FINAL PROJECT DESIGN REPORT
LAPORAN TUGAS AKHIR

VISION FOR *BENER* 2025

Architectural Intervention for Creative Space of *Desakota*

Visi *Bener* 2025

Pendekatan Arsitektural untuk Mengembangkan *Desakota*
sebagai Kawasan Kreatif Kota

By:
Disusun Oleh:
Paramitta Sekartaji
06 512 144

Supervised by:
Dosen Pembimbing:
Dr. Ing. Ilya Fadjar Maharika, IAI

CENTER OF SOCIUS DESIGN

DEPARTMENT OF ARCHITECTURE
JURUSAN ARSITEKTUR
FACULTY OF CIVIL ENGINEERING & PLANNING
FAKULTAS TEKNIK SIPIL & PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
YOGYAKARTA
2012

LETTER OF ENDORSEMENT
LEMBAR PENGESAHAN

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LAPORAN PERANCANGAN TUGAS AKHIR

Submitted to Department of Architecture, Faculty of Civil Engineering and Planning in Partial Fulfillment of the Requirements for the degree of Sarjana Teknik at Universitas Islam Indonesia, Yogyakarta
Laporan Tugas Akhir ini disusun sebagai persyaratan memperoleh gelar Sarjana Teknik (S1) di Jurusan Arsitektur, Fakultas Teknik Sipil dan Perencanaan Universitas Islam Indonesia, Yogyakarta

By:
Disusun Oleh
Paramitta Sekartaji
06512144

Yogyakarta, June 2012

Supervisor 1 *Dosen Pembimbing 1*	**Supervisor 2** *Dosen Pembimbing 2*
(Dr. Ing. Ilya Fadjar Maharika, IAI)	**(Ir. Arman Yulianta, MUP)**

Accepted by
Mengetahui,
Chair of Department of Architecture | *Ketua Jurusan Arsitektur*
Faculty of Civil Engineering and Planning | *Fakultas Teknik Sipil dan Perencanaan*
UNIVERSITAS ISLAM INDONESIA

UNIVERSITAS ISLAM INDONESIA
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
YOGYAKARTA

(Dr. Ing. Ilya Fadjar Maharika, IAI)

ASSESSMENT SHEET
LEMBAR PENILAIAN

Below is the assessment for the final project design report of:
Berikut ini adalah penilaian mengenai buku laporan akhir:

Name / *Nama Mahasiswa* : Paramitta Sekartaji

Student Number / *Nomor Mahasiswa* : 06512144

Project's Title / *Judul Tugas Akhir* : **Vision for Bener 2025**
Architectural Intervention for Creative Space of *Desakota*
Visi *Bener* 2025
Pendekatan Arsitektural untuk Mengembangkan *Desakota* Sebagai Kawasan Kreatif Kota

Quality of the Design Report / *Kualitas Buku Laporan Akhir* : **Average** / *Sedang* | **Good** / *Baik* | **Excellent** / *Baik Sekali* *) please circle / *mohon dilingkari*

So that it is,
Sehingga,

Recommended / ~~Not Recommended~~
Direkomendasikan / Tidak Direkomendasikan

*) please circle
mohon dilingkari

Yogyakarta, June 2012

Supervisor
Dosen pembimbing,

Dr. Ing. Ilya Fadjar Maharika, IAI

Foreword

Paramitta Sekartaji's design thesis (06 512 144) entitled "Vision for *Bener* 2025" shows us the role of architecture as a generator of urban community development through creating a "creative space". The space, in Sekartaji's vision, is not only creative in design but also, and perhaps more important in this thesis, plays as creative ground for people to nurture creative industry. For her, urban development through creative industry is meant to promote "energetic creative activities of artists, creators and ordinary citizens" by way of creative and innovative architecture. Her three creative levels of intervention attempts to demonstrate that roles. A small scale design of structure - named *HitpPod* - makes possible for urban community to generate development by assembling, adjusting and replicating freely. Architecture here becomes fluid, lego-like form production and adaptive to people's definition of function. In her view, larger scale development can also be done by duplicating the structure into other places where creative space and industry can also be generated.

In UII's architectural education culture, the way of Sekartaji develop her design thesis is still rare. She convinced us that combining design and research is possible. Based on in depth observation in place and people of Bener Yogyakarta and then careful yet rigorous architectural design thinking she gave a strong conceptual design scheme that answers both architectural questions and community development problems. Indeed, in my view, this is a kind of architecture that we should pursue in education level as well as a kind of architect we should produce for current and future spatial development, especially in Indonesian context. Architects could not work as form and structure generator only as the role is getting taken over by computers. We have to think beyond form and structure but providing schemes and venues for opportunities to grow and to come.

However, Sekartaji's work leaves also some space for criticism. Her *HipPod*, despite open for indigenous creativity of people, in some cases it is "too beautiful" - thanks to beautiful rendering. The choice of materials, the way and technique of opening, the variety of building envelop, are all indeed open to people decision since the design is participative. Yet, giving the "right direction" to more climatic adaptable solutions will be more suitable.

Dr. Ing. Ilya Fadjar Maharika, IAI

Centre for Socius Design

DECLARATION

LEMBAR PERNYATAAN

This is to certify that this design report comprises only my original work towards the ST (*Sarjana Teknik*) except where due acknowledgement has been made in the text to all material used. The final project design report is less than 10,000 words in length, exclusive of tables, maps, references, and appendix.

Dengan ini, saya menyatakan bahwa dalam laporan ini sepenuhnya karya penulis, tidak terdapat karya yang pernah diajukan untuk mendapatkan gelar kesarjanaan pada perguruan tinggi lain, jika terdapat karya atau pendapat yang pernah ditulis orang lain pada laporan ini ditulis sebagai kutipan yang mencantumkan sumber dan daftar pustaka.

Paramitta Sekartaji

June, 2012

ACKNOWLEDGEMENT

Sometimes the questions are complicated and the answers are simple (Dr. Seuss)

Alhamdulillahirobbil'alamin. I would say thank you to great Lord, Allah SWT for always hearing my prayers and always giving me surprises in life.

I would like to give my greatest gratitude to my supervisor, Dr. Ing. Ilya Fadjar Maharika for guiding me from the very first time I started this final project until the end. I'm very proud and thankful of having you as my supervisor, for without your support this project would not materialize.

To Ir. Arman Yulianta as my second supervisor, I would really like to say that I'm very lucky to have your insight. Every conversation with you was very intriguing yet inspiring.

To all of Lecturers of the Department of Architecture, especially to Wiryono Rahardjo, Ph.D and Ir. Hanif Budiman, you are my most favorite amongst my favorite. And all staff of the Department, especially for Mr. Sarjiman who always alarmed me on every deadline.

The life of college would be very suck without the accompaniment of a good friends, so I'd like to say thank you for all my friend in college especially to my International Program Industrial Engineering class of 2005 (I miss you guys so bad) and my class of 2006 Department of Architecture friends.

To whom I consider are (or were) my best college lads and lassies: Ganesha Kresna, Halim Maulana, Subhan Nuralim, Aditia Azmi, Rinaldi Kesuma, Romie Passie, Galuh Ajeng, Ulfah Catlya, Aditya Nandi, Gadang Sunu, Trisandhi Hardisaputra, Tetuko Bayu Lelono, Admal Yasar, Hendra Ferdiansyah, Galih Reza, Sapta Kurnia, Fariz Rachmana, Didi Kristiawan : I remember you

My best to my soul sisters : Dian Suci "Ultramen" Rahmawati, Harinda Artarani, Wuri Nika, Diandhita Ayu, Meidhan Fidhelia, Olivia Ruben, Alfina Shofa, Minati Gayuh. Thank you. I am soulless without you.

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Thank you to Irfan Arghi Nuswantoro for all his help with his might, I couldn't put you in any section so I put you here, alone.

All my family,Eyang eyang eyang eyang .Ohana!

My Parents, for without them I would not materialize thus this project would not materialize.

My star, my moon, my guiding star: Kai, Karan, Rae. You are the ultimate blessing and bother.

RK, the orbit.I mosby you

Everything stinks 'till it's finished (Dr.Seuss)

Yogyakarta, June 2012

Paramitta Sekartaji

Abstract

This design thesis is about developing the creative economy embryo of the urban informal community through architectural intervention. It took setting in *Bener*, *desakota* in the western part of Yogyakarta municipal area. *Desakota*, as the melting point between rural and urban characters, is the feature of urbanization in most Asian cities, where rapid changing from agricultural-based economy to creativity-based economy, takes place. In this case*, Bener* is fortunate for having the creative economy embryo in the form of micro community-based industry named *Salingsih* that recycles inorganic trashes e.g. plastic bottle and snack wraps into wearable products such as bags, pillowcases and accessories.

The project proposes various level of community based-design intervention to create “creative space” namely macro; *meso*; and micro that range from urban guideline to small-scale architectural intervention e.g. single pod. At urban design level, the project proposes the urban design guidelines on how to create the creative space. At *meso* scale planning, the project proposes the master plan to generate the creative space of *Bener* which is divided into 3 five-yearly stages started at year 2012 and is expected to be completed at 2025; the first step of the project is initialization, continued with proliferation, cultivation, and then advancement. Initialization phase is based on the author’s dialogue with the actress of the creative industry, that the crucial need to develop the industry is the establishment of workshop facilitation. Proliferation phase is trying to embrace the men folks into the industry by providing alternative to create another product of the trash recycling industry. The cultivation is the effort to generate creative support infrastructure by merging the creative economy to the educational institution. Advancement phase is the urban guidelines for the façade of the *Bener* Street to generate it into *Bener* Promenade. The phases in the project master plan need the formal device that covers every requirements of each stage. The design of the formal device is the micro scale planning in the project.

Keywords: Asian Urbanism, *Bener*, Community-based Design, Creative City, Creative Economy, *Desakota*, Recycling Industry

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Chapter 1:
Introduction

The "century of the city" is starting. (Sasaki, 2007: 77)

This First chapter introduces an underlying issues and phenomenon behind this project: urbanization, generally in Asia and particularly in Indonesia causes severe problem like urban poverty. Many cities now attempt to solve the problem by creative economy. Here also in this chapter, presented the brief description of desakota -as one of the rule of urbanization in Indonesia- Bener with its potency on creative economy

1.1 Issues

1.1.1. An Urbanizing Asia at Glance

Asia is the world's largest and most populous continent. It covers 8.7% of the Earth's total surface area (or 30% of its land area) and with approximately 3.879 billion people, it hosts 60% of the world's current human population (Wikipedia). Moreover, 6 of the world's most heavily populated countries are found in Asia: China, India, Indonesia, Pakistan, Bangladesh and Japan. Together, these account for 45% of the global population and 77% of all Asians (Biau, 2007).

Asian cities are home to 1.7 billion people, nearly half the urban population of the world. This proportion is expected to increase slightly by 2020, when Asian cities will be host to 2.2 billion of the world's 4.2 billion urban population. Asia's urban population has grown from 31.5% of the total in 1990 to 42.2% in 2010. Between 2010 and 2020, a total 411 million people will be added to Asian cities, or 60% of the growth in the world's urban population[1]. Megacities attract the largest share of development investment, energy and creativity. But statistics tell us clearly that actually, many more urban Asians live in smaller cities and towns than in all the megacities in the region (UN- Habitat, 2008). The total population of Asia living in urban areas in 2000 was 1,367 million, but only 10.4% of them lived in mega-cities with 10 million or more inhabitants. Half of the urban population of Asia lived in towns with fewer than 500,000 inhabitants[2]. Small and medium-sized cities act as economic growth centers, but most lack adequate infrastructure and services[3].

> *This means that by 2030, one out of every 2 urban residents in the world will be in Asia.*

[1] As Cited in *The State of ASIAN Cities 2010/11*
[2] UN-ESCAP, 2007
[3] *The State of ASIAN Cities 2010/11*

1.1.2. Urbanization and Urban Poverty

According to UN – Habitat (2008), urbanization happens in three ways: first, it happens by natural population growth. About half of urban growth rate was caused by natural population growth. Second, it is the result of rural to urban migration. Cliché yet good reason to migrate is that because most people can't make the decent living out of the agriculture in rural areas as agriculture is highly dependent on weather conditions, rural land is limited and its fertility is sometimes low or declining, land holdings are small, farm debts are high, and many households have always been or have become landless. While cities tempts people with better job prospects, better education and health facilities or more freedom from restrictive social and cultural realities, for themselves and for their children. Third, urbanization happens by reclassification of rural areas into urban areas.

With the escalating urbanization, it's likely that in the coming years and decades, urban poverty will become a major challenge in the Asian region. Urban poverty is different in nature from rural poverty, so that it needs different approach. Urban poverty is not so much a lack of employment, because almost all urban poor are "working poor". Their income is higher than that of the rural poor. The problem is not an absence of basic services, because such services are highly concentrated in urban areas.

> *Cities are engines of economic growth and social development. They contribute a majority of Asia's GDP and house its most dynamic, innovative and productive citizens.*
>
> Housing the Poor in Asian Cities, Quick Guide 1, UN-Habitat: 2008

Despite having a higher income, the urban poor cannot live a decent life, because the higher income is taken away by a number of additional (often urban-specific) costs:

(a) A high cost of living, because of the highly monetized access to goods and services;

(b) The exclusion from public services because of the extra-legal status of the house or its occupants;

(c) The higher cost of a service provided by the private sector for lack of public sector provision

(d) The high opportunity cost of waiting for a (possibly free) service by a public provider;

(e) The high and recurrent cost of bribes, other informal payments and harassment by law enforcers owing to their extra-legal living and working conditions;

(f) The high health cost of living in an unhealthy environment with inadequate water supply, sanitation, drainage and solid waste collection;

(g) The costs of threats and consequences of eviction and of natural hazards such as floods and landslides.

As a result, the urban poor have less money to spend on basic necessities, their source of income is insecure and their health is affected by poor living and working conditions. In Sen's words (1999: 87), they are as much deprived of many capabilities to live the life they have reason to value as the rural poor.

As UN-ESCAP (United Nation-Economic and Social Commission for Asia and Pacific) resumed that the urban poor need better conditions for their work, including in the informal sector, better infrastructure and services, including inside the slums, and good urban governance to make the local decision processes inclusive, participatory, accountable and transparent.

1.1.3. Urbanization in Indonesia

The proportion of people living in urban areas in Indonesia is predicted to exceed 50% by 2010 and to reach 60% by 2025. Most city governments and also *kabupaten* (county) governments that cover a significant proportion of urbanized areas have been overwhelmed by the ever-

increasing demand for urban services, infrastructure, housing and facilities, and employment. The urban informal sector, within which most rural-to-urban migrants find refuge, has become ubiquitous in Indonesian urban landscapes but has not been seriously or strategically addressed by many city governments (ILOURDI 2005,UNDPURDI 2004).

The significant part of the rise in urbanization in Indonesia has been due to reclassification of areas from 'rural' to 'urban'. The number of rural '*desa*' (villages) classified as 'urban' almost doubled between 1980 and 1990, from around 3,500 to approximately 6,700 (Hugo, 2003).

In the Indonesian context, urbanization cannot be represented solely by cities (*kota*). At the district level, there are two types of administrative unit: *kota* or city and *kabupaten*. Both administrative units are autonomous under the decentralization policy. *Kabupaten* are not necessarily entirely rural. Often, significant urbanized areas are within *kabupaten* as represented by Sleman[4]. Thus it is implied that there's little distinction between urban and rural in Indonesian term.

One of the norms regarding haziness between urban and rural in Indonesia is shown by feature like *desakota*. *Desakota* is a term defined by the Canadian geographer T.McGee as peripheral rural areas with high population densities which characterizes most of the cities in Java, and Asia in general. In simple term, *desakota* is the mixture between "rural" and "urban" whereas in *desakota* we will find some pattern that Maharika (2010) stated as an "overlap of two distinct activities namely agriculture in urbanized setting". Another significant note by Maharika in the same paper is quoted below:

"*Desakota* hence is an exemplary case of the process of fusion of natural, rural and urban environments through global processes. Here we could not easily distinguish between informal settlement as a residue of urban development and native villages as those villages have already been engulfed by urbanization process. The *desakota* of Asian cities are in

[4] Asian Development Bank: Urbanization and Sustainability in Asia, 2006

fact a fertile soil for a complex relationship between architecture and its natural, social and cultural setting."

Hypothetically speaking, i see *desakota* as an urban embryo that will undergo more or less the same problems as cities nowadays endure. Thus, early particular planning of *desakota* is highly expected.

1.1.4. Creative Economy: Next Prospect

The world's economic trend has been changing rapidly from agricultural-based economy to creativity-based economy, as Toffler (1980) describe it with the illustration below

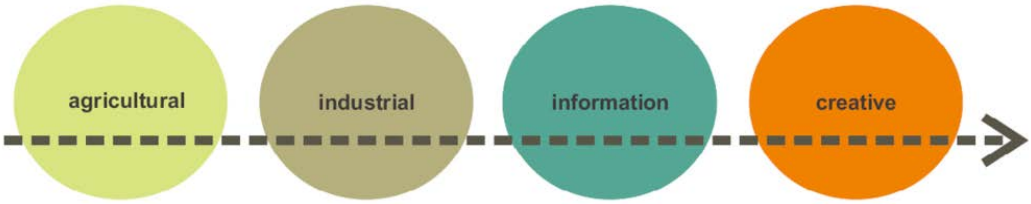


Fig 1.1 Evolution of world's economic trend
Source : reworked by author extracted from http://portal.indonesiakreatif.net/ accessed September, 3rd 2011

Creative economy can be defined as economic activity that is focused in the making of goods and services which depends on the creative skill and knowledge[5]. It's the economy concept in which the Human Resources are more important than Natural Resources. As Romer (1993) stated that ideas are invaluable economic commodity, considering that ideas, talents and creativities are limitless. It includes an artist expressing a personal aesthetic in his/her work (the core); collaborative processes between creativity, technology and business; and functional products (related sectors).Together, the core and related sectors constitute the total creative economy. A creative economy encompasses both formal and informal activities; industrial as well as non-industrial sectors[6].

[5]Translated from Blueprint of Indonesian Creative Economy Development Plan 2025, Ministry of Trade Republic of Indonesia, 2008
[6] Etienne Clément,Deputy Director of UNESCO Bangkok Office, 2011

As the creative industries amount to 7.3% of the world GDP and growing by 10% annually, it seems right to state that creative economy is the next prospect for development in globalized context. Furthermore, I notice that creative economy has the power to profit the poorer groups of society, both in rural and urban with the simple logic: even the poorest one does not pay for brain, and any employer won't find "brain" anywhere but from the employee. This is obviously different with industrial or agricultural which are able to replace human employee with machine.

As the nation that's rich of culture, Indonesia has big shot in creative economy. Moreover, Yogyakarta city was claimed to be the center of contemporary art of South-East Asia (Raslan, 2010). The creative industry's average share of Indonesia's Gross Domestic Product year 2002-2006 is 6.3% (Nominal value of IDR 152.5 Trillion).

Indonesia categorizes creative industry into 14 sub-sectors: Architecture; Design; Fashion; Movie, Video & Photography; Craft; Software & Computer Services; Music; Art Markets; Advertising; Publishing; Interactive Leisure Software; Performing Art; Television & Radio; Research & Development. With the area of development including Bandung; Denpasar; Jakarta; Solo; Yogyakarta; Makassar; Pontianak; and Medan.

1.1.5. *Bener* : *desakota* with the Potency of Creative Economy

Bener is one of sub-district in Tegalrejo district, western part of Yogyakarta municipal area which is planned to be one of urban settlement district[7]. *Bener* has an area of 0.57km² with the population of 12,091 people that consists of 6,063 male members and 6,028 female members sorted into 3,603 households[8].

