Chapter_01
Introduction

"There was a time, not too long ago in evolutionary terms, when our existence was based on our capacity for movement and adaptability; indeed it is to this that we owe our survival of species" (Kronenburg, 2007: 10)

This chapter will briefly discuss the author's theoretical stance, followed by the real world problem that led to the proposed programme. These elements are thereafter combined to formulate a problem statement, hypothesis and sub-questions. Finally, the reader is exposed to the physical context, methodology and strategies the author intends to utilise for achieving the stated objectives.

Aiming for change_ *a 'normative stance'*

In the publication *'How Buildings learn: What happens after they're built'* , Stewart Brand (1994: 10) mentions that there is an interesting twist between how the individual perceive the world and the reality of the 'real'. He argues that architecture is imagined as permanent, thus our surrounding environment and architectural elements thwart us.

Building environments that ignore time, waste time **"…all buildings except monuments should adapt"** (*Ibid:* 12). Groák (1992: 15) invokes for a flexible design solution that not only **"withstand the changes brought about by time"** (Dewar & Uytenbogaardt, 1991: 22), but to accommodate these changes through physical adaptation. It is evident that available literature implies for a more adaptable built environment, where architecture reacts to ever evolving sociological, economical and environmental pressures (Zuk, 1970: 5). Adaptable architecture is not a new occurrence, but represents a form of building that has revolutionised along with human beings' developing social skills (Kronenburg, 2007: 11).

