and there had been no visible mechanism to check on the quality of the project output.

5.4. Recommendations

This research presents a general knowledge and understanding of how such grand projects are executed and by whom they have been developed. By analyzing the existing situation locally and internationally and by the principles and theories in the literature review, the following recommendations are made to achieve the objective of the study; the objective being recommendation a better solution in design and planning process for mass housing.

Inclusion of the local community

It seems apparent that none of the phases mentioned above included the participation of the local community (who are also the end users) throughout the design/ planning process regarding the design of the units, unless it was for capacity development and the presence of MSEs (production of construction materials).

In any planning system, the level of involvement of the local community varies with the type of development that is carried out on the site. Planning can be participatory, Informative or authoritative (the level of participation of the local community decreases from the fist to the latter). Literature suggests that contemporary planning methods to be participatory. The recent 40/60 project sites showed an informative side where occupants were informed of what type of unit they are to acquire through media, and that can help broaden the occupant‘s set of choice in his/her unit. This is a step closer for a participation of the local community in the future, and should be nurtured.

In the case of future sites with adjacent neighborhoods, the occupants in the adjacent neighboring sites need to be informed of the development that would be taking place. This is used as a means of awareness of the development and their input to the design is important in a way that they can provide a viewpoint that architects and planners failed to see when designing the projects. This can be done in the form of public discussions and design presentations, questionnaires and research on what the end users want as individuals and as a community.

Role of the Government

It‘s known that AAHDPO/AASHDE (government) is the client that hires consultants and contractors for their work. It needs to be acknowledged that the client in this situation is in fact the end-users (beneficiaries) so that the planning process can be people-orinted. The end-users pay a full amount for the unit they acquire and are in need of the full understanding of the term ~~-o~~wnership” as they will feel more responsible to their units and surroundings. The lacking of the human aspect of the projects could arise from incidents such as this one and the social aspect needs to be considered from the design and human perspective as well rather than the design perspective only.

The role of the government needs to be clear and defined as its level of involvement can be set to allocation of funds, monitoring the design and planning process and providing design outcomes when necessary. It shall provide the proper rules and regulations for housing and keeps track of the projects to be made. In this manner, much of the project load will not be on the government and tasks can be sorted evenly among other actors that will be included in the process.

The actors in design and planning processes should not be limited to architects, engineers and urban planners only but should also include other professionals that can provide socio economic viewpoints and other inputs at the different stages of the process. They can be useful in production of a design that encourages the inclusion of the end users in the design system as well.

Monitoring Mechanisms

Although there are occasions where follow-up and monitoring sites post-occupancy and connections with the community electives of the site users, the AAIHDP projects are in need of an independent yet inclusive (of a variety of actors with different but linkable professions) *monitoring committee* that has a respectable level of experience and expertise in project management for better control of the projects. The monitoring committee can be hired by means of competition but it should be present in all the procedures taken, guide the actors to assume their proper roles and present mechanisms that avoid flaws in task division and project time keeping.

Flaws like repetitive modification of typologies in the midst of construction phase, lack of follow-up of contractors, lack of responsibility and accountability for project that leads to project delay can be avoided in this manner. In areas where project lagging is visible, such as in the current construction and transfer phase, the monitoring committee can prepare methods then take quick and easy measures to alleviate any problem that arises within the site.

Policies and Guidelines

The IHDP should target a various set of housing type in terms of ownership, affordability, size and typology (typology in this case meaning from single detached type to multistory housing). It be structured into a more specific form of housing provision and be specialized in its own character i.e. as renewal project only or as an expansion project etc.. There should also be a broader provision of other housing provision mechanisms and strategies under a well-defined housing policy, with their own goals and objectives. This can introduce more flexible and variable set of choices for the local community.

Rules and regulations should not strictly focus only on producing cost-efficient designs. In other words, they shouldn‘t focus on the *cost* aspect of the projects but they should also include the elements of *quality* and *time* and use different project management tools to acquire these assets.

All the houses that have been provided since the pilot project seem more or less standardized and there is no space for flexibility for the occupant. They should include better design flexibility considerations, systems that strengthen integration of Structural Plans with LDP, NHD and Typology designs and mechanisms that involve the local community i.e. especially those that are directly influenced by the project, such as occupants that leave their

site for renewal, occupants that live in immediate surroundings, and occupants that will own the units in the project.

Proper Task Execution

Certain tasks such as modification of typology designs appear repetitive in phases where they shouldn‘t be considered and/or have passed. By terms of completion in time, these tasks should be finalized in their according manner: from concept, to pre-development, to development, to construction, and finally to monitoring. If these tasks overlap with other tasks, there is bound to be an unwanted time extension and this aspect needs to be minimized for meeting project deadlines.