[7]DI Yogyakarta province spatial plan 2009-2029, DI Yogyakarta Public Work Department
[8]Data extracted from *Bener* sub-district authority office, 2011

Bener, is one model of *desakota* that was briefly explained in the previous paragraph, shows the pattern such as overlap of agriculture in the urbanized setting. It's the form of contemporary urban feature in Indonesia: fusion of the informal settlement and native village; real estate and the industrial development.

Fig 1.2 Agriculture within the urban setting at *Bener*
Photos credits : author. Taken : November,2011

Fig 1.3 Set of images : from top right, counter clockwise : native village & informal settlement ; real estate; industrial building of *Bener*
Photos credits : author, Taken : November,2011

There is potency of creative economy manifested into trash recycling industry named *Salingsih* community, takes place in RW 02 *Bener*. This community based home business mainly processing non-organic trash into wearable products like backpack, tote bag and accessories. The problem faced by the industry at present time is the lack of facilities to run and develop business, not to mention that there's inadequate appreciation given to the business even from within larger community of *Bener* itself.

Fig 1.4 products of Bener recycling industry
Photos credit : author. Taken : Sept,2011

1.2 Problem Formulation

1.2.1 Design Constraints

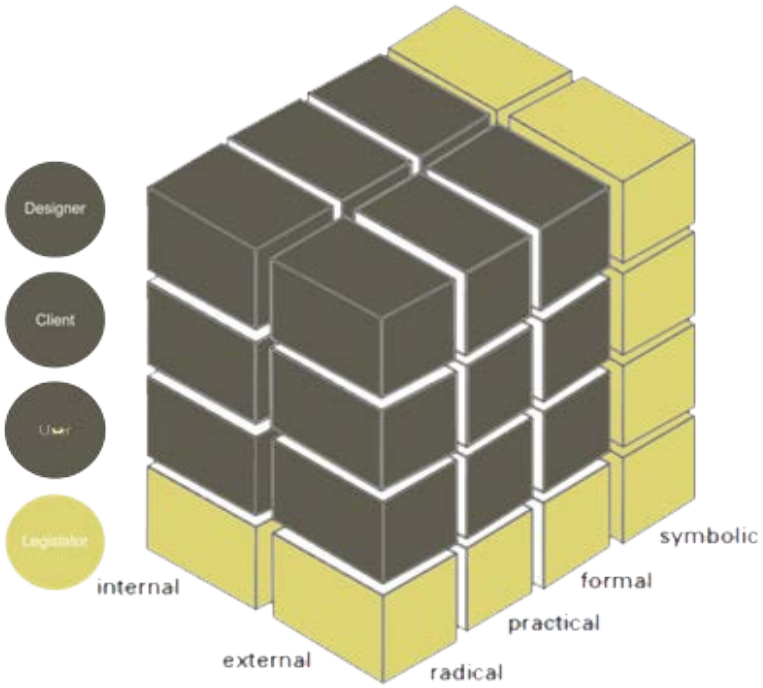


Fig 1.5 model of the project design problem according to Lawson's model
source : reworked by author, taken from How Designers Think by Lawson

Using the model of design problems by Bryan Lawson[9], the straints of this project are generated by author as a designer and RW 02 *Bener* community as both the client and user. This constraint is not ated by the legislator. The project is limited on doing land-use planning on certain areas of *Bener* and the formal design of architectural typology to be applied in pursuing *Bener* as creative urban space. This project wills not going further on the budget estimation and investment; site development policies and building regulations. The technology that is used in this project is referred to the case studies and will only being presented as conceptual drawing.

[9]Lawson, Bryan : How Designers Think, 2005

1.2.2 Problem Statement

My architectural project here is more or less running in the subject of urban planning, thus I divide the problems here into 3 levels: macro; meso; and micro:

Macro-problem : how to develop the creative economy embryo of *Bene*r in order to generate Bener as creative urban space?

Meso-problem : how is the Master Plan for generating Bener as creative urban space?

Micro-problem : what kind of architectural intervention to be the instrument to generate *Bener* as creative urban space?

1.3 Aim and Scope

This project is aimed to find the master plan and architectural interventions to generate the creative economy embryo of *Bener* in order to develop the area as creative urban space

The scope of this project is planning certain area of Bener that includes the creative economy center and its further development via particular form of architecture that will work in the setting of *desakota-Bener*.

1.4 Structure of The Paper

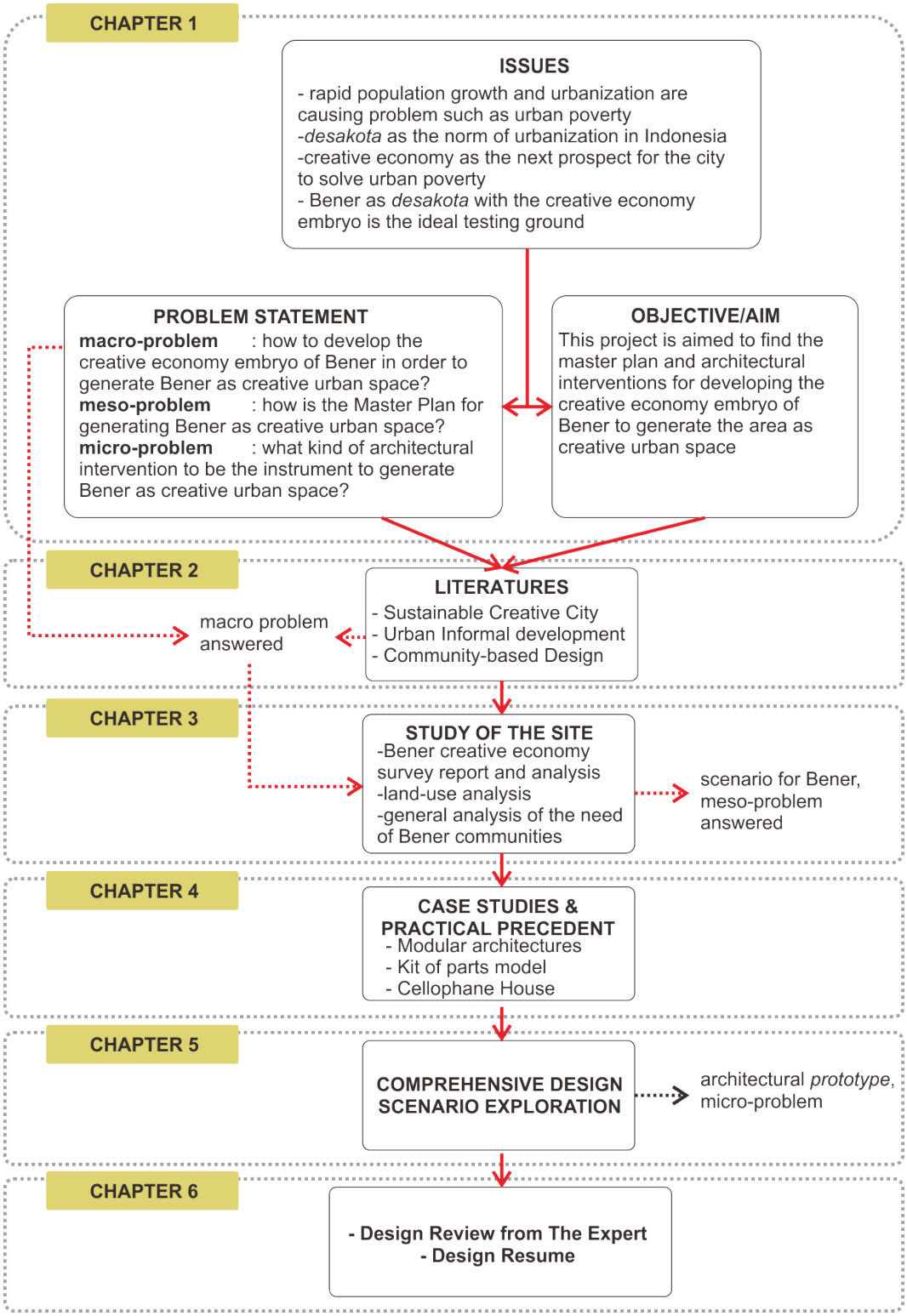


Fig 1.6 scheme of the paper's process
Source: author, 2012

Chapter 2:
Literatures

A city is made with conflict;
a city is the conflict between the formal and the informal
Alfredo Brillembourg from Urban Think-Tank

This project sees its setting –desakota- as contemporary urban informal area in where the development is outside the plan of city government. Thus this second chapter is presenting method and methodology behind the practices on urban informal development –at this case the practice is Urban Think_tank. This chapter is as well interpreting the theories and guidelines of creative city. And as the author realized there is the change in the trend of communal space design and planning from conventional to community based design, this chapter as well delivering the introduction of community design and open building concept. At last this chapter concludes the befitting points of urban informal development and the planning of creative city to be implemented in answering this project's macro problem

2.1 Urban Informal Development: The Study of Urban Think-Tank

"The practice of urban planning in the developing countries including Indonesia has been dominated by two urban theories, the Chicago School of Urban Sociology and the Los Angeles School of Urban Geography. Both urban theories are rooted in the developed world. Planning practices are constantly borrowed and replicated across borders (Roy 2005). Planning practices that replicate both urban theories through the dichotomy of developed and developing countries become ubiquitous. This becomes a problem when such a replication is no longer relevant with the unique urban phenomenon in developing countries including in Indonesia."[10]

As i previously discuss in the first chapter that one of the norm regarding urbanization in Indonesia is *desakota. Desakota* is one of the unique urban phenomenon in Indonesia the previous paragraph has been stated. Despite the complex definition about *desakota*, one can simply say that *desakota* is the feature outside the formal definition of urban, in the other word, *desakota* is contemporary informal urban feature, and talking about urban informality is like talking about jungle I can't meticulously see what happens inside. Hence, the precedent of the guidelines, methods and methodology in planning such field that has similar feature like *desakota* - contemporary informal urban feature- is urgently needed in this project.

2.1.1 Urban Think-Tank (U-TT)

Urban Think-Tank (U-TT) is an interdisciplinary design practice dedicated to high-level research and design related to contemporary architecture and urbanism. It was founded in 1993 by Alfredo Brillembourg in Venezuela. In 1998 Hubert Klumpner joined as a co-director. The firm em-

> We like the word "informal" because "inform" is not "out of form". "Inform" is a hybrid that actually means something different, which can be interpreted, meaning that we can discover the actual form and logics of design that is in these areas –
>
> Alfredo Brillembourg

[10]Quoted from Rukmana, Deden as written in http://indonesiaurbanstudies.blogspot.com/2010/06/urban-planning-and-local-wisdom-shift.html

phasizes researching and building for the informal city. I found Urban Think-Tank as one the practice that offers architectural solution in build the contemporary, informal urban development. In order to improve the living conditions of the barrios through architecture, U-TT finds small-scale intervention and insertion like the modular stair for the *barrio* in Caracas is best in responding to community needs. U-TT here sees architect as mediator between top-down governance and bottom-up community initiatives.

Fig 2.1 modular stair by U-TT
source : http://www.u-tt.com/projects_ModularStairs.html
extracted March 17 2012

2.1.2 The Thinking behind Urban Think-Tank: Urban Acupuncture

> "We started with analyzing the transformational properties of the architecture object, such as the building, and the context in which it is inserted. In other words, we realized that once you placed a powerful building within the slum context, you created a kind of urban acupuncture, which actually resonates and creates a lot of change around it"[11]

Urban Acupuncture itself is an urban environmentalism theory of Finnish architect Professor Marco Casagrande which combines urban design with traditional Chinese medical theory of acupuncture. In short, urban acupuncture sees small scale approach will "heal" urban decay rather than large-scale revitalization projects which are not only less effective, but they are increasingly less feasible, as municipal budgets tighten.

[11]As cited from Brillembourg's interview at http://www.designindaba.com/ accessed March, 17 2012

Fig 2.2 illustration of urban acupuncture
source : http://www.http://www.mozardien.com/halls/2011/08/14/the-concept-of-urban-acupuncture/
extracted March 17 2012

2.1.3 Urban-Think Tank's thinking Strategy

Urban-Think Tank is building experiments in which the buildings have a few prominent features. One, they are new prototypes. They are prototypes that come directly out of what U-TT observes in cities. Two, the new prototypes can be multiplied. The idea behind these prototype buildings is that they can be refined over time so U-TT makes them open source to have other architects build them. They are replicable and systemic catalysts.

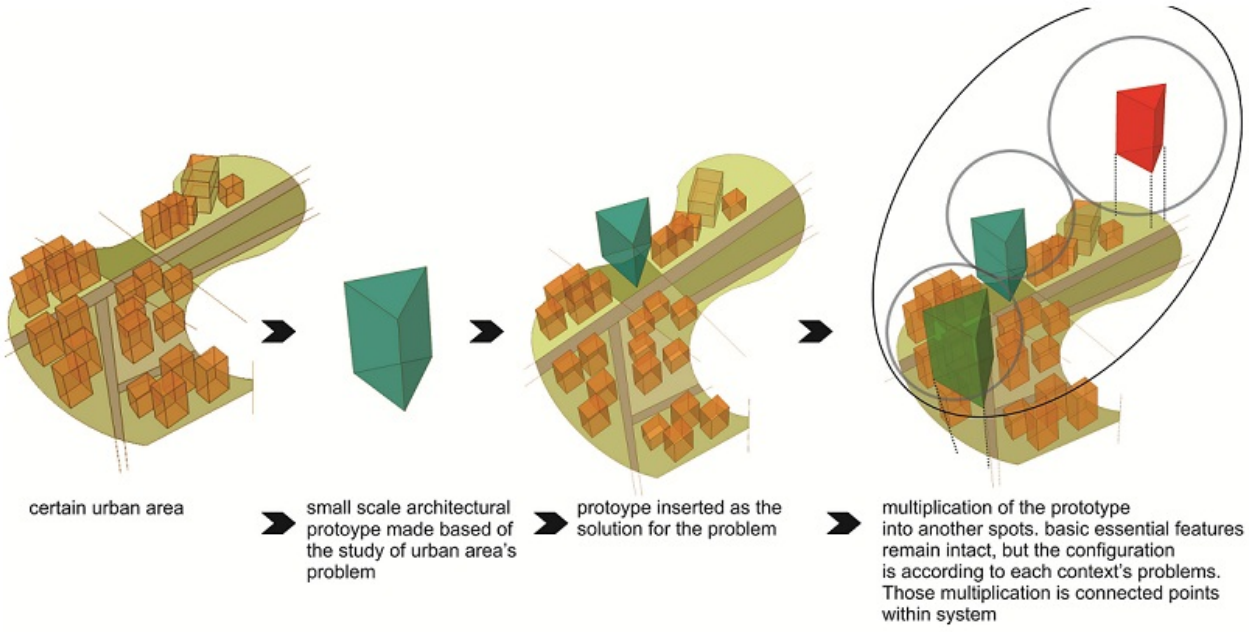


Fig 2.3 Analysis of U-TT's Thinking Manifesto
source : Author, 2012

2.1.4 METRO CABLE project by Urban Think-Tank

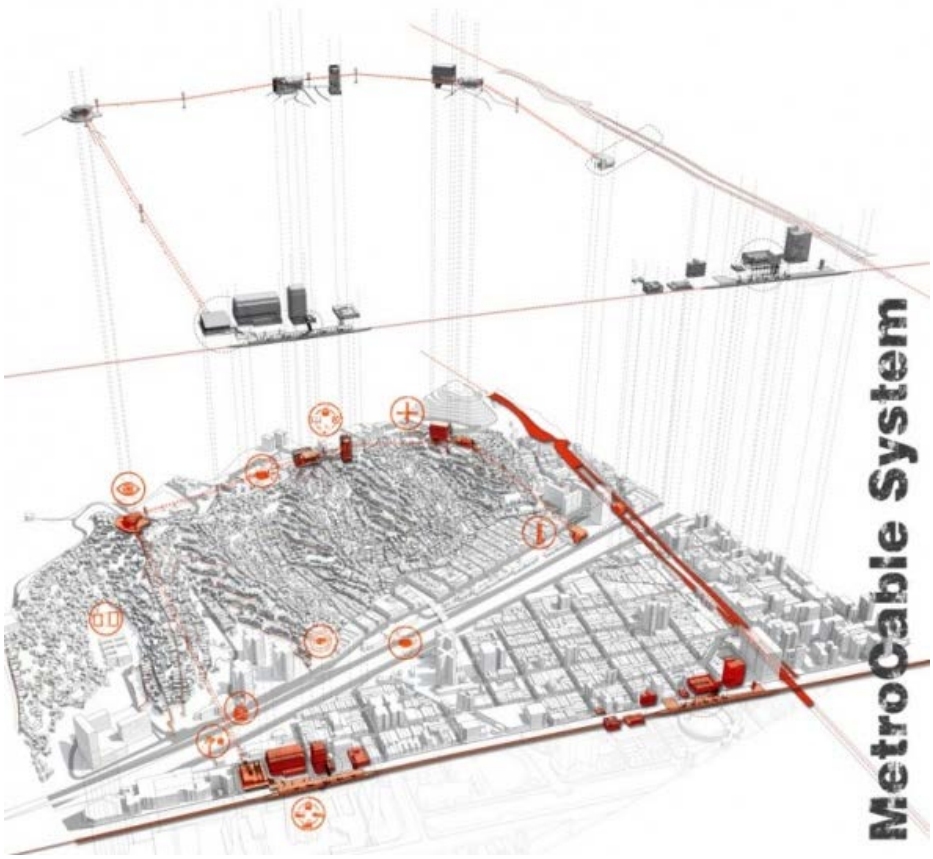


Fig 2.4 U-TT cable car's master plan
source : http://www.designindaba.com/article/urban-acupuncture extracted March 17 2012

"We call this 'urban acupuncture " says Klumpner[12]

The cable car system, which is integrated with the Metro System of Caracas, is 2.1 km in length and employs gondolas holding 8 passengers each. Metro Cable's capacity allows for the movement of 1,200 people per hour in each direction.

Two stations will be to be in the valley and connect directly to the Caracas public transportation system. Three additional stations are located along the mountain ridge, on sites that meet the demands of com-

[12] As cited from http://archrecord.construction.com/features/humanitarianDesign/0810urbanthink.asp accessed March 17,2012

munity access, established pedestrian circulation patterns, and also spatial availability for construction, ensuring minimal demolition of existing housing.

The five stations' designs share a basic set of components in common; platform levels, ramps for access, circulation patterns, materials, and structural elements. However, each station differs in configuration and additional functions, and the separate stations include cultural, social and system administrative functions; replacement of demolished residences with more homes, as well as public spaces; a gym, supermarket, and day-care center; and a link between the cable car system and the municipal bus circuit.