Brian MacKay-Lyons rhetorically questions the ideals of current architectural trends stating that **"Why should we imitate the past, is the future not good enough?"** (Tayona, 2007: 35). However Hampton Adams (2001: 11) signifies that **"only by looking at the past we can plan the future"**. Both authors raise interesting concerns, but considering the unpredictably of the built environment and human behaviour, architects surely cannot 'plan the future' but rather 'plan for the future'. This calls for the impermanent aspect of architecture that allows for future adaptation, but should also accommodate and justify any design move.

Re-entry vs. Re-integration _ *a 'real world problem'*

fig. 01 *0.4 % of population incarcerated

fig. 02 *39 % reconviction rate
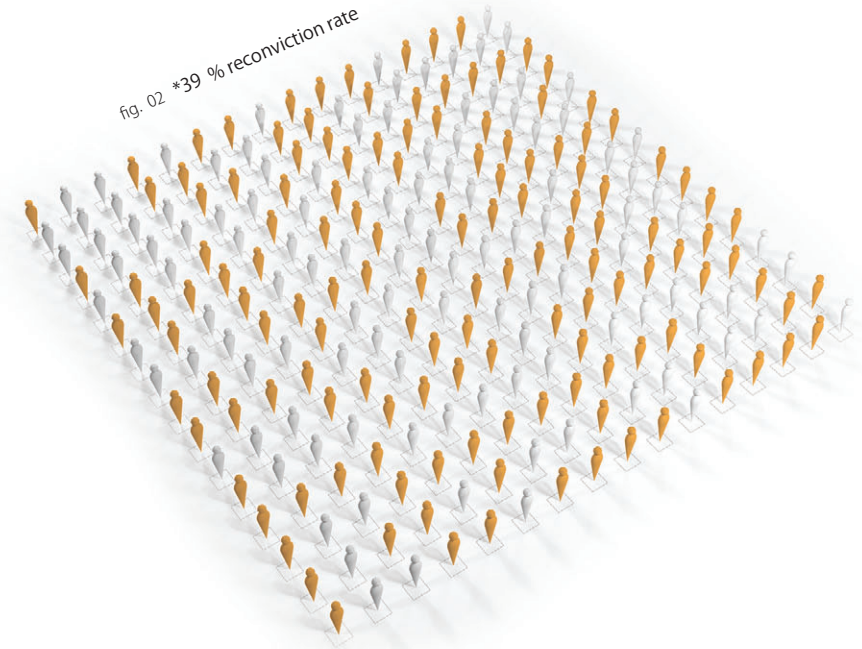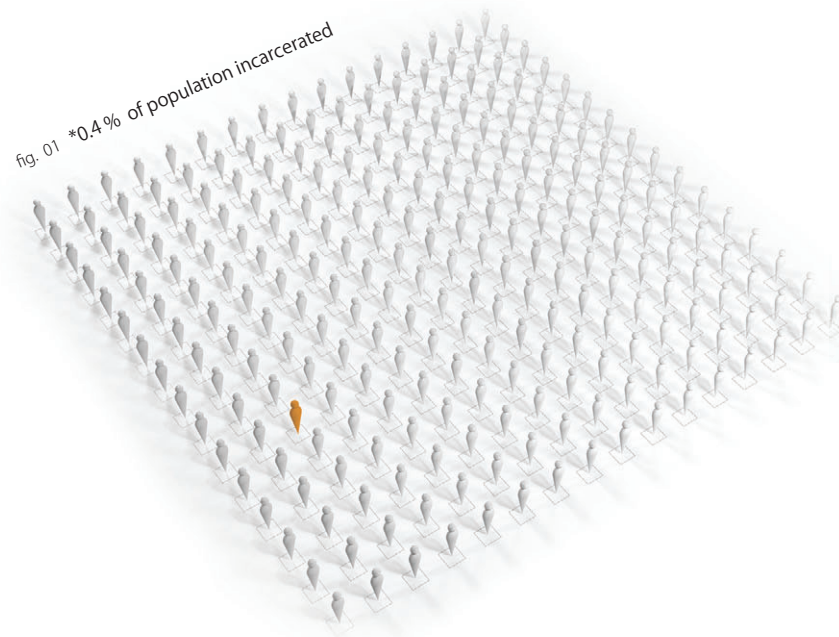
According to Travis et al. (2001: 2), 'Re-entry' is a quantitative term used meaning "the process of leaving prison and returning to society". All released offenders experience re-entry; however, these prisoners are not successfully 're-integrated'. 'Re-integration' is defined as "a process of increased participation in social institutions such as the labour force, families, communities, schools and religious institutions" (*Ibid:* 3).