All of the designs should be integrated well: the structural plan should be in sync with the LDP to be made; LDP with the NHD; the NHD with the single block; the block with the typology design and the site. Although the involvement of many consultants and contractors in this process is encouraged, all of the actors should be involved in the making of the project at every level mentioned above.

In conclusion, when designing a project that comprises different sectors it is important to clearly and selectively track and monitor the execution actors‘ tasks within the project (especially the processes in accordance with incidents of organizational changes within the actor/organization during the making of the product). It is because this has a direct influence on the product which is set to be delivered and it can even affect the product on whether or not it‘s delivered in time. A product as sensitive as mass housing needs cautionary measures (with their own pre-determined outcome) taken such as those discussed above regarding planning and design processes as well as organizational structures in IHDP. This can to encourage links and communications, create awareness and further strengthen the concept of ―Integrated” in Integrated Housing Development Program in Addis Ababa in the future.

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Annexes

Annex 1- The 21 steps in planning process for a sustainable city

Box 4. Twenty-one steps for a healthy and sustainable urban planning process

Stage 1. Getting started: building partnerships

1. Defining the scope, goals and objectives of planning
2. Understanding health issues and increasing health awareness
3. Getting the approval of the local council, forming a stakeholder group and a working group
4. Building appropriate partnerships with key actors
5. Establishing means for community participation

Stage 2. Knowing your city: analysis of issues

6. Defining the scope and the issues to be analysed
7. Defining sustainability and health priorities
8. Implementing detailed sustainability and health assessment to complete the issue analysis
9. Setting priorities based on previous analysis

Stage 3. Looking forward: a common vision

10. Developing a common community vision based on strengths and weaknesses, opportunities and threats
11. Identifying key principles and values for a healthy and sustainable city
12. Involving the community in the process

Stage 4. Getting organized: action planning

13. Defining the action planning process and the framework of the action plan
14. Establishing strategic goals
15. Setting targets
16. Selecting specific implementation strategies and programmes

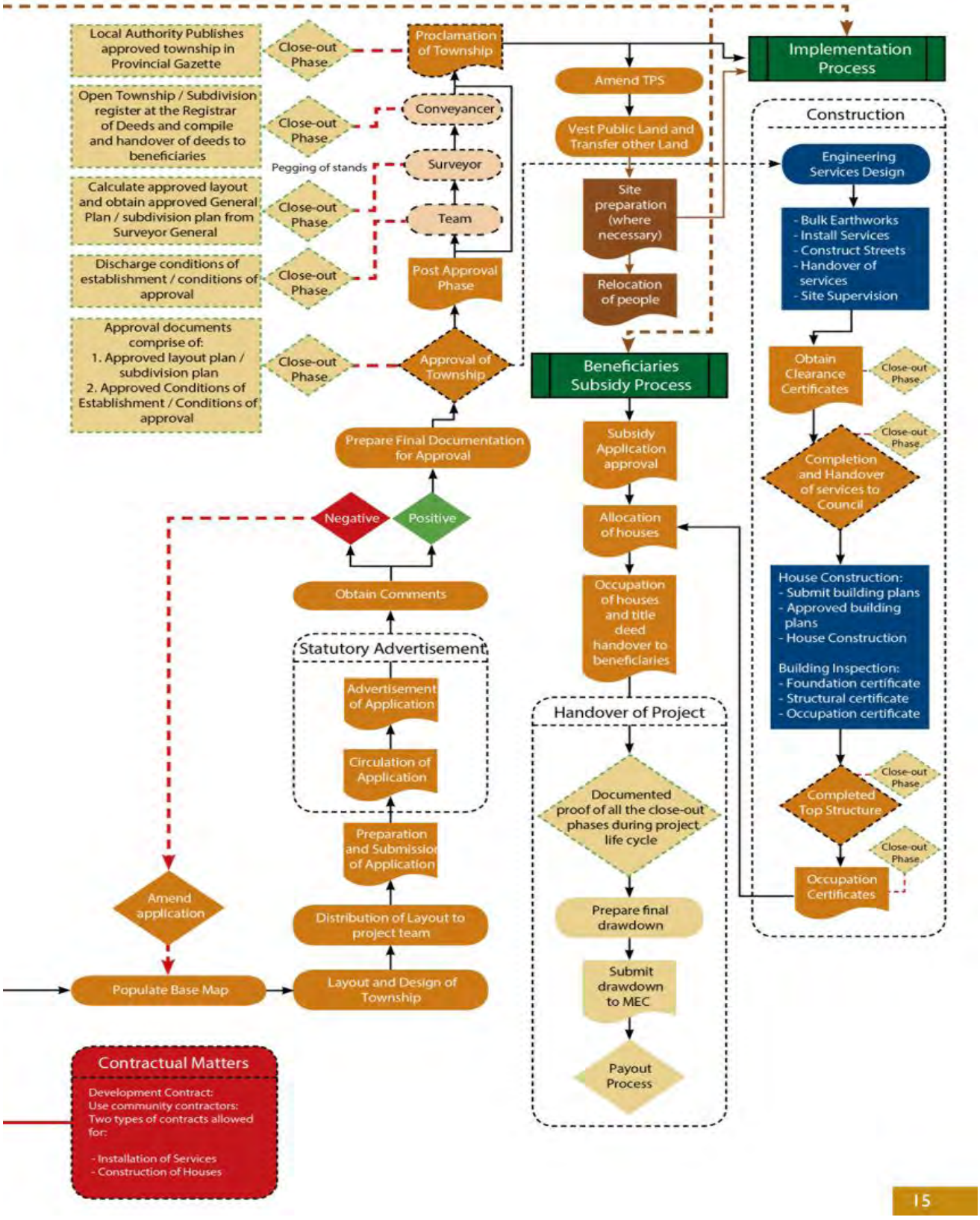
Stage 5. Taking action: implementation and monitoring