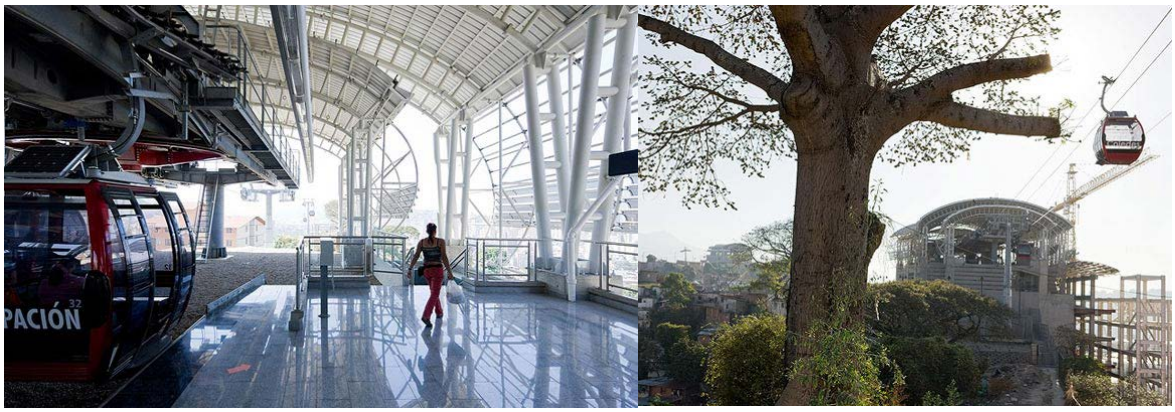


Fig 2.5 one of U-TT metro cable car's station
source : http://www.u-tt.com/projects_Metrocable.html extracted March 17 2012

2.2 Interpreting Creative City

I found that it's difficult to literary analyze about creative city because the definition itself is elusive. There are many definition and approach to creative city. Thus, here i try to decide and adopt one guideline to transform theory into practice

Creative cities is a concept developed by Charles Landry in the late 1980s, encouraging a culture of creativity in urban planning and solutions

to urban problems[13]. According to Comunian (2011), in this concept, all creativity – be it scientific or artistic – can make a difference to cities. Among the examples, many present the interaction between artists or art organisations and places or communities. A vision of culture as an engine to support a cities' image and economic future is also portrayed[14].

Then the current understanding of the creative city is one dominated by term such as creative class (Florida, 2002) which stress the importance of culture and the arts in the urban context. Cultural aspects of city life and artists have become important factors for urban policy, public officials, and businesses.The presence and concentration of artists, scientists, musicians, bohemians, and even gays, is linked to the city‟s economic development in that these groups foster creativity, which is seen as the new economic value. The creative climate of a city or an urban district is essential because it attracts the creative class (or not). Thus, the presence of urban amenities that can attract the creative class is the only key to create creative city, as Florida stated

> "...creative people are not slavishly following jobs, but rather look for attractive urban amenities. If you want to produce first quality honey, you don't start with the beehives. First you find a field where a thousand flowers bloom which in turn attract the bees. The creative class doesn't want generic amenities. Creative people look for authentic places that aren't finished yet, places where you can add something of your own. 'New ideas often require old buildings', I learned from Jane Jacobs. Office towers, large-scale conference centers and multifunctional stadiums are boring. The creative class isn't interested in shopping malls. They are already finished and therefore do not stimulate creativity. The built environment and an area's people climate should be active and authentic."[15]

[13] http://understandingsocialscience.wordpress.com/2010/11/11/key-term-definition-creative-cities/ extracted March, 20 2012
[14] Florida, R. (2002). The rise of the creative class—and how it is transforming leisure, community and everyday life..New York: Basic Booksvia http://en.wikipedia.org
[15] Gert-Jan Hospers and Roy van Dalm on the article How to create a creative city? The viewpoints of Richard Florida and Jane Jacobs

However, there are many critics in Florida's thinking about creative city. One comes from Sasaki[16], that stated "attracting people of the "creative-class" does not automatically make a creative city." Furthermore, Sasaki did such thing as reinterpreting the definition of creative city through interchange with Landry & Florida as follows : Cities that cultivate new trends of arts & culture and promote innovative & creative industries through the energetic creative activities of artists, creators and ordinary citizens, contain many diverse "creative milieus" and "innovative milieus", and have a regional, grass-roots capability to find solutions to global environmental problems such as global warming (Sasaki, 2008)

He also summarized following elements of the Creative City by above analysis : not only artists, scientists, workers and craftsmen should involve themselves withcreative work, but also all citizens should evolve (or expand) their free creative activity. As aresult, they are able to feel satisfaction with their lives. In order to make this condition, it is

necessary to encourage production of useful and culturally valuable goods and services, and to improve environment of factories and offices.

1. Ordinary life of citizens should be artistic. To do so, it is necessary to ensure enoughincome and free time to be well off. In addition, reasonable price of high quality consumption goods should be supplied and arts & culture like the performing arts should be appreciated with low price.
2. Thirdly, universities, technical schools, research institutes, theater, library, and cultural institutions which support creative activity of science and art in a city have to function as the creative support infrastructure.
3. The environmental policy is crucial. It preserves historical heritage and a city'senvironment and improves amenity. Consequently, citizens enhance their creativity and sensitivity.

[16]Dr. Masayuki Sasaki, Director of Urban Research Plaza; Professor of Osaka City University

4. A city has to have the well-balanced economic basis which supports sustainable andcreative region.
5. In terms of public administration, the Creative City is composed of the creativeintegrated urban policy, unified cultural policy with industrial policy and environmental policyunder the democratic management of the public finance.

   In other index, those elements above can be defined below :

   1. Creative Talents : the number and activity of artists, scientists, engineers and craftsmen
   2. Quality of life : the wealthy of personal income, free time and expenditure for cultural affairs and entertainment; richness of urban environment and amenities
   3. Creative Industries: the number of firms and employments in the cultural creative industries, such as film, video, music, art and craft etc.
   4. Creative Support Infrastructure : the number and availability of universities, technical schools, research institutions, theaters, libraries, and cultural institutions
   5. Heritage and Cultural Asset : the number and the preservation condition of tangible and intangible cultural assets which are documented by the public sector
   6. Citizen's Activities : the conditions of NPO activities and women's participation insociety
   7. Creative Governance: positive citizen participation, ability of policy-making, and financial independency.

2.3 Community-Based Architecture

Like any other urban scale development, this project needs to consider the basic principles of urban design: it belongs to the community. The mere fact that top-down approach had never worked in planning such communal space has brought planner and architect to new trend in com-

munity design: bottom-up planning; participatory design, community design.

2.3.1 Community Design Continuum

According to Sanoff (2000: ix), the term 'community design' is an umbrella term covering community planning, community architecture, social architecture, community development, and community participation, all of which emphasize the involvement of local people in social and physical development of the environment they are living in. The question now is "what kind of community involvement; participation in this kind of design process? Toker (2007) explained in his article, that Shirvani (1985) identifies two types of approaches in the overall scheme: facilitator approaches and political activist roles. Wulz (1986), on the other hand, presents a continuum of seven stages of participation ranging between full autonomy of the professionals and the full autonomy of the users. By combining these two categorizations and adding other definitions in the literature, we can construct another continuum below

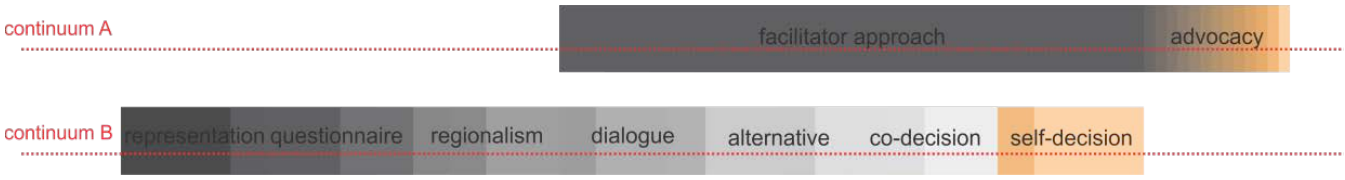


Fig 2.6 Two continuums of different roles of professionals in community design
source : Toker, 2008 reworked by author

Based on Shirvani (1985), facilitator approach uses participatory methods for both problem definition and design solution generation through design assistance techniques. Sanoff (2000: 38) defines facilitation as 'a means of bringing people together to determine what they wish to do and helping them find ways to work together in deciding how to do it'.

Shirvani (1985) and Sanoff (2000) define the facilitator approach covers stages of Wulz's participation continuum: dialogue, alternative, co-decision, and self-decision. The dialogue is based on informal conversa-

tions between the architect and the users. The alternative participation gives the local residents the chance to choose among the alternatives prepared by the architect in a fixed frame. The participation as co-decision aims at achieving direct and active involvement of users through the whole design process. The participation scale is full in the seventh stage, self-decision, in which the user controls the whole design and construction processes (Wulz, 1986).

In facilitator approach, the extent that architect is involved varies according to the specific situations. This definition of the facilitator approach also matches with Hatch's (1984) social architecture definition. He claims that social architecture is in-between. It avoids the idealistic utopias and encourages the generation of alternatives by using the information received from the user.

2.3.2 Introduction to Open Building Concept

Open Building is an approach to the design of buildings that is recognized internationally to represent a new wave in architecture, but a new wave with roots in the way ordinary built environment grows, regenerates and achieves wholeness. The origin of the concept of Open Building is best captured by one of John Habraken's finest quotes: 'We should not to forecast what will happen, but try to make provisions for the unforeseen' (Habraken, 196I). Since the built environment involves many people that has different interests that leads to the potency of conflict. The concept is no one decides everything in the design process. This helps in the avoidance of conflict between people and the parts of the whole they each control, and improves the chances of balancing common interests and the more individual interests of those who inhabit space[17].

[17] Kendall, Stephen, Open Building Concept 2004

Habraken, In order to accommodate unknown future change, suggested different levels of decision making in the building process: tissue, support and infill, respectively referring to the urban fabric, containing base buildings with their fit-outs. They are separated, yet coordinated. The town fabric (tissue level) is of a higher level than the buildings, positioned within the town fabric. Buildings can be altered or replaced, while the town fabric remains the same. The buildings in turn can be divided in base building (support level) and fit-out (infill level). The design professions, for their part, have evolved naturally in correspondence to the behavior of environmental levels: urban planners, urban designers, architects and interior architects each operate according to a certain level of intervention.

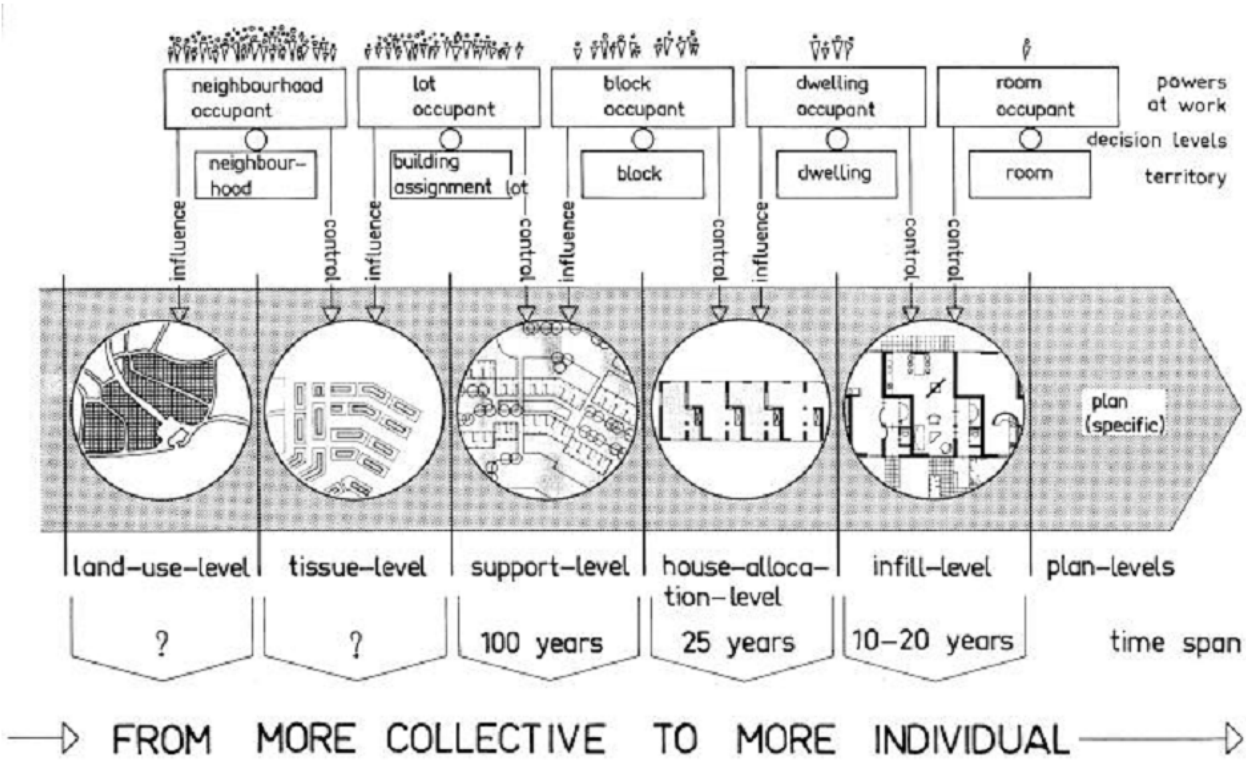


Fig 2.7 Levels of decision making in open building concept
source : Habraken, NJ. 1998

The higher level (support) accommodates and limits the lower level (infill), which in turn determines its requirements towards the higher. On every

level there is an 'ultimate customer': the consumer on the infill level, the housing corporation or developer on the support level, the municipality on the tissue level.[18]

Kendall (2004) stated that if we look into the level of the individual building, we see the level of intervention we call architecture. Here, a building offers space for occupancy, offering form, services and safe passage for any of a variety of occupancies over time. The building is a stable spatial and technical "offering", making itself available to a variety of individual territorial claims, enabling each occupying power their own decisions within the constraints of the base architecture. The occupants can move in and out, without compromising or disrupting the interests of the entirety.

This is most easily observed in multi-family condominium residential buildings, office buildings, shopping centers and other multi-tenant buildings, even medical facilities. Sometimes, the entire façade of a building is removed and replaced, revealing yet another technical level, to a certain extent independent of the structure and interior layout. At a still lower level, the furniture in a room, the computers and other equipment, can be changed with some degrees of freedom without forcing the partitions of the room to be altered. These form and space behaviors are less visible in monumental buildings such as museums, churches, and auditoria, yet there, too, parts and spaces adjust and change over time within more stable enclosing forms and a supportive infrastructure of services.

The Conclusion, according to Habraken, Open Building is the term used to indicate a number of different, but related ideas about the making of environment. For instance:

- The idea of distinct Levels of intervention in the built environment, such as those represented by 'support' and 'infill', or by urban design and architecture.

[18] Cuperus, Y. An Introduction to Open Building. Delft University of Technology. Netherlands

- The idea that users / inhabitants may make design decisions as well.
- The idea that, more generally, designing is a process with multiple participants also including different kinds of professionals.
- The idea that the interface between technical systems allows the replacement of one system with another performing the same function. (As with different fit-out systems applied in a same base building.)
- The idea that built environment is in constant transformation and change must be recognized and understood.
- The idea that built environment is the product of an ongoing, never ending, design process in which environment transforms part by part.

2.3.3 Participation from Christopher Alexander

Another concept of community decision-making in built environment is that of Christopher Alexander. He has attempted to decipher the act of building in order to unveil all its components for the easy understanding of the end-user. This understanding of the process is necessary to enable the user to create an environment based on his or her individual needs and requirements. Alexander argues that only users have the best knowledge about their needs and requirements and hence should be involved in the planning process.

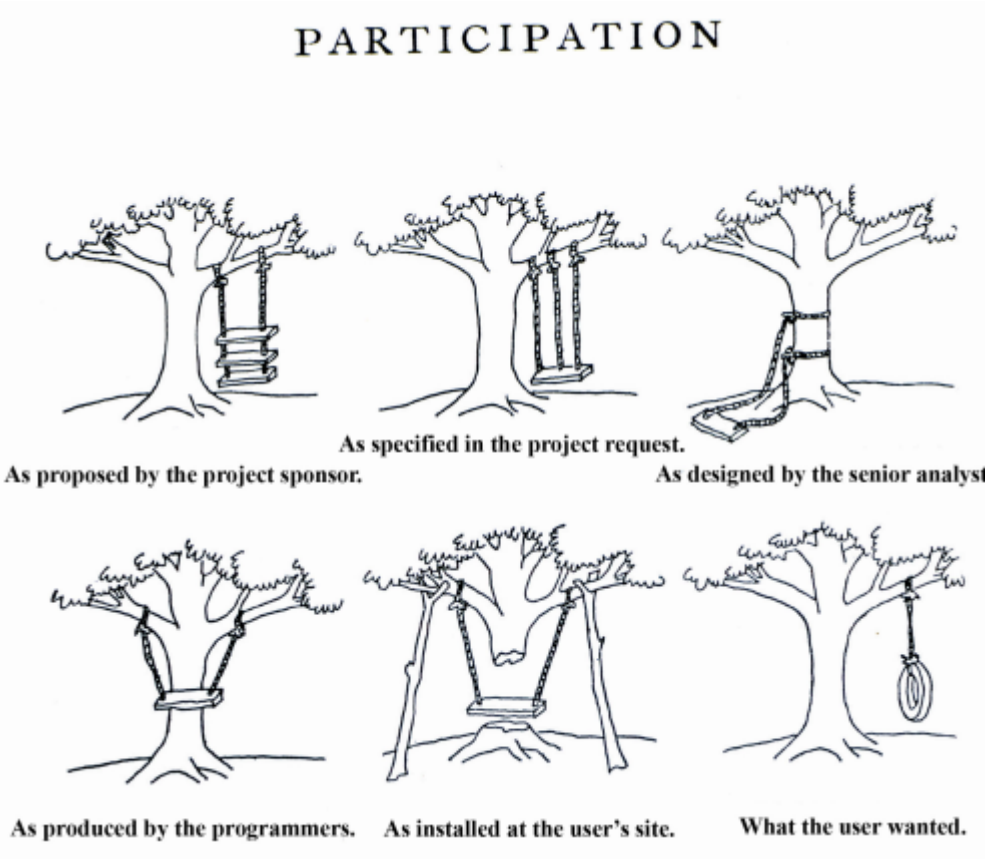


Fig 2.8 Participation from Christopher Alexander
source : Alexander, Christopher. 1975:44

2.4 Answering the Macro-Problem of the Project

Thus, the answer for the macro-problem that was previously presented in this project :

"How to develop the creative economy embryo of Bener in order to generate Bener as creative urban space?" is through urban acupuncture, community-based small scale architectural intervention to achieve Bener as urban area that cultivate new trends of arts & culture and promote innovative & creative industries.

Chapter 3:
The Site Study

The project is located in the rural-urban continuum area named *Bener* in the west side of Yogyakarta municipal area. This chapter analyzed the overview spatial condition of Bener in the context of its creative industry, which one is the strength to be made use for this project's objective and where the designated area to be intervened is.

3.1 Urban Context: Yogyakarta Municipal Area

Yogyakarta is the capital city of *Daerah Istimewa Yogyakarta* (the Special Province of Yogyakarta). The province has an area of 3,185.8km² or 0.17 percent of Indonesian area (1,860,359.67km²) which is the smallest province after DKI Jakarta. It consists of: Bantul Regency (506.85km²/15.91%); Kulonprogo Regency (586.27km²/18.4%); Gunungkidul Regency (1,485.36km²/46.63%); Sleman Regency (574.82km²/18.04%); Yogyakarta Municipality (32.5km²/1.02%) With the population of 462,663 people living on an area of 32.5 km², the density of Yogyakarta (14,236 person/km²) is the highest in the province. [19].