"Contemporary prisons are designed by specialists to hold convicted men and women as punishment" (Johnson, 2000: 1). Defined by confinement and isolation, these structures offer little, if any freedom. According to Fairweather and McConville (2003: 49), the primary design intention of any prison facility is to protect the staff, the public and offenders. Only after these requirements are met, other issues can be considered such as rehabilitation, education and skills development.

Even though these secondary priorities are considered within the 'social re-integration programme' (fig. 04) of existing prison facilities, little opportunity is offered to released prisoners (parolees) to implement the skills and education obtained within prisons. This deplorably leads to the high recidivism rates (fig. 02) we experience in South Africa, and, in turn, leads to the overcrowded prison facilities (fig. 03).

fig. 03 *35% overcrowded prisons
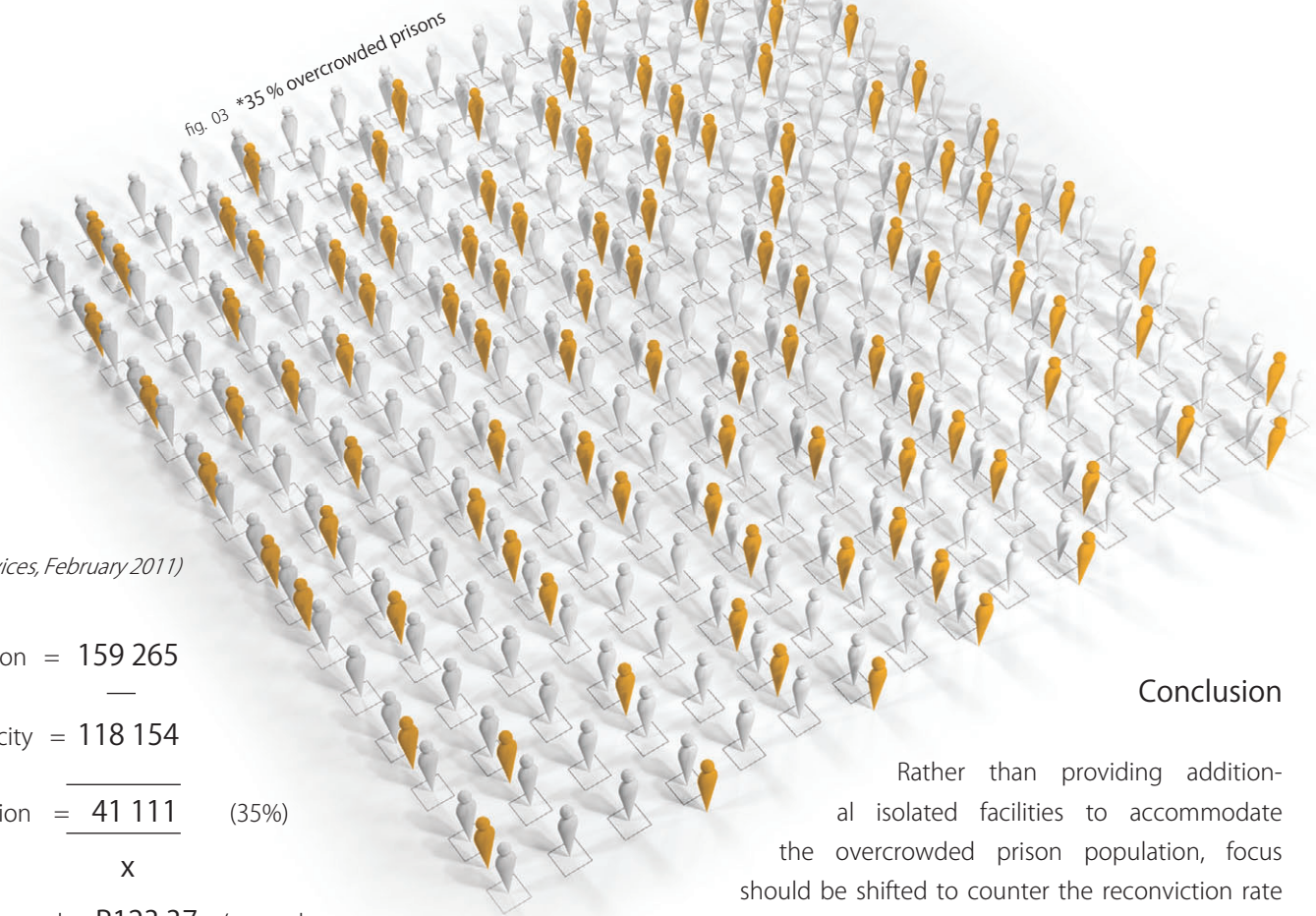
Arousing prison statistics:

(South Africa. Department of Correctional Services, February 2011)

Total inmate population	=	159 265
		—
Prison accommodation capacity	=	118 154
Overcrowded population	=	41 111 (35%)
		x

Average cost for incarceration estimated at R123.37 p/p per day

Government pays an additional R 5 071 864 per day to house the overcrowded population of prison facilities.