17. Creating effective structures and planning links
18. Establishing internal auditing and monitoring procedures

Stage 6. Getting feedback: evaluation and feedback

19. Selecting useful indicators for measuring progress
20. Measuring and reporting on performance and progress
21. Getting feedback from the community

Annex 3 - Detailed processes continued, IRDP South Africa



Annex 4- Legend of processes shown in Annex 1

ICON	DESCRIPTION
	This icon signifies that a sub-process would normally be required.
	This icon signifies that a decision is to be made.
	This icon signifies that an action, document or sub-process would be required to complete a specific task.
	This icon signifies the initiation of a specific phase.
	This connector represents the flow process from one activity to another. Black connectors represent the main process flow.
	Coloured connectors contextualises the flow between phases and should not be used as a short-cur procedure.

Annex 5- Key informant interview questions (Type 1)

1. What is your name, your occupation and Organization?
2. What is/was your role in the IHDP?
3. For how long did you work throughout the IHDP?
4. Who were the different actors that took part in IHDP during the time of your presence?
5. What were the procedures that were taken to produce housing in IHDP?
6. Were there any complete changes or modifications in actors/ processes within the lifespan of IHDP?
7. If so, what were the complete changes and modifications?
8. What‘s the reason for the changes in actors/processes?
9. Consider project X. What were the specific steps taken to produce it and who were all the organizations that participated in the project?

Annex 6- List of key informants for interview

No	Name	Current Work place	Position
1	W/ro Tsedale Mamo	Private consulting company	Former Manager at AAHDPO
2	Ato Wondwessen Demerew	Manager, Association of Ethiopian Architects and Lecturer at EiABC	Former Manager, Design Department, AAHDPO
3	W/ro Shewabirhan Belachew	AAHDPO	Senior Design Expert
4	W/rt Shewaye	AAHDPO	Senior Design Expert
5	Ato Tadesse Yemane	MoHUD	Department Head of Housing Development and Government Buildings
6	Ato Ayele	MoHUD	Senior Design Expert
7	W/ro Hiwot G/Hiwot	MoHUD	Department Head of Housing design preparation, Implementation and follow-up
8	Ato Zekarias Sebsebe	MH Engineering	Cost effective Architectural Department Head
9	Ato Feysel	UPI	Plan Preparation Sub-Process office, Design Expert
10	Ato Fasil Solomon	AASHDE	Land Preparation main work process Senior Architect
11	Ato Mulatu Aragaw	Mulatu Aragaw General Contractor	General Manager
12	Ato Tadele	AAHDPO	Architect

Annex 7- Key informant interview questions (Type 2)

1. When did the project start?
2. How and by whom (Actor) did the project start?
3. What is the role of [company‘s name] for the project?
4. How long did the project take until completion?
5. Who are the actors that participated in the project besides [company‘s name]?
6. Explain in detail, the steps [company‘s name] took to prepare the LDP, NHD, and Typology of the project?