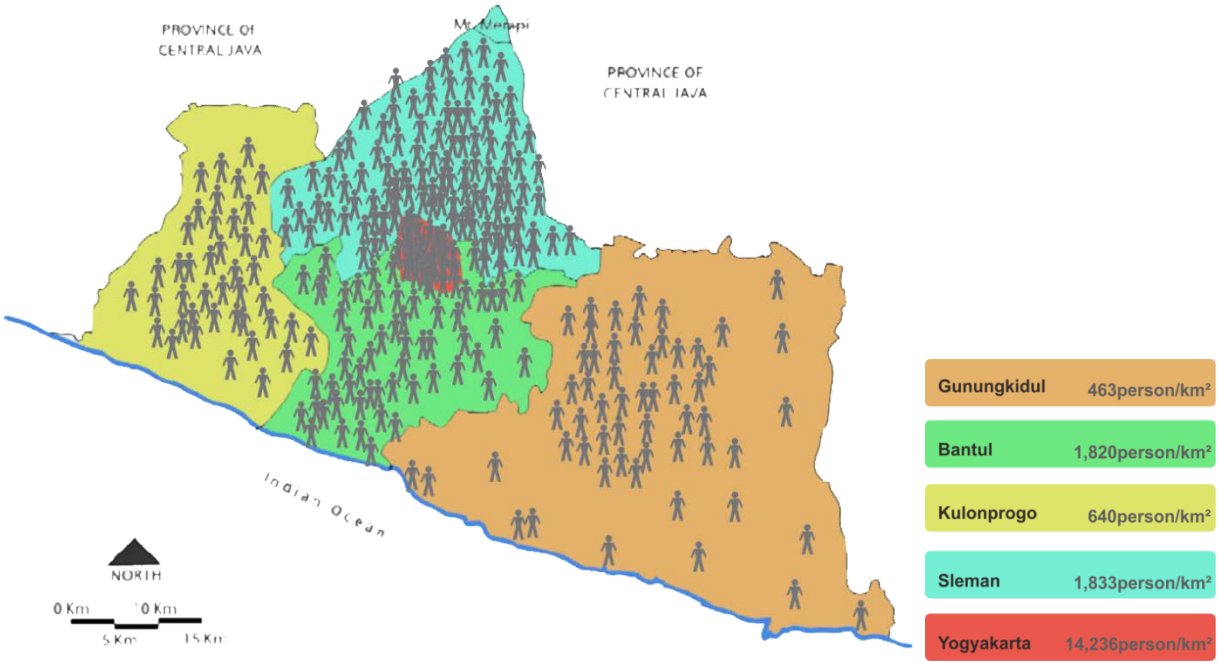


Figure 3.1 Map of DI Yogyakarta Administrative areas and its Illustration of density
Source: reworked by author. Map's from Raharjo, 2010. Density data from D.I Yogyakarta in Figures, BPS 2010

[19]D.I Yogyakarta in Figures, BPS 2010

All of the areas of Yogyakarta Municipal City are considered “urban”, as there’s no area is classified as rural by the state definition.

Table 3.1 Number of Districts, Villages and Area by Regency/City in DI Yogyakarta

Regency/City	Districts	Villages/ Sub-Districts			*Dusun/ Dukuh*	RW	RT	Area (km²)
		Urban	Rural	Total				
Kulonprogo	12	13	75	88	930	1884	4462	586.27
Bantul	17	47	28	75	934	-	5861	506.85
Gunungkidul	18	5	139	144	1432	1671	6864	1,485.36
Sleman	17	59	27	86	1212	2933	7364	574.82
Yogyakarta	14	45	0	45	-	614	2525	32.5

Source: extracted from D.I Yogyakarta in Figures, BPS 2010

Regarding the projection of Yogyakarta density will be up to 21,712 people per square km in 2026[20] the policy for the development of housing and settlements are directed into two points: vertical housing and *kampung* re-vitalization[21]

3.2 The Site: *Bener, Tegalrejo, Yogyakarta*

Bener is one of sub-district in Tegalrejo district which is planned to be one of urban settlement district[22]. Bener has an area of 0.57km² with the population of 12,091 people that consists of 6,063 male members and 6,028 female members sorted into 3,603 households[23]

[20] DI Yogyakarta province spatial plan 2009-2029, DI Yogyakarta Public Work Department
[21] Department of Public Works, *Daerah Istimewa Yogyakarta*, 2010
[22] DI Yogyakarta province spatial plan 2009-2029, DI Yogyakarta Public Work Department
[23] Data extracted from *Bener* sub-district authority office

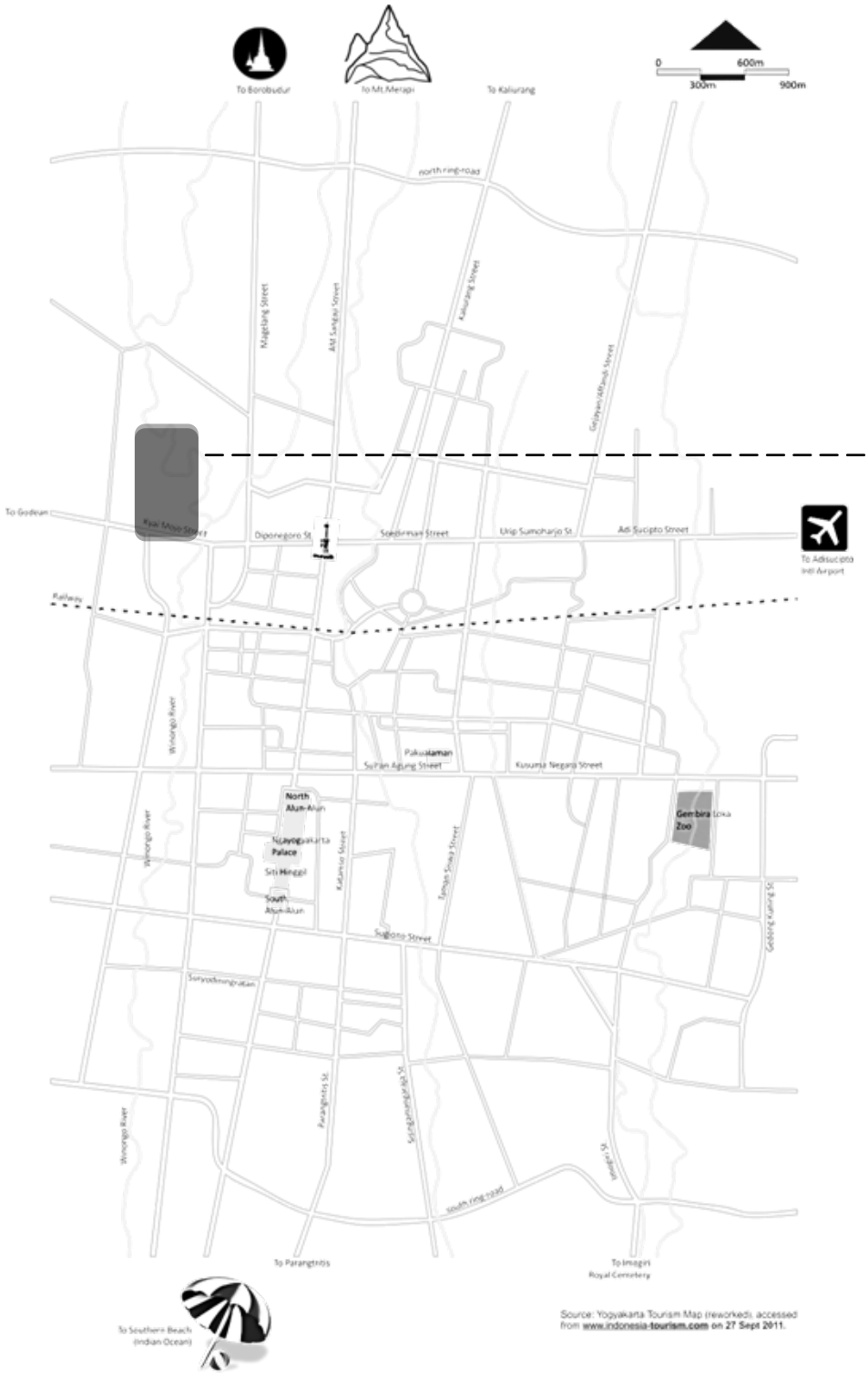


Fig 3.2 Map of Yogyakarta
Source : Reworked by author, extracted from www.indonesia-tourism.com accessed 27 September 2011

The Site : *Bener, Tegalrejo.*

Located ± a kilo from Magelang Street which is full of commercial buildings and activities

Fig 3.3 One of the commercial building located in Magelang Street within the area of Tegalrejo District
Photo Credit : Author
Taken : Oct,2011

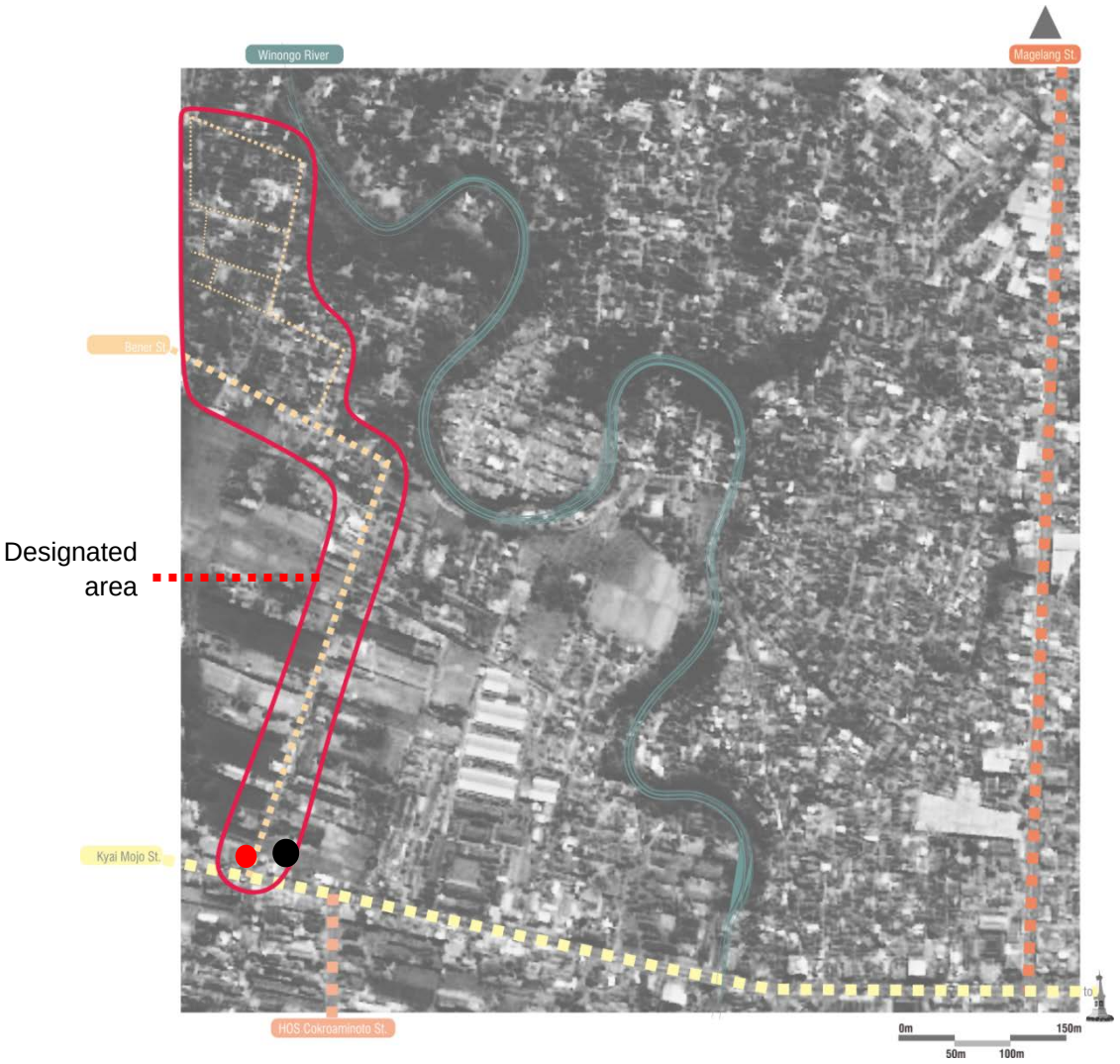


Fig 3.4 Land satelite figure of Bener area 2011
Source : Reworked by author. Extracted from Google Maps, October 2011

Traffic and typical commercial building at Kyai Mojo st.

Signage of educational institutions and Bener st. signage near the entrance gate

- gas station as kind of "landmark" to the entrance of Bener street

Photos credit : author. Taken October 2011

J

Recycling industry "center"

I

1 of the Community mosque

H

Multi-purposes community building

G

Bener authority office

F

Community church

E

Factory

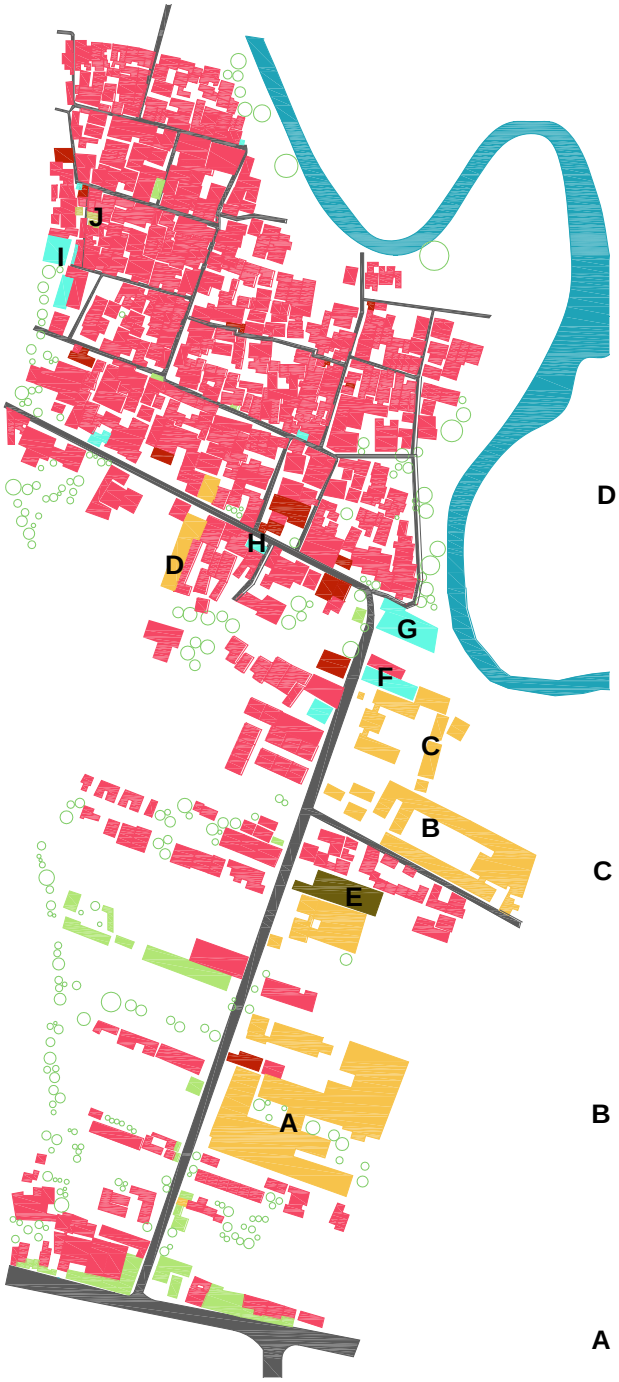


Fig 3.5 educational&utilities analysis of designated area
Source : map and photos credit by author

D

Happy Bear preschool

C

SDN Tegalrejo I

B

SMA N 2 Yogyakarta

A

ASMI Santa Maria

A

Real Estate, one example of land-use conversion from agricultural to formal housing within the last 5 years

B

C

Residential+commercial

D

Luxury house in low - density housing

Fig 3.6 housing performance analysis of designated area
Source : map and photos credit by author

E

Typical incremental growth of the house in high-density housing area : going vertical with the addition of new structure

F

Various kinds of house in high-density housing area with passageway in between

Fig 3.7 road/street analysis
of designated area
Source : map and photos credit by author

3.3 Creative embryo of *Bener*: trash recycling industry

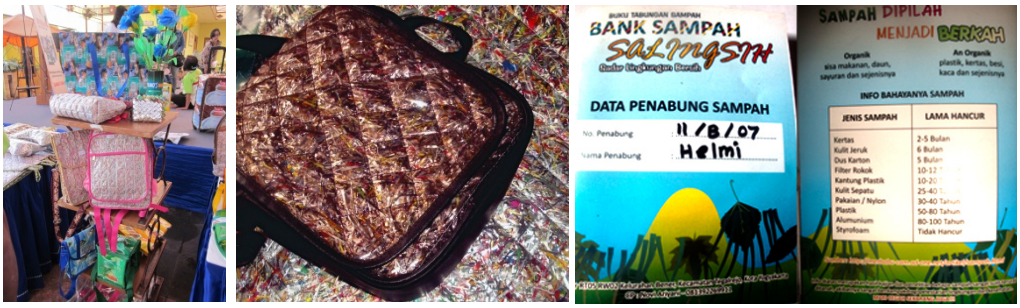


Fig 3.8 products of Bener recycling industry, and the account book for the trash bank
Photo credit: author. Taken Sept, 2011

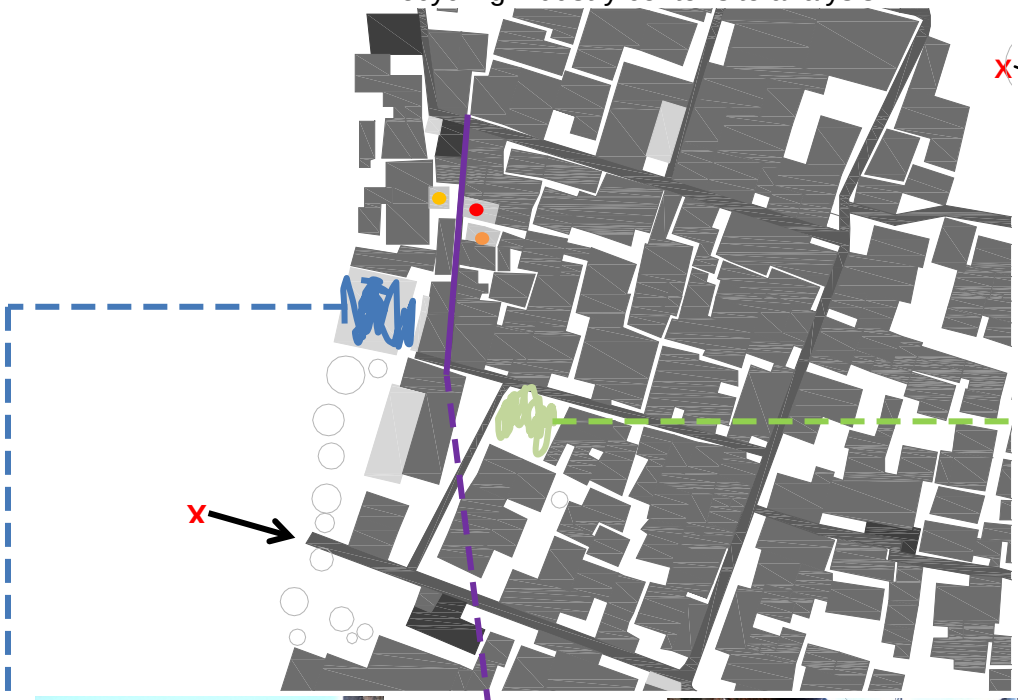
Recycling Industry in the means of making craft and mostly products such as tote bag, clutch, pencil case, etc. with non-organic trashes as a raw materials has been established at RW 02 *Bener* (red spot area) since 2007, coordinated by Novi Aryani that created "trash bank" system in the neighborhood so that people in the neighborhood could invest "easy money" and the industry get even lower cost in the raw materials. Nowa-days the industry is well-developed, run by 6 craftsmen -all of them are housewife- and managed by Novi Aryani herself.

The principal problem with the industry is about spaces and facilities. The workshops are now scattered at the craftsmen's houses; the industry's office is within Novi's house, and the trashes warehouse is just 4m x 5m temporary building.

Fig 3.9 trash warehouse and central workshop
Photo credit: author. Taken Sept, 2011

Fig 3.10 Novi Aryani's house as the "office" of the industry's management
Photo credit: author. Taken Sept, 2011

Recycling Industry center site analysis



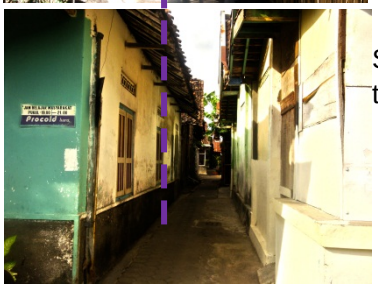
key map

Another temporary trash house

Inadequate facilities for the industry

Kids played in alleyway, Indicates that playground or other kind of open space is needed

Muqorrobin mosque



Starting point of the alleyway

Available open public space

Interesting fact that might as well become the very potency of Bener is that the people of Bener were entrepreneurship-oriented as we can take a look at the statistical data below:

Table 3.2 Number of economically productive people of Bener by the kind of livelihood

Type of Livelihood	Year	
	2009	2010
Employee/labor	1966	2108
Civil Servant	584	578
Craftsman	63	63
Retailer	58	91
Tailor	5	5
Masonry worker	185	1
Carpenter	162	0
Breeder	9	19
Doctor	72	72
Mechanic	29	6
Driver	98	5
Becak Driver	51	0
Military servant/policeman	27	31
Entrepreneur/businessman	59	1363

Source : Bener Sub-district authority office, 2011

The drastic change of the color indicates significant change of the number whether it's increased or decreased. Take a look at the rows with blue bar, those are the kind of "blue-collar" works, and they're significantly decreased within 1 year up to level zero. Now take a look at row with the red bar, the entrepreneur row which is dramatically increased from 2 digits up to 4 digits number. Without having to consider mere facts such as the population growth behind the statistical change of this, the author can say that the people of *Bener* are motivated to make the better future for themselves.

3.4 The Physical Scope of the Project

The “phase 2” physical limitation of built area for this project is intended to make clearer definition of my vision and plan for *Bener* 2025 without lessening the aftermath of the project for bigger *Bener* area

Bigger Area of *Bener*

Designated Area of the Project

Built area is now indicated by colored section which includes

- figures
- grounds
- streets

ownership : personal
area : ±174m²

ownership : public
area : ±270m²

ownership : personal
used as PAUD (community pre-school) place
area : ±248.6m²

ownership : personal
area : ±158m²

ownership : government/public
occassionally used as badminton hall and rarely used for community meeting
area : ±263m². ground floor area :

ownership : personal
for sale
area : ±624m²

Fig 3.11 alternatives of project's sites
Source : map and photos credit by author

3.5 Vision for *Bener* 2025: Issues and Ideas

The emerging question is now : what will become of Bener in 2025 without the development of its creative embryo?Without trying to “forecast” the spatial future of Bener, i may project it as most cases of desakota transformations that have happened described with pictures below :

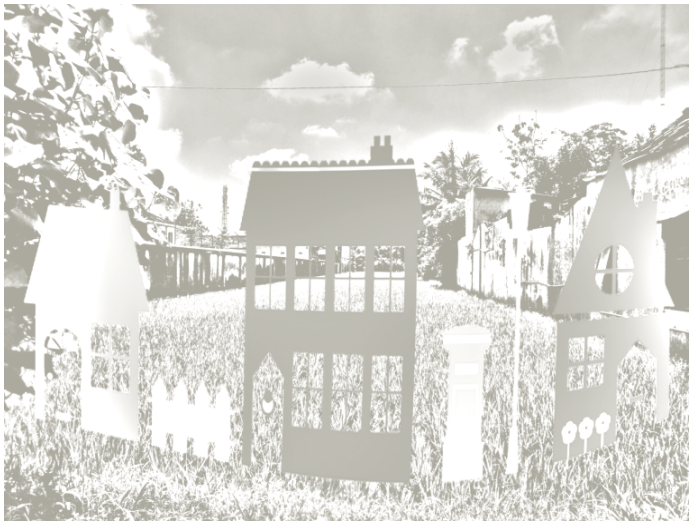


Fig 3.12 Illustration of land use conversion from agricultural to residential
Source : reworked by author. Photo credit by author with houses graphic from http://bobbieprint.blogspot.com extracted December 2011

Since the macro problem of this project was answered in previous chapter as “*small scale architectural intervention to achieve Bener as urban area that cultivate new trends of arts & culture and promote innovative & creative industries through the energetic creative activities of artists, creators and ordinary citizens, contain many diverse “creative milieus” and “innovative milieus”, and have a regional, grass-roots capability to find solutions to global environmental problems*” , the master plan is needed to meet the intersection between urban planning and architecture, to put the architectural intervention into the frame of urban space. To concept the master plan, the author formulated particular issues and ideas for Bener to transform norm into form.

***Bener* Now (ISSUES)**	***Bener* Future (IDEAS)**
• Little visible acknowledgement of the significance of the Salingsih recycling industry community • Limited facilities to support the recycling industry • The industry is still limited to "imitative" industry rather than "creative" or "inventive" industry • Barely used public amenities such as community hall and several vacant lot that is now used as place to dried up the people's laundry • Pedestrian amenity is poor in Bener street, despite the fact that there are many educational building along the street	✓ Capture unused space to facilitate and develop the industry ✓ Creative economy becoming the spirit of Bener community by the proliferation of initial prototype of the industry's development ✓ Engage the creative economy into educational institution in Bener, in this case is SMA 2 Yogyakarta. Make it to be the creative support infrastructure. ✓ Bener street is altered into promenade filled by creative business

Hence, the scenario for Bener master plan then generating another problem, as it needs formal device. Following the previous practise of Urban Think-Tank (see chapter 2), planning the informal urban area, the small scale, prototypical architectural intervention is work best. Thus, what kind of small scale, prototypical architectural intervention to be used in this project?

Chapter 4:

The Seek of Formal Device : Case of Lego; Parc de La Vilette by Bernard Tschumi and Cellophane House by Kieran&Timberlake

The phases in the project master plan need the formal device that covers every requirements of each stage. The design of the formal device is the micro scale planning in the project.

4.1 Kit of Parts

In the seek of the answer for the micro-problem, what kind of small scale prototypical architectural intervention to be used in this project, i refer to –once again- Urban Think-Tank. I read their "toolbox", the guiding principles behind their working methodology on intervene urban informal area. One of the tool was "Kit-of-Parts" . According to U-TT, just like the ad hoc nature of slum construction, the kit-of-parts is best when modular and flexible. A favela kit-of-parts needs to satisfy a few criteria: they must not be easily removable, materials must be cheap and they must be capable of working on a small footprint. A kit that can be disassembled and sold for scrap will meet an untimely end[24].

4.2 Case Study of Lego

Lego (trademarked in capitals as LEGO) is a popular line of construction toys manufactured by the Lego Group, Billund, Denmark[25].

Lego, consists of colorful interlocking plastic bricks and an accompanying array of gears, minifigures and various other parts. Lego bricks can be assembled and connected in many ways, to construct such objects as vehicles, buildings, and even working robots. Anything constructed can then be taken apart again, and the pieces used to make other objects.

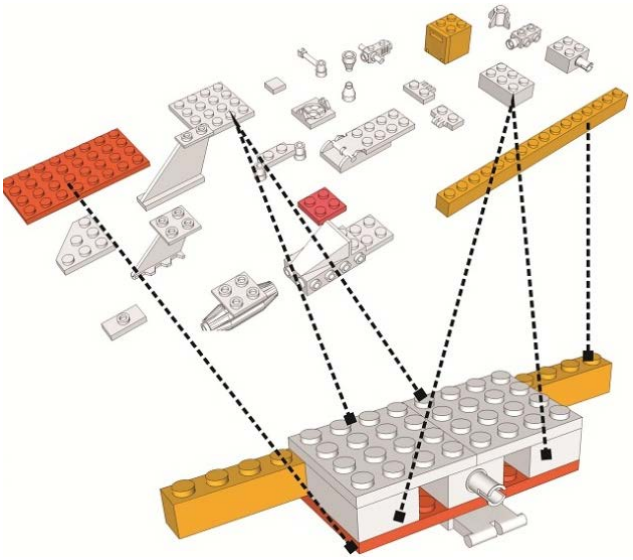
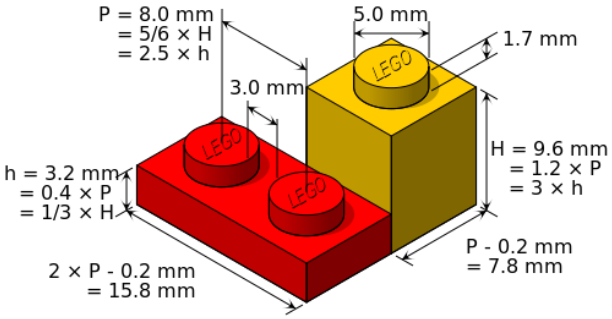


Fig 4.2 Lego pieces can be assembled and connected in many ways and be taken apart again
Source : Author, 2012

[24] http://www.u-tt.com/pdf/UTT_ProjectToolBox.pdf
[25] As cited from http://en.wikipedia.org/wiki/Lego accessed March, 20 2012



Each Lego piece must be manufactured to an exacting degree of precision. When two pieces are engaged they must fit firmly, yet be easily disassembled.

Fig 4.3 Dimension of Lego bricks
Source : http://en.wikipedia.org/wiki/Lego extracted March, 21 2012

Fig 4.4 Fallingwater house made of Lego
Source : gadgetvenue.com extracted March, 21 2012

4.3 Case Study of Parc de La Vilette. Paris

It's an award winning project (1982-1998) by Bernard Tschumi. The park is located on what was one of the last remaining large sites in Paris, a 125-acre expanse previously occupied by the central slaughter houses and situated at the northeast corner of the city.

Fig 4.5 One Section of Parc de Le Vilette at Night
Source : http://www.tschumi.com/projects/3/# extracted March, 21 2012

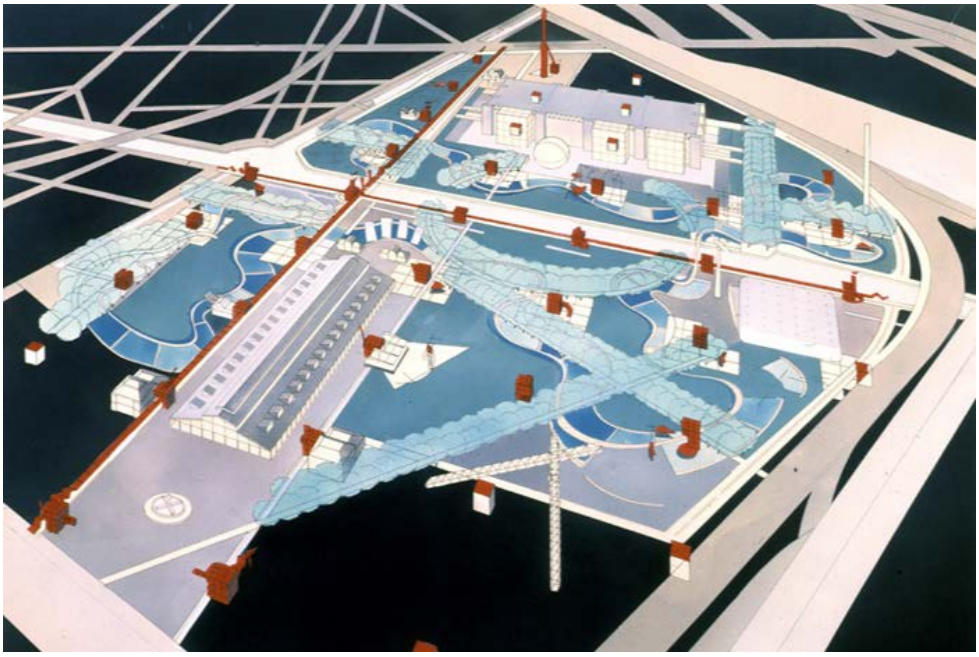
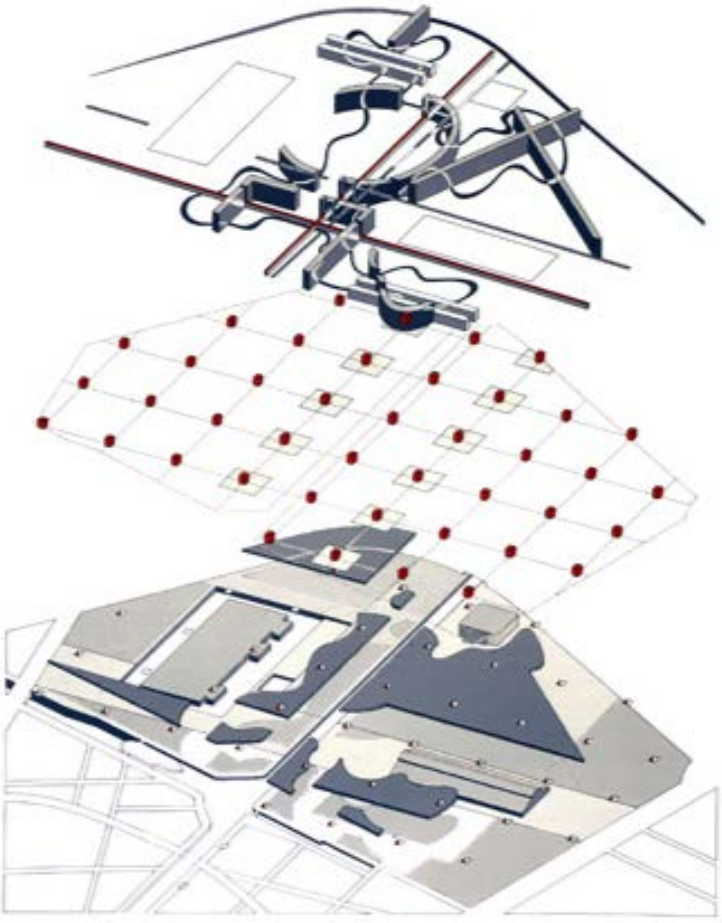


Fig 4.6 Master Plan of Parc de La Vilette
Source : http://www.tschumi.com/projects/3/# extracted March, 21 2012



In addition to the master plan, the project involved the design and construction of over 25 buildings, promenades, covered walkways, bridges, and landscaped gardens over a period of fifteen years.

Fig 4.7 Superimpose of the park's buildings and folies
Source : http://www.tschumi.com/projects/3/# extracted March, 21 2012

A system of dispersed “points”—the red enameled steel *folies* that support different cultural and leisure activities—is superimposed on a system of lines that emphasizes movement through the park.

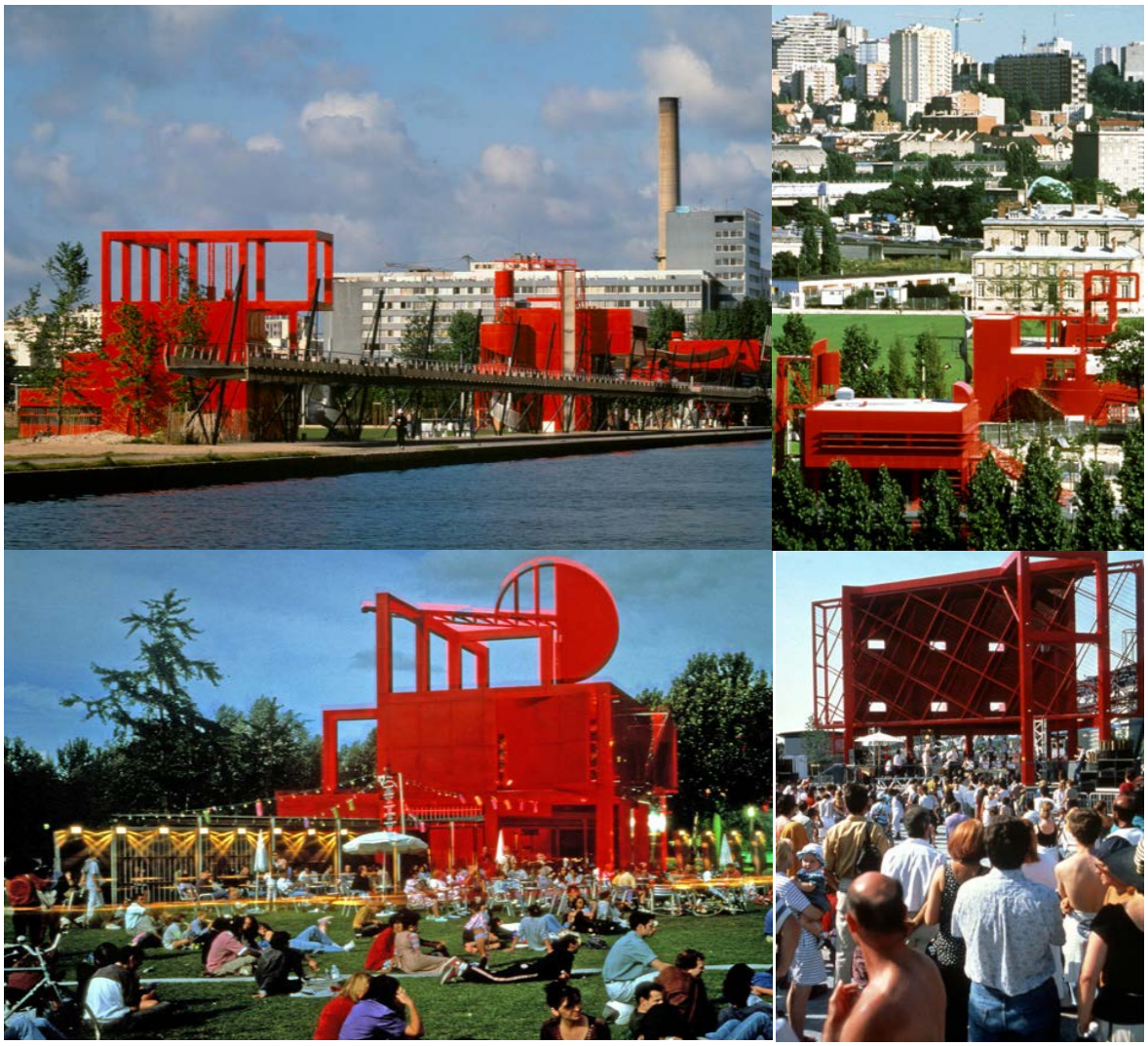


Fig 4.8 Set of Images : The Folieses at Parc de La Vilette
Source : http://www.tschumi.com/projects/3/#extracted March, 21 2012

What makes the author interested in Parc de La Vilette is the folieses. The Folies is a kit of part, consist of several elements that were coonfigures in many ways across the park. They became the point of the nodes and landmarks of the park, though some folieses have no functional use

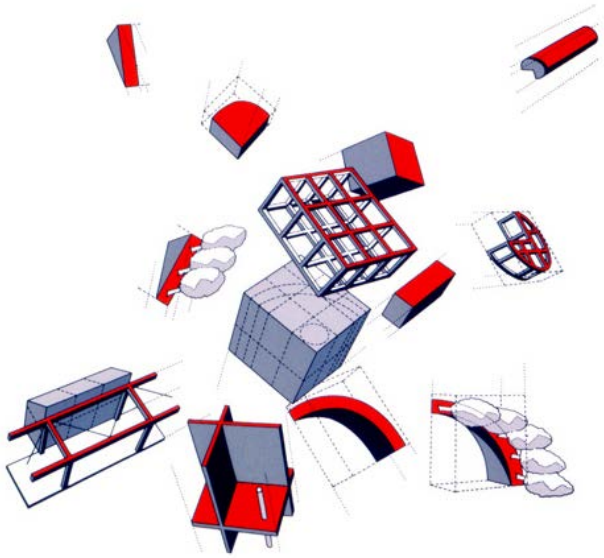


Fig 4.9 Set of Images : The Kit of Parts of The Folies
Source : http://www.tschumi.com/projects/3/# extracted March, 21 2012

4.4 Cellophane House

It is a project by Philadelphia-based architectural firm KieranTimberlake. Cellophane House is a five-story, offsite fabricated dwelling commissioned by the Museum of Modern Art's exhibition *Home Delivery: Fabricating the Modern Dwelling*, on display July 20 through October 20, 2008.