Annex 8- List of key informants for interview

No	Name	Current Work place	Position
1	Ato Habtamu	Habtamu International Consulting Office	Architect, founder and CEO
2	W/ro Samrawit	GET Consult	Assistant Manager
3	W/rt Selam	MGM Consult	Architect
4	Ato Zena Mekbeb	PACE Consulting Architects	Architect
5	Ato Fekadu Lemma	PACE Consulting Architects	General Manager, Senior Architect

Annex 9 - Questionnaires

Name of Organization_____

Project Site _____

Background of the Project

1. When did the project start? _____

1.1. By whom (organization) was the project given? _____

1.2. What's the target population for the project? (How many units does it include?)

_____

1.3. What were the major specifications (requirements) for the project?

-
-
-
-
-
-

1.4. Please tick under the following items that were supportive incentives given for the initiation of the project?

Raw Materials ☐ Construction Equipment ☐ Other ☐

Start-up fees ☐ Capacity Building Training ☐

Mention if other,

_____

_____

1.5. What other companies/ organizations took part in this project?

_____

_____

_____

_____

Content of the Project

2. Does the project:

2.1. Include Local Development Plans? Yes ☐ No ☐

2.2. Include Neighborhood Designs? Yes ☐ No ☐

2.3. Include Typology Designs? Yes ☐ No ☐

- State the major specifications required for the LDP, NHD and Typology designs.

_____

_____

_____

_____

_____

_____

2.4. Incorporate housing policy to regional issues? Yes ☐ No ☐

- If your answer is no, please state the reason why

_____

_____

_____

_____

2.5. Integrate housing to current road planning, transit-way planning and development in terms of:

2.5.1. Plans & Policies: Yes ☐ No ☐

2.5.2. Inclusionary zoning: Yes ☐ No ☐

2.5.3. Corridor-specific housing: Yes ☐ No ☐

2.5.4. Rent or condominium conversion controls: Yes ☐ No ☐

2.5.5. Affordable & unsegregated zoning: Yes ☐ No ☐

2.5.6. Integration with immediate surrounding Yes ☐ No ☐

2.5.7. If your answer is no to any of the above questions, state the reason why

_____

_____

_____

_____

2.6. Provide regional perspective on Housing policy? Yes ☐ No ☐

2.7. Promote alignment of LDPs with structural plans? Yes ☐ No ☐

2.8. Expand technical assistance to share best practices with local governments for future development? Yes ☐ No ☐

2.9. Adopt a data-driven approach to measure progress? Yes ☐ No ☐

- If your answer is no to the questions, state the reason why

_____

_____

_____

_____

2.10. Does the project provide opportunities for housing and transport cost reduction? Yes ☐ ☐

2.11. Does the project encourage infill development? Yes ☐ No ☐

2.12. Does the project have aesthetic/architectural diversity? Yes ☐ No ☐

2.13. Provide housing options that are safe, stable and affordable for different income groups? Yes ☐ No ☐

2.14. Towards which income group is the project more oriented?

Low Income ☐ Middle-Income ☐ High Income ☐

3. What considerations does the project hold in terms of :

3.1. Size? Studio ☐ 1-Bedroom ☐ 2-Bedroom ☐

. 3-Bedroom ☐ 4-Bedroom ☐ 5-Bedroom ☐

3.2. Variable Housing types?

Detached ☐ Semi-Detached ☐ Row ☐ Multistory ☐

3.3. Housing for seniors ☐ disabled ☐ Female Household heads ☐

Other ☐

Mention if other,

_____

_____

_____

3.4. Multiple Tenure options: Ownership ☐ Rental ☐ Co-operative ☐

3.5. Is the project spatially flexible for future accommodations? Yes ☐ No ☐

3.6. Is it spatially accessible? Yes ☐ No ☐

3.7. Is it adaptable to changes on demand/preference/lifestyle? Yes ☐ No ☐

If answer to any of the above is no, state the reason why

_____

_____

_____

_____

4. For Compact Residential development patterns (**community or neighborhood level**), Environmentally sensitive design and construction techniques (**building level**):

4.1. Does the project consider :

- Reduction of harmful emissions Yes ☐ No ☐
- Raise of water sustainability Yes ☐ No ☐
- Proper waste disposal system Yes ☐ No ☐
- Encourage environmentally sustainable buildings/ construction techniques?

Yes ☐ No ☐

If answer is no to any of the above, please state the reason why

_____

_____

_____

_____

_____

4.2. Does the project provide necessary amenities as per population standards?

Schools ☐ Communal Halls ☐ Open Spaces ☐

Playgrounds ☐ Parks/Seating areas ☐ other ☐

Please state, if other

_____

_____

_____

_____

Does the project consider preservation and maintenance of?

Physically Existing Housing ☐ Historic locations ☐

Temporary Dwellings ☐ Housing Affordability ☐ Selective Infill Housing ☐

5. Future Considerations of the Project

5.1. Does the project include expansion areas for future expansions?

5.2. What are the future Short and long-term strategies for maintenance of the project?

_____

_____

_____

6. If you have any additional comments and suggestions involving the project, write below on the provided space.

_____

_____

_____

_____

_____

_____

Thank you for your co-operation!!