Fig 4.10 Cellophane House at the Exhibition
Source : http://www.architonic.com/ extracted March, 21 2012

Concept of Cellophane House:

"A building is, at root, nothing more than an assemblage of materials forming an enclosure. We recognize that these materials came from somewhere, are held together for a time by the techniques of construction, and will at some future time transition into another state. While we tend to think of buildings as permanent, they are in fact only a resting state for materials, a temporary equilibrium that is destined to be upset by the entropic forces that drive the physical universe." [26]

The prototype is a 1800 square-foot two-bedroom, two-bathroom house and was assembled on MoMA grounds in a mere 16 days.

Fig 4.11 Visualization of Cellophane House
Source : http://inhabitat.com/kieran-timberlake-cellophane-house/ extracted March, 21 2012

Fig 4.12 Set of Images : Cellophane House On Site Completion
Source : http://www.momahomedelivery.org/extracted March, 21 2012

[26] Quoted from http://kierantimberlake.com/featured_projects/cellophane_house_3.html extracted March, 21 2012

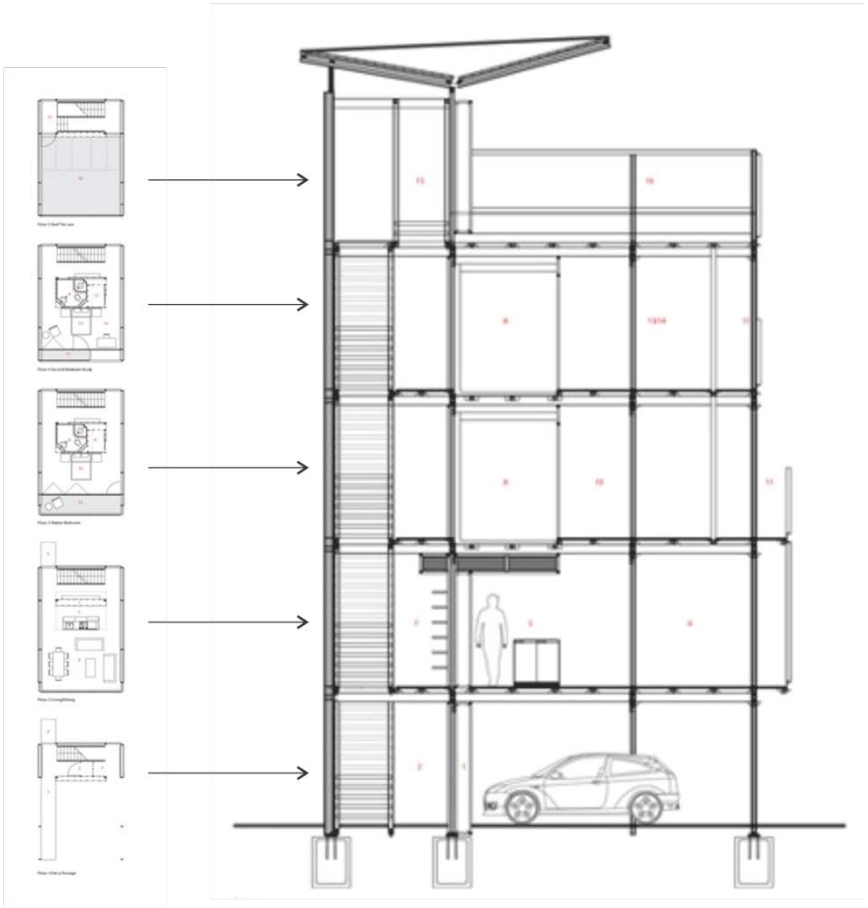


Fig 4.13 Cellophane House's Floor Plans and Sections
Source : reworked by author, from http://www.architonic.com/extracted March, 21 2012

Fig 4.14 Cellophane House's Interior
Source : http://www.architonic.com/aisht/cellophane-house-kierantimberlake/5100378
extracted March, 21 2012

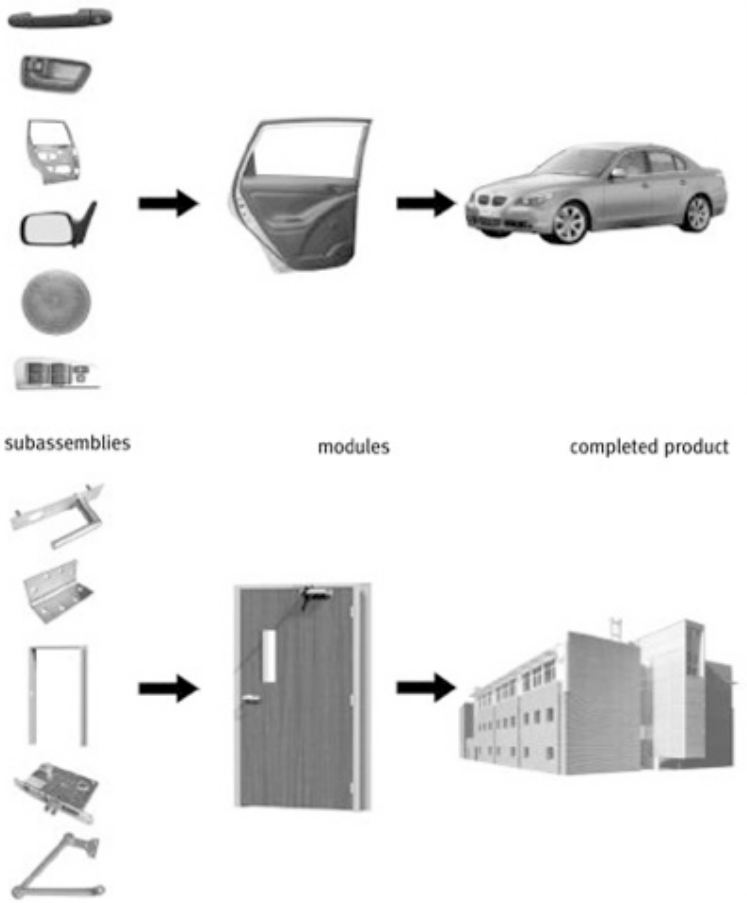
An aluminum frame provides the structure and the means to attach factory made elements together. It is designed to preserve all energy embodied in the house materials through rapid disassembly and recovery of all components for reassembly, helping to offset the millions of tons of construction and demolition debris generated each year. The house is enclosed with a lightweight, energy-gathering building envelope made of recyclable plastic film with photovoltaic panels adhered to its surface. PVs harvest energy from the sun and heat is captured in a cavity between layers and either held or released; minimizing the energy required for heating and cooling. The south facade features glazing with integrated photovoltaic cells, promising further energy independence.

Fig 4.15 Cellophane House's exterior
Source : http://www.architonic.com/aisht/cellophane-house-kierantimberlake/5100378
extracted March, 21 2012

The most prominent features of Cellophane House so that I chose it to be the project's precedent is its modular versatility and pre-fabrication architecture. KieranTimberlake integrated easy assembly and disassembly into the planning and building of the Cellophane House. The modular construction enables the house to be broken down into parts, or to be

reused in another residence all together. It also means that the house can grow and shrink as families go from child-bearing to empty-nesters.

What makes Cellophane House different from dozens others pre-fab is that the firm has brought pre-fabrication to the next level. Back in 2001, Stephen Kieran and James Timberlake got a research fellowship that allowed them to pursue an idea. “We realized in looking at cars and planes and ships that there were very small components coming together in these bigger chunks and blocks and assemblies. And I think we felt very strongly that buildings could be constructed the same way.”[27]



Following the analogy of the automotive, aircraft and shipbuilding industries, KieranTimberlake using the method of “chunking”. "Chunking" is what car manufacturers do; they have subassemblies that are put together into modules, and then put together into the finished product.[28]

Fig 4.16 Illustration of Chunking
Source : http://media.treehugger.com/assets/images/2011/10/modules.jpg
extracted March, 21 2012

[27] James Timberlake on Karrie Jacobs’ article Industrialist Without Factories, 2008. Extracted from http://www.metropolismag.com/story/20080716/industrialists-without-factories March, 21 2012
[28] http://www.treehugger.com/modular-design/home-delivery-wrapping-it-up-with-the-cellophane-house.html extracted March, 21 2012

Chapter 5:

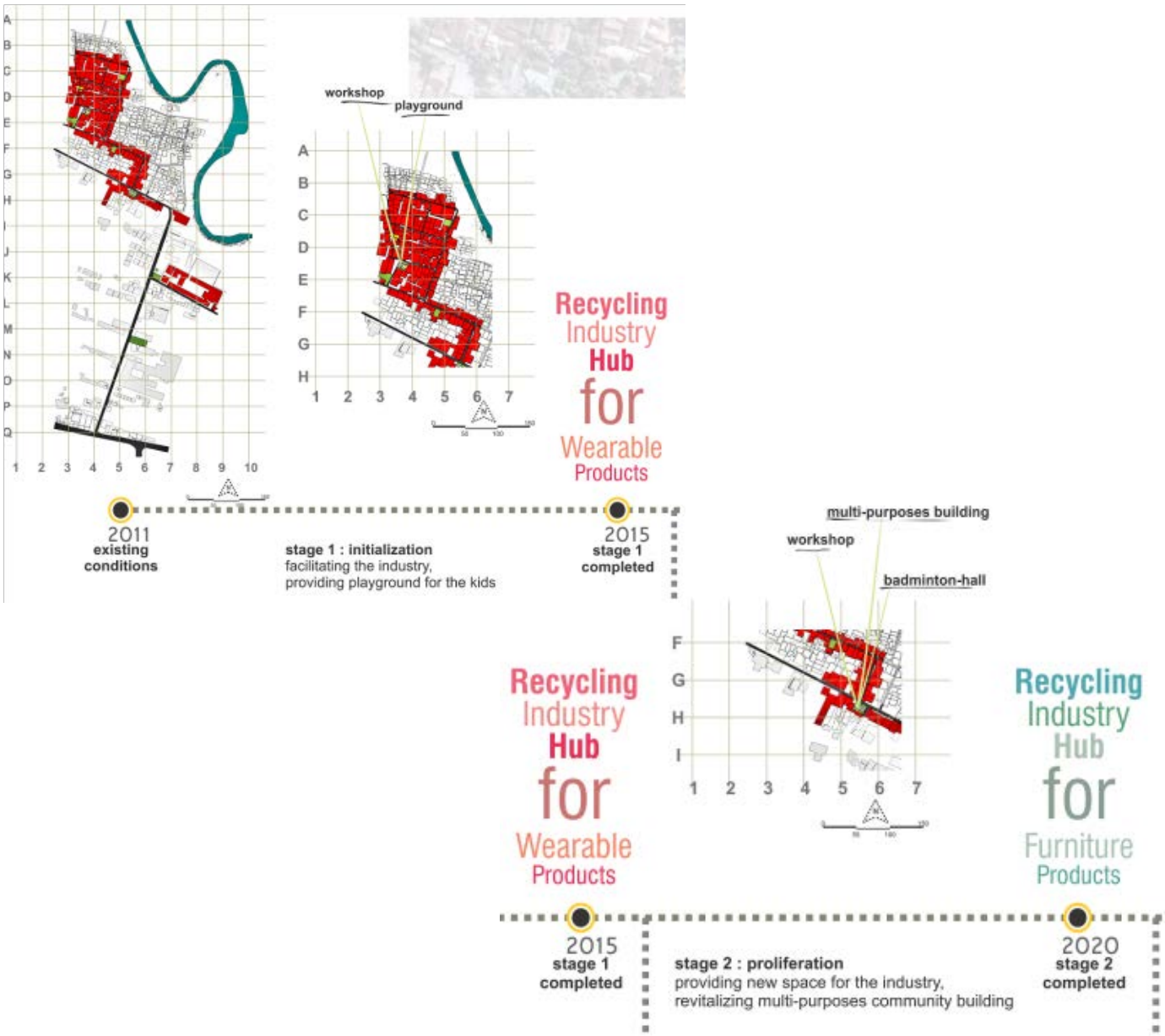
Design Exploration

Here in this chapter, I try to elaborate the comprehensive concept to meet the project's objective: generating *Bener* as creative micro urban area through small scale architectural intervention, started with developing the existing creative embryo in *Bener*.

Once you placed a powerful building within the slum context, you created a kind of urban acupuncture, which actually resonates and creates a lot of change around it ~ Alfred Brillembourg, U-TT

5.1 Overview: Design Scenario

The first step is making the scheme timeline as the author designed several stages to fulfill the project's objective. I planned the project to be 3 stages in which each stages is intended to be executed within 5 years. Thus, this project is about visioning *Bener* year 2025 or at least 15 years from now.



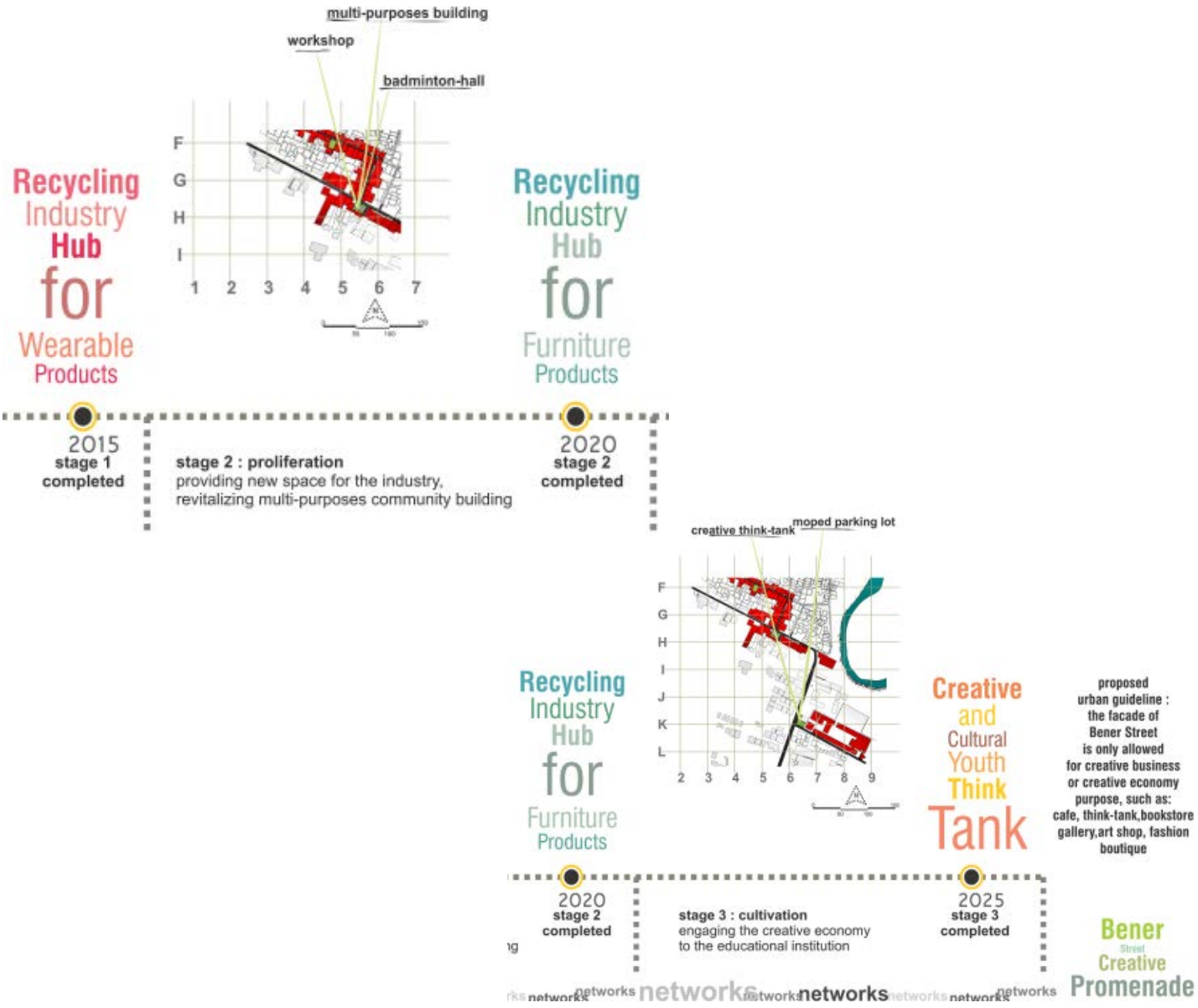


Fig 5.1 Project's Scheme Timeline
Source : Author, 2012

Table 5.1 Project's Scheme Timeline

Stage	Year	Process	Programs	Product
1	2011 - 2015	Initialization	1. Facilitate Trash Recycling Industry 2. Providing Playground for Children	Trash Recycling Industry Hub for Fashion and Wearable Product
2	2015 - 2020	Proliferation	1. Revitalizing Existing Community Building 2. Providing New Space for the industry Development	Trash Recycling Industry for Furniture Product
3	2020 -2025	Cultivation	1. Merging Creative Industry Factor to the chosen Educational Institution	Creative Youth Think-Tank
4	After 2025	Advancement	Urban Design Guidelines for Bener : The Façade of Bener Street used for Creative Business and Development	*Bener* Promenade

Source : Author, 2012

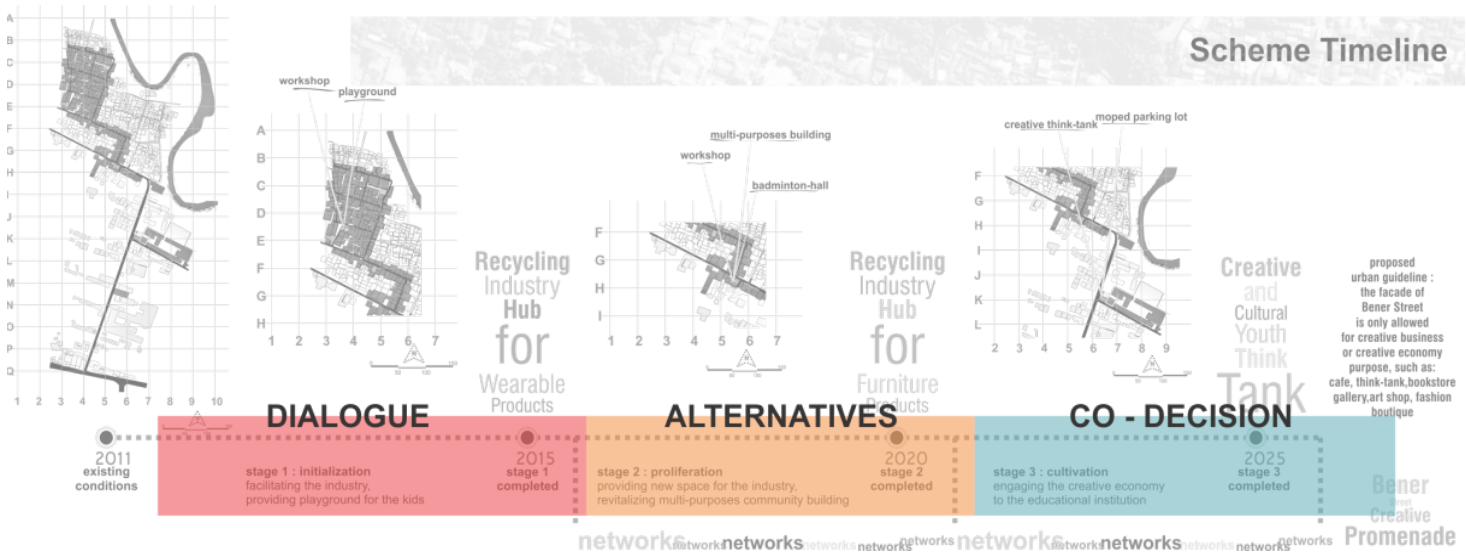


Fig 5.2 Level of Participation along the Timeline
Source : Author, 2012

5.2 Programs Analysis

5.2.1 Stage 1: Initialization

As listed in table 5.1, stage 1 is an initialization. The right architectural program is crucial in this stage. The very first important step in this project is developing the embryo of creative industry in *Bener*. Thus, the requirement for this stage is providing the facilitation for the trash recycling industry. As we can see in the images below that the current trash-warehouse indicates the inadequate facilities for the industry

Fig 5.3 Current condition of trash recycling industry center in *Bener*
Photo Credit: Author, 2012

However, the duality of interest should be considered. Beside the need to develop the creative industry, the architectural intervention on this project is to accommodate public interest. Most of the industry's workers are young mother with toddlers who don't have adequate space for their play-ground.

Thus, the kids play in the alleyway near the trash recycling industry center, as letting them play in the open space far from the mother's watch would leave insecurity for the young mothers that work for the recycling industry.

Fig 5.4 Kids play in the alleyway near trash recycling industry center
Photo Credit: Author, 2012

In conclusion, the requirements for the first stage are: space for workshop and space for playground

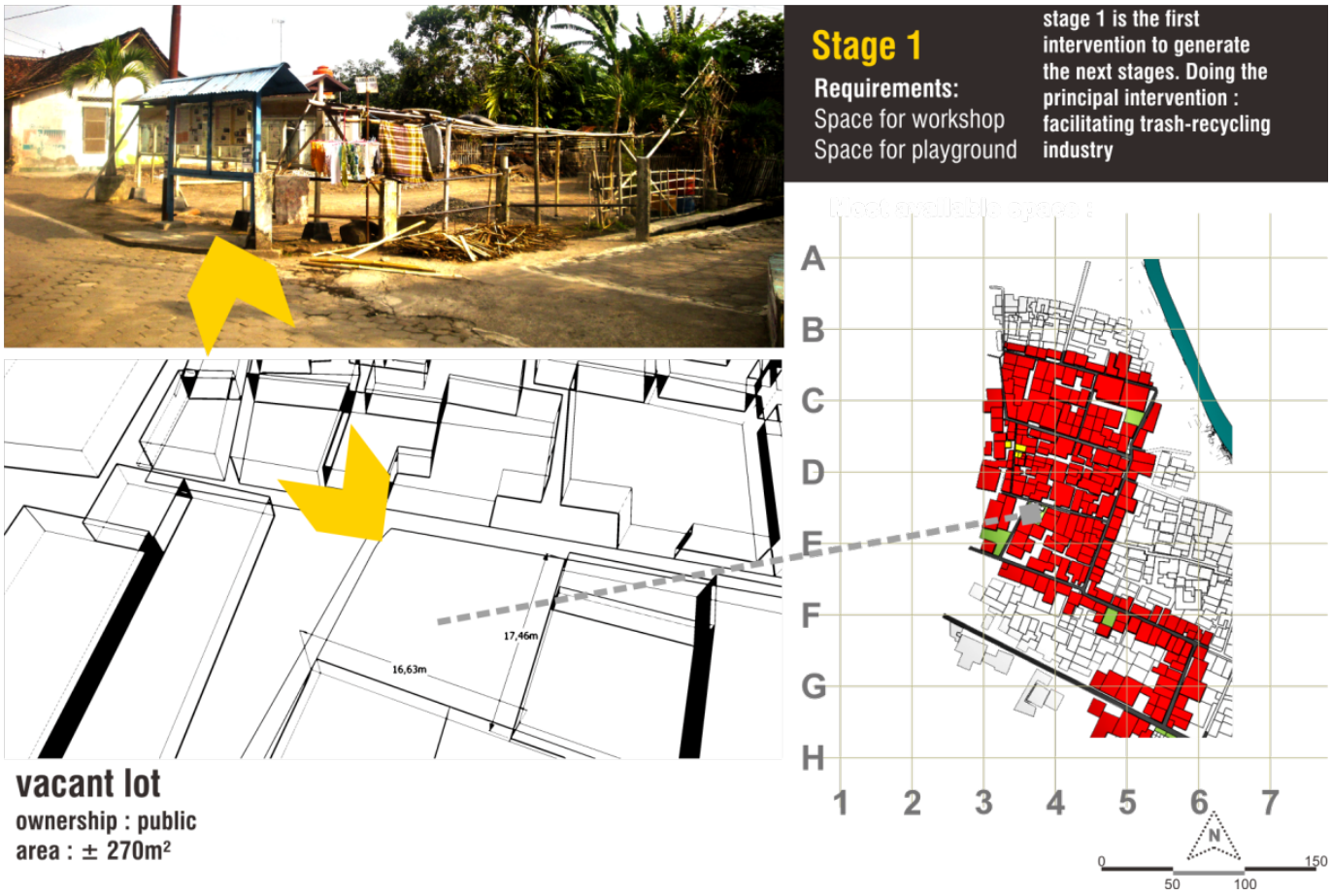


Fig 5.5 Analysis of Stage 1
Source: Author, 2012

5.2.2 Stage 2: Proliferation

This stage is aimed to expand previously developed creative embryo of the trash recycling industry. While the core of the industry is making wear-able product or such thing that catch the eyes of girls and woman (that's why the workers are all young mother), the proliferation of the industry is expected to accommodate the male craftsmen. Using the community building in where men of the Bener play badminton, the programs of this stage are revitalizing the purpose of the community building for the melting pot and providing space for the trash recycling industry which concen-trates on making furniture and house wares.

Fig 5.6 Analysis of Stage 2
Source: Author, 2012

5.2.3 Stage 3 : Cultivation

According to Sasaki, universities, technical schools, research institutes, theater, library, and cultural institutions which support creative activity of science and art in a city have to function as the creative support infrastructure. As a fortune, Bener Street has the potency of educational institutions (see chapter 3). As in this project, the chosen educational institution is SMA Negeri 2 Yogyakarta which is included in the list of Yogyakarta's most wanted high schools.

Fig 5.7 Analysis of Stage 3
Source: Author, 2012

5.2.4 Scheme Plan

Thus, if we conclude overall process in the form of plan, below is the scheme plan of the project. I started with placing small scale architectural intervention within the center of the project: the trash recycling industry center. The expectation is, it will initialize the domino effect as Brillembourg said: “Once you placed a powerful building within the slum context, you created a kind of urban acupuncture, which actually resonates and creates a lot of change around it”

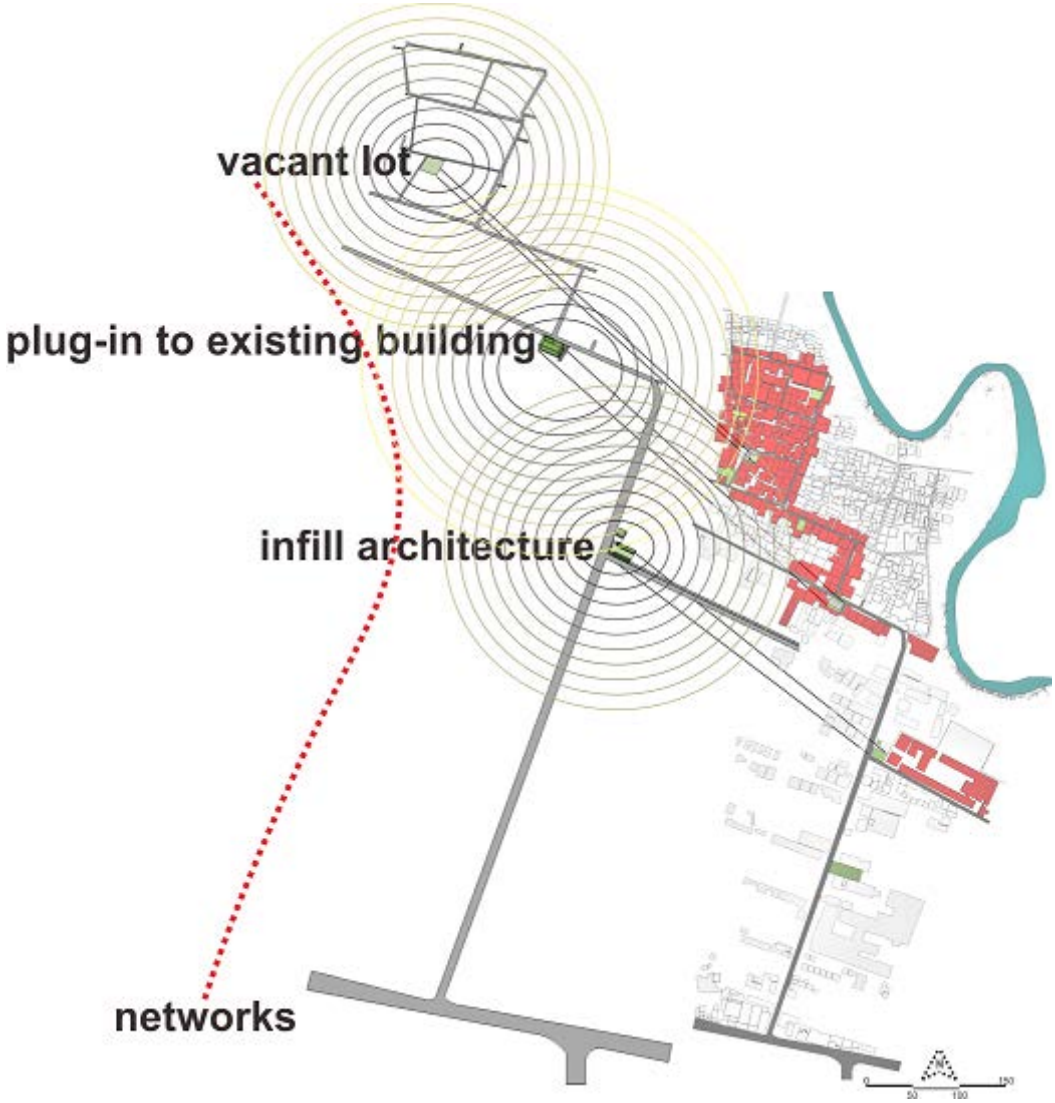
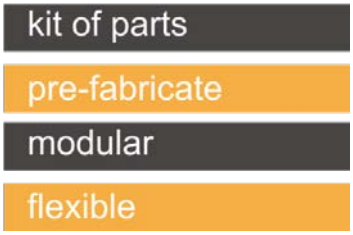


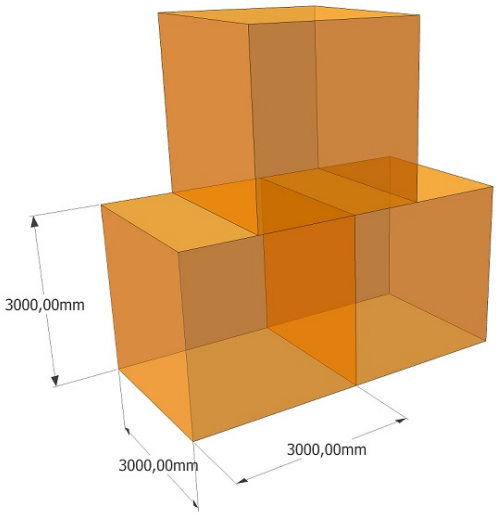
Fig 5.8 Scheme Plan
Source: Author, 2012

5.3 The Exploration of Formal Device



Following the analogy of Lego and Chunking of the Cellophane House, the architectural device in this project is using the principles of Kit of parts: providing Lego like material that offers the variety of form arrangements. All of them are off site fabricated just like the chunking principle.

Weapon of Choice: HipPod.



HipPod is a modular 3m x 3m x 3m pre-fab pod that can be stacked each other vertically or horizontally, thus adaptive with the available space on the setting of contemporary informal urban area

Fig 5.9 Illustration of the Modul of HipPod
Source: Author, 2012

This pod is basically using vernacular structure of local event tent, with galvanized-pipe column and beam so it's not an alien to the community. Here i take them to the next level : creating interlocking system with bolt, hooker, multi-function panel, and adjustable roof.

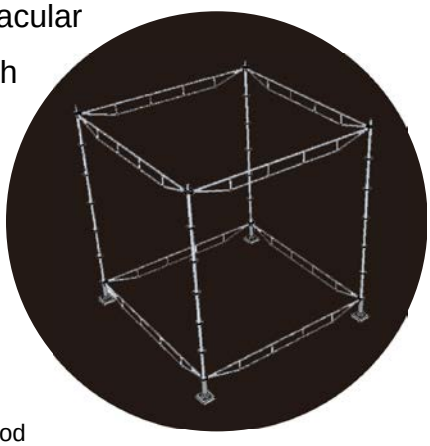


Fig 5.10 The Structure of HipPod
Source: Author, 2012

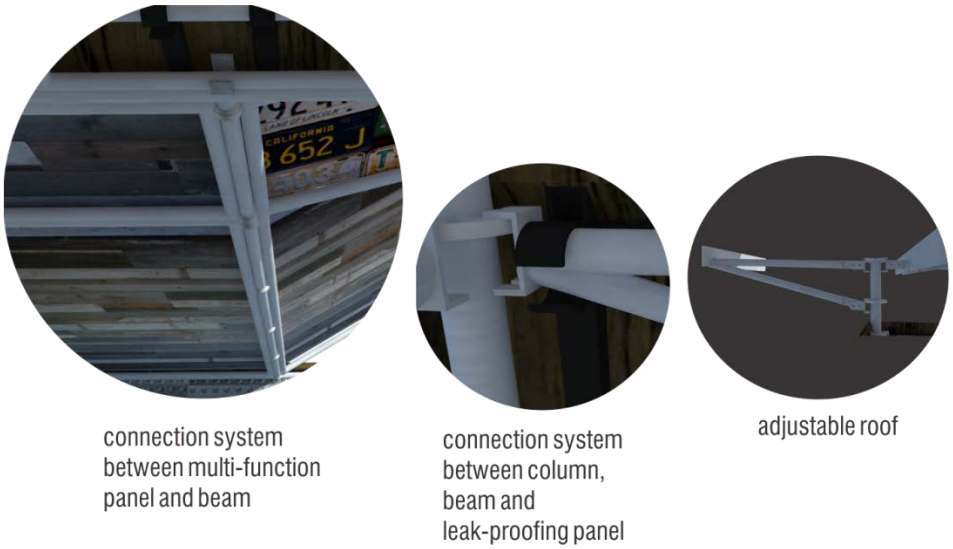


Fig 5.11 Several Details of HipPod
Source: Author, 2012

The pod, as the completed product, is the assembly of the modules as follows :

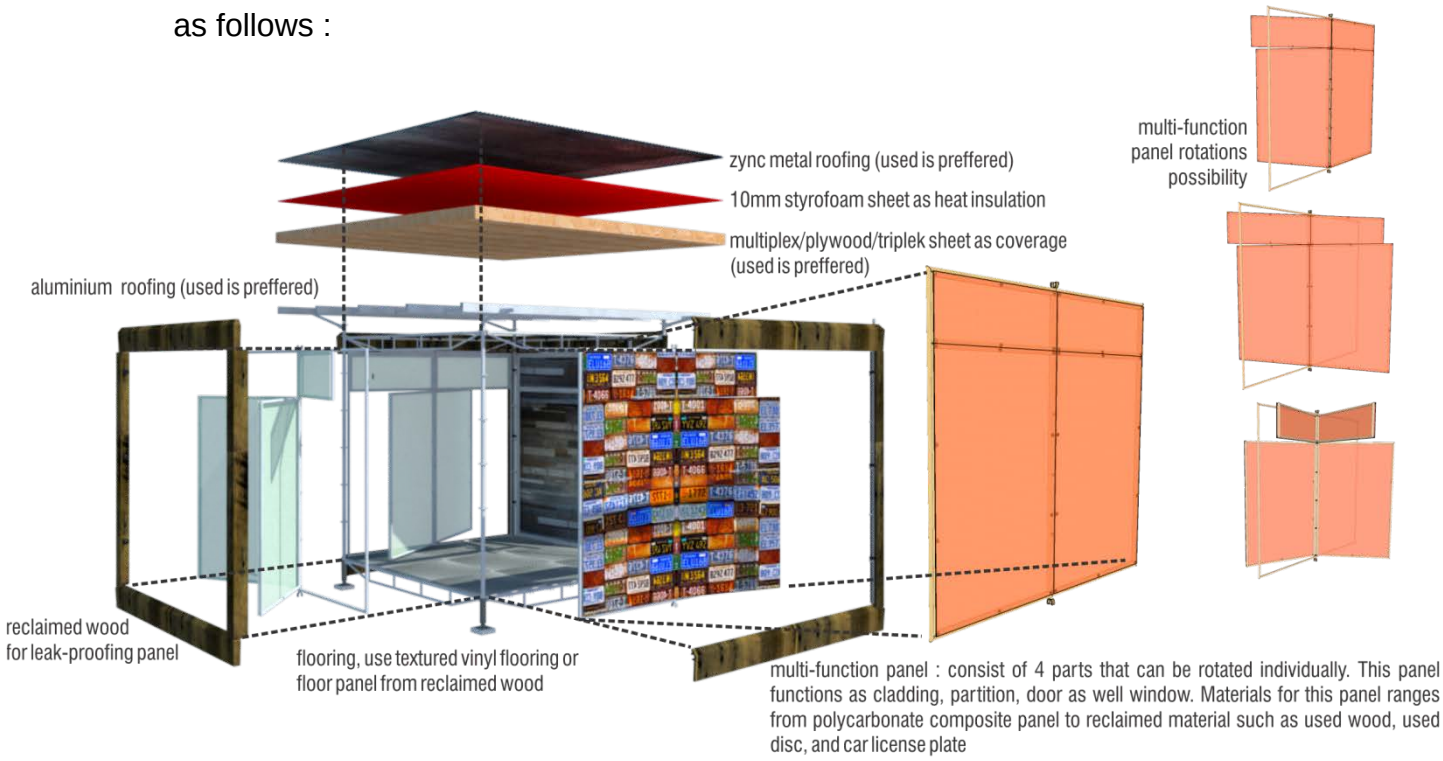


Fig 5.12 Modules and sub-assemblies of HipPod
Source: Author, 2012

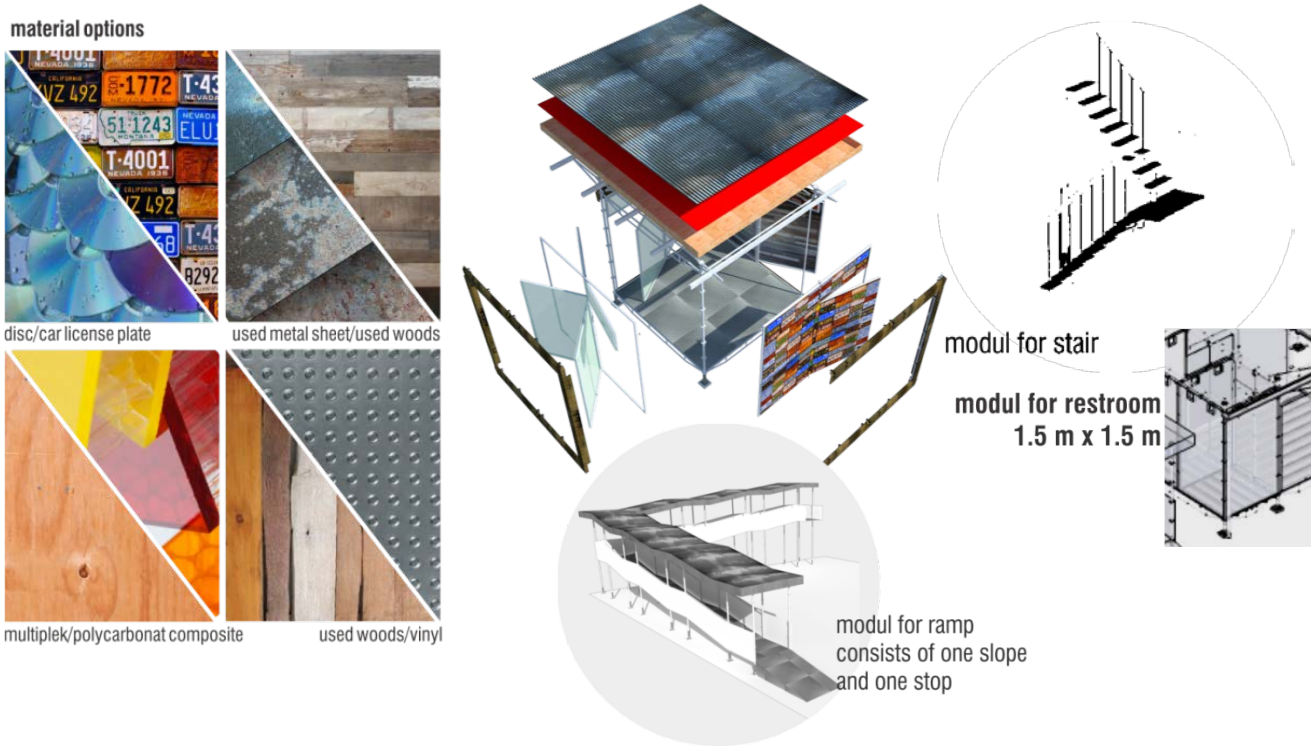


Fig 5.13 Modules of HipPod
Source: Author, 2012

Fig 5.14 3d Visualization of the Pod within the urban setting
Source: Author, 2012

5.4 Architectural Intervention on Each Stage

5.4.1 Recycling Industry Hub for Wearable Products

This building's purposes is to facilitate the Salingsih trash recycling industry as well as providing the playground for the kids, as all of the craftsmen in Salingsih are mother with children.
This building is stacked from 14 hippod,10 half-moduls, 2 restroom modul, 1 stair modul and 7 moduls of ramp. Most material used in the building is polycarbonate composit, as this building function as gallery for the product, translucent material is needed. The intention for the use of polycarbonate composite instead of the recycle material is to introduce new form to the local community. All of the wooden materials used in the building are all recycled

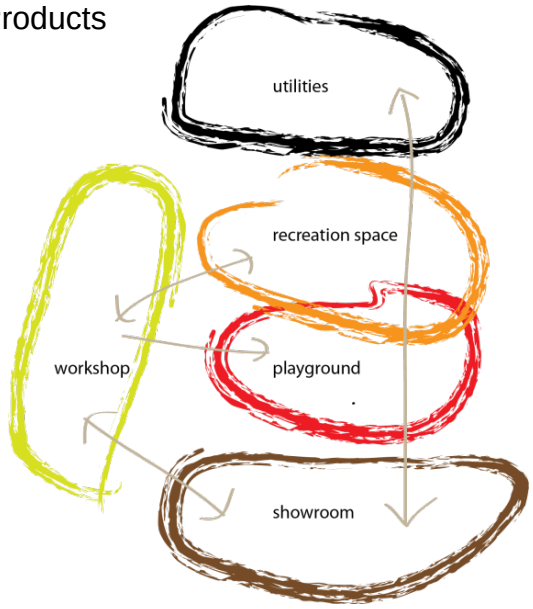


Fig 5.15 Zoning Concept of Recycling Industry Hub for Wearable Products
Source: Author, 2012

Table 5.2 Space requirement of the first stage

No	Zone	Room Label	Kind of Activities/Function	Required dimensions	Required quantities	Total Dimension (m²)
1	workshop	Workshop	Moulding	table: 750mmx1000mmx750mm	5 tables	3.75
			Finishing			
			Cutting	table: 1000mmx1200mmx750mm with cutting pad	5 tables	6
			Sewing	singer machine 20U-109 : 572mmx1270mmx1245mm	10 machines	7.2644
			Pressing	Huasen fabric press cut machine :1200mmx2500mm	1 machine	3
						20.0144
			Storage			4.00288
			Circulation			4.00288
					Total	28.02016
2		Collaborating room	Collaborating	seats 10-15 peoples	1 conference table set	24
			Meeting			
3		Manager Office				12
					Total	**64**
4	utilities	Rest Room	4 blocks of restrooms, each consists of 2 units of toilet+1 sink			36
5		Genset Room	genset : 700mmx500mmx550mm		2 genset	2.25
6		Trash Warehouse	Storing trashes			9
			Trash shredding	1 multi purposes brentwood AZ5 shredding machine : 900mmx1000mmx500mm		0.9
			Circulation			2
					Total	**50.15**
7	showroom (products gallery)					**72**
8	playground					flexible to available space
9	recreation space					

Source: Author, 2012

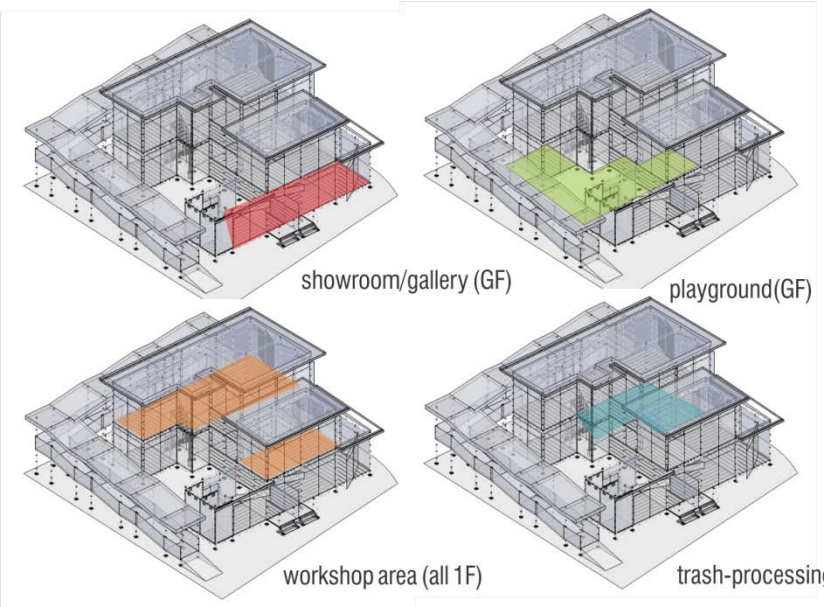


Fig 5.16 Zoning of Recycling Industry Hub for Wearable Products

Source: Author, 2012

Fig 5.17 3d visualization of Recycling Industry Hub for Wearable Products

Source: Author, 2012

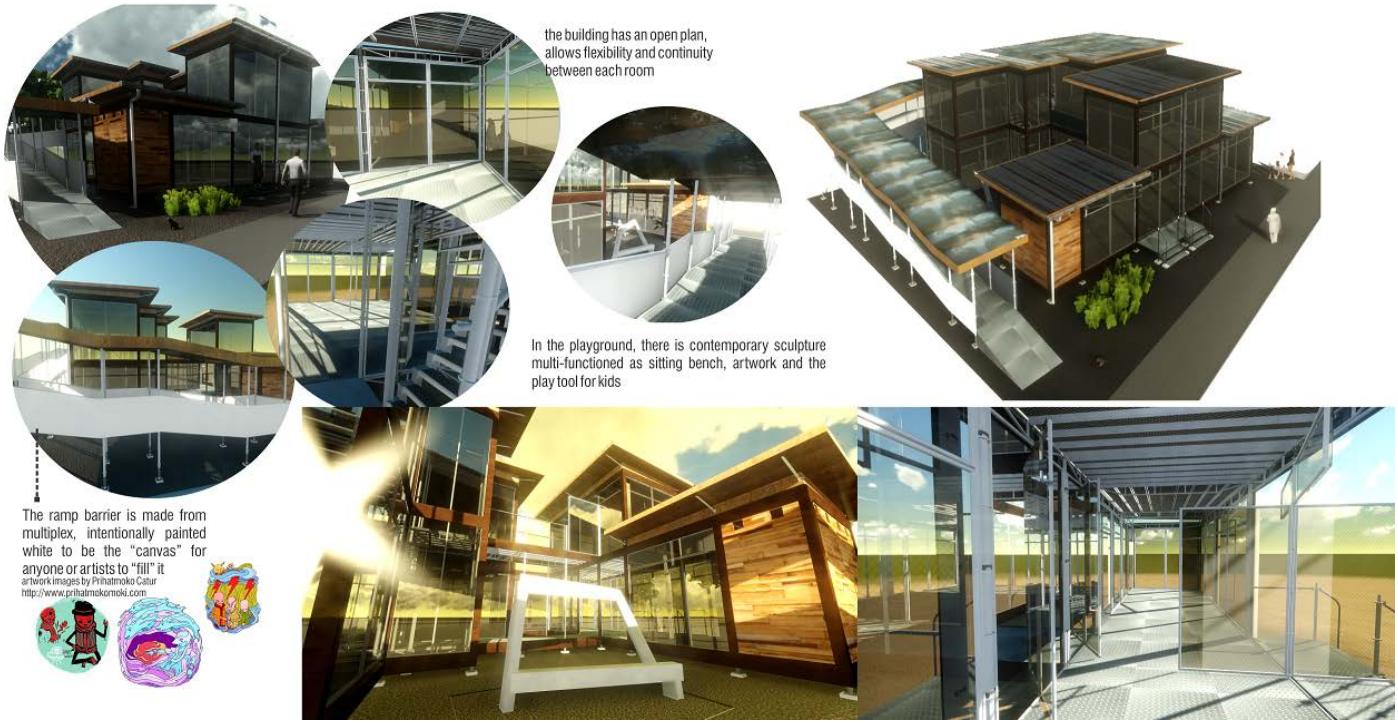


Fig 5.18 Set of Images: 3d visualizations of Recycling Industry Hub for Wearable Products

Source: Author, 2012

5.4.2 Recycling Industry Hub for Furniture Products

Fig 5.19 Set of Images: 3d visualization of Recycling Industry Hub for Furniture Products

Source: Author, 2012

5.4.3 Creative Youth Think-Tank

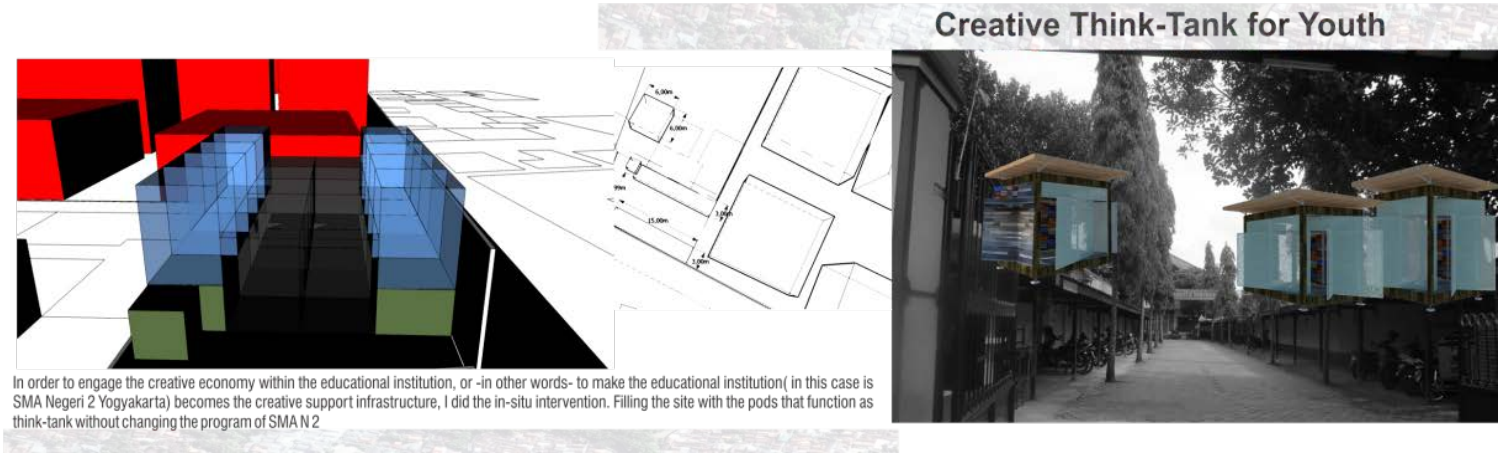
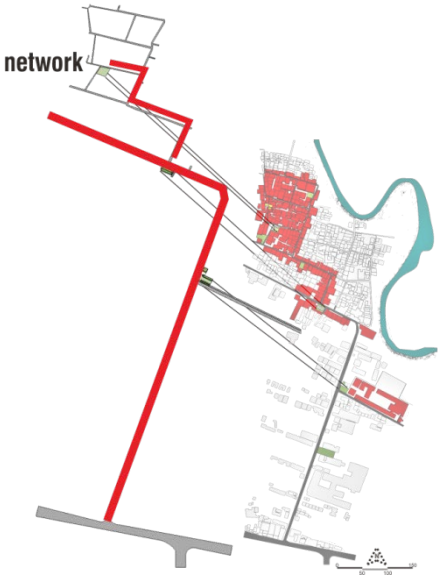


Fig 5.20 Set of Images: 3d visualization of Creative Youth Think-Tank

Source: Author, 2012

5.4.4 Next Step : Network



The next vision for Bener is making it as promenade, which will functions as network between previous interventions. The use of same architectural device is needed to create such connection visually. The HipPod could functions individually or in system.

As described in this set of images below. The first picture is HipPod being used as *pos kamling*. The second picture is hiPpod being used for public space along the side of Bener Street. And the last picture describes HipPod being used in culinary business w*arung padang.*

Fig 5.21 Set of Images: 3d visualization of The Various Functions of *HipPod*

Source: Author, 2012

Chapter 6:
Conclusion

In this chapter, the project is being reviewed by the non-architect expert as the representation of the community and the city government. The assessment then is being used to conclude the plusses and the minuses of the design thesis.

6.1 Project's Review from the Expert

The author had explained on the previous chapters (see chapter 2 and chapter 5), that the project is community-based design with the level of participation range from dialogue to co-decision. Thus, as the participative design, the result of the project needs to be examined by the community itself. In this project, the author is lucky to have the examination from the government representation who's also the activist of community empowerment through culture and creative economy. Shavitri Nurmala Dewi, MA is the Head of Tourism Destination Development on Sleman County Government. Below is her review of this project

"Uncontrolled population growth, raises such problems such as reduces public spaces that is actually needed by a healthy settlement. But nowadays, in urban areas, emerging community groups that aware about clean and healthy environment will affect the physical and mental growth of the community members. This can be seen in the example in the village *Bener*, group that tries to process waste into recycle product."

From the government point of view, the project gets the following points:

First several points are about the design of the architectural device:
1. integrated building design will allow community members to actively engage in the activities carried out by environmental groups.
2. simple design would be more efficient and multifunctional process.
3. although the design is simple yet seen the use of local plants should be part of the community in waste management practices, mainly household waste in the form of organic waste that can be used as compost. with those fertilizer, it can develop a residential greener.
4. for kids and young people, design with vibrant color can give positive energy. But for old generation, they prefer relatively elegant and simple tone color for their environment.

Below are the points from the aspect of spatial planning:
1. for Sleman Government, the urban growth is inevitable. As long as its development in accordance with the government plan, then the dynamics of the detail in it that relates to the needs of the community, can be accepted.
2. In case of *Bener*, it could be inspiration to near villages, how to deal with poor environment

6.1 Project's Resume

This design thesis is about developing the creative economy embryo of the urban informal community through architectural intervention. It took setting in *Bener*, *desakota* in the western part of Yogyakarta municipal area. *Desakota*, as the melting point between rural and urban characters, is the feature of urbanization in most Asian cities, where rapid changing from agricultural-based economy to creativity-based economy, takes place.

In this case*, Bener* is fortunate for having the creative economy embryo in the form of micro community-based industry named *Salingsih* that recycles inorganic trashes e.g. plastic bottle and snack wraps into wearable products such as bags, pillowcases and accessories. The project proposes various level of community based-design intervention to create "creative space" namely macro; *meso*; and micro that range from urban guideline to small-scale architectural intervention e.g. single pod. At urban design level, the project proposes the urban design guidelines on how to create the creative space, based on Sasaki's theory that creative city is the city that promotes innovative & creative industries through the energetic creative activities of artists, creators and ordinary citizens. At *meso* scale planning, the project proposes the master plan to generate the creative space of *Bener* which is divided into 3 five-yearly stages started at year 2012 and is expected to be completed at 2025; the first step of the

project is initialization, continued with proliferation, cultivation, and then advancement

Initialization phase is based on the author's dialogue with the actress of the creative industry, that the crucial need to develop the industry is the establishment of workshop facilitation. Proliferation phase is the means of spreading the spirit of creative industry throughout bigger community of *Bener*. This phase is trying to embrace the men folks into the industry by providing alternative to create another product of the trash recycling industry. The cultivation is the effort to generate creative support infrastructure by merging the creative economy to the educational institution. In the advancement phase, assuming that the previous phases had accomplished, is the urban guidelines for the façade of the *Bener* Street to generate it into *Bener* Promenade.The phases in the project master plan need the formal device that covers every requirements of each stage. The design of the formal device is the micro scale planning in the project.

To design the formal architectural device that could meet every requirement in the setting of *desakota*, the author follows the analogy of chunking. Chunking is what car manufactures does to improve supply chain: creating sub-assemblies e.g. door handle, rear view, door chassis that can be assembled into door module; then the door modules, combined with another car modules are being built into completed car product. In this project, the author designs single pod named *HipPod* as the completed product that can be broke down into structure; stair; floor panel; wall panel modules. Each module consists of sub assemblies, and some even gives alternatives of the materials e.g. wall panel is composed of the galvanized iron frame, hooker, revolver and wall covers with material option ranges from used-license plate to polycarbonate composite. With that method of co-decision, the community as the user has the liberty to built architectural device to meet their need, for the *HipPod* as the completed product can be multiplied and then combined each other horizontally or vertically into bigger pod.

The development of community's creative economy through architectural planning is being supported by the government as the strategy of the government is now empowering the community to achieve the economic autonomy; generating cultural, tourism, and creative village. For the community itself, any development that is bettering their live is fully accepted. However, the "alien" form of the architectural device, *HiPod,* has to be promoted to the government and community for example by using more ingenious materials.

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