Conclusion

Rather than providing additional isolated facilities to accommodate the overcrowded prison population, focus should be shifted to counter the reconviction rate that leads to the overcrowded population. Offering parolees temporary accommodation and the opportunity to successfully reintegrate themselves within society on a gradual manner.
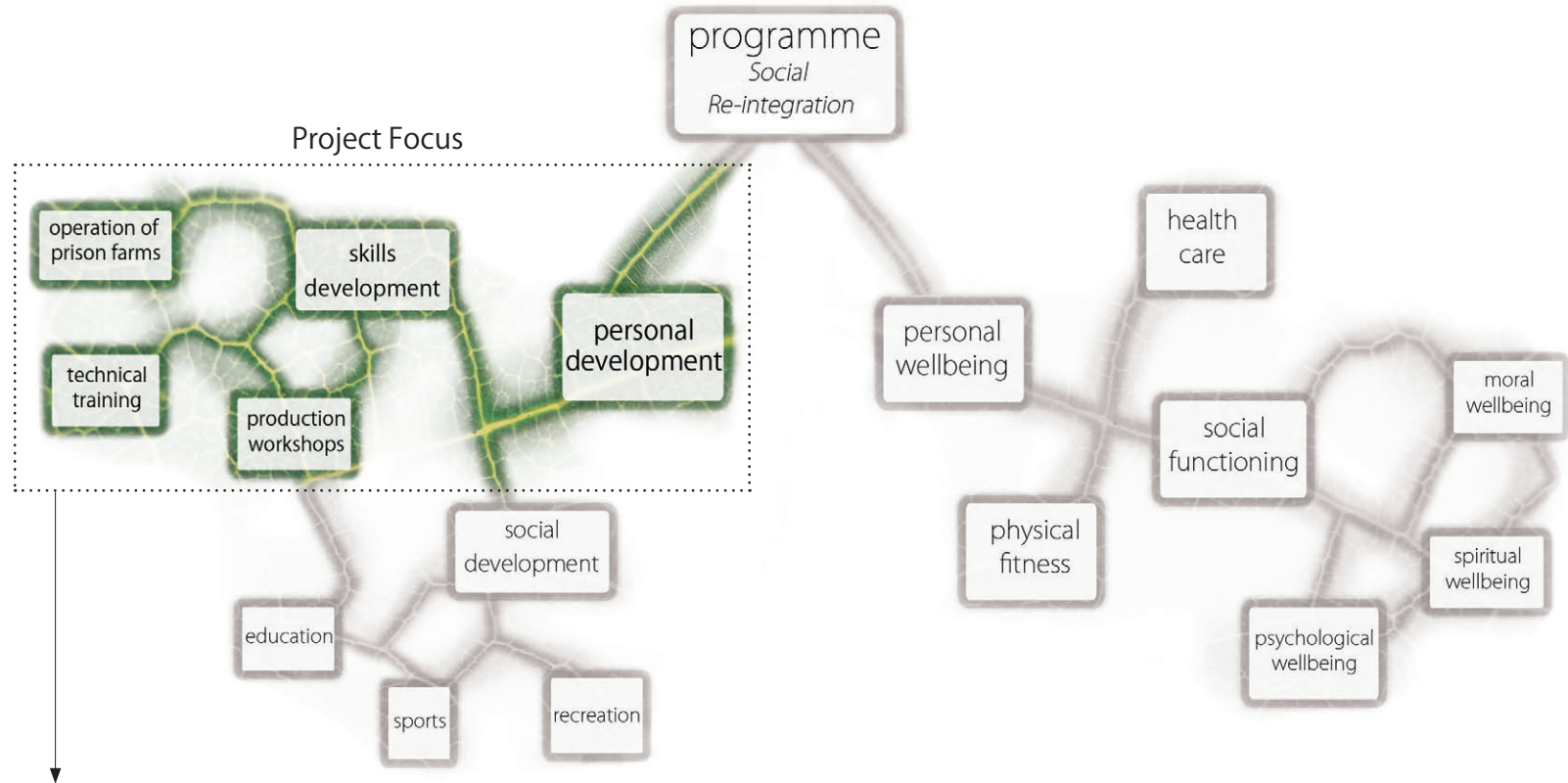
fig. 04   social re-integration programme

Illustrated in fig. 04, current prison facilities focus on personal development prior to final release. However, according to statistics (South Africa. Department of Correctional services, 2010: 83), the skills that are developed in prison are not put into effective use after prisoners are released back into society (See fig. 05).

An additional programme is required to implement the skills that were developed in prison such as:

- Production facilities / workshops
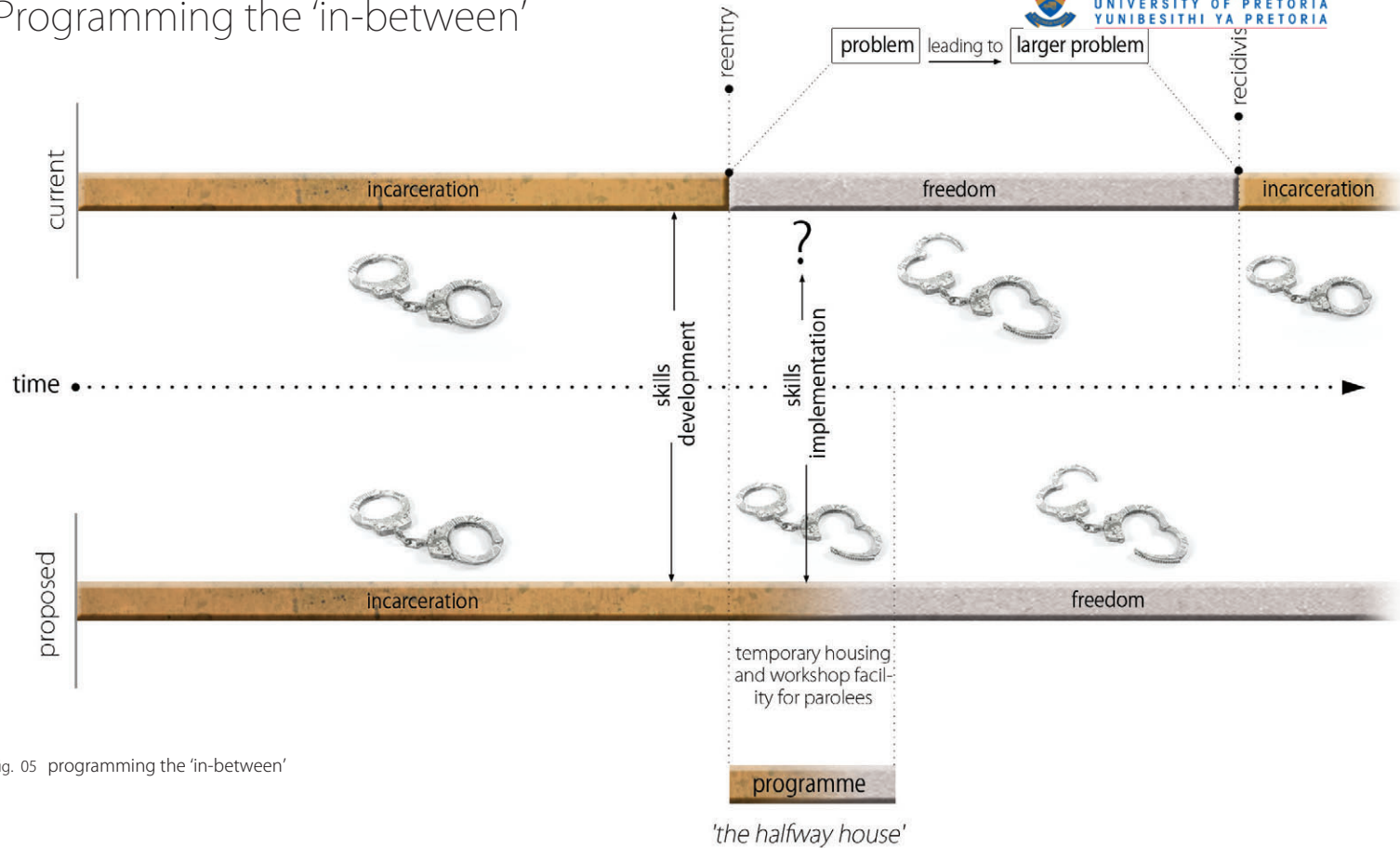- Farming / agricultural facilities

Programming the 'in-between'

fig. 05   programming the 'in-between'

The aim of the research does not intend to contradict the existing structure of prison facilities, but rather to establish an additional architectural typology hosting a programme 'between' isolation (prison) and freedom (society). A facility that is not compulsory, allowing the parolee freedom of choice.

A facility that aims to:

- Temporarily house prisoners after release
- Improve the offender's human relationship abilities and employability for achieving successful social re-integration.
- Allow the parolee an opportunity for social acceptance by 'giving back to society' through:
  - The production process of sustainable useful products using recyclable waste.

Funding

fig. 07 National Treasury logo

- Public-Private Partnership (PPP) prisons fund the departments financial commitment to the suppliers of correctional services.

- 'Facilities Planning' funds the provision of infrastructure for correctional and other facilities.

- Department of Public Works (manage funding).

fig. 08 Department of Public Works logo

Client

fig. 06 Department of Correctional Services logo

Objectives

Provide needs-based programmes and services to offenders to facilitate social acceptance and effective re-integration into their communities.

http://www.dcs.gov.za/AboutUs/Programmes.aspx (access 16-04-2011)

Site

fig. 09 site location

The site under investigation is currently owned by the Department of Water Affairs. All occupied buildings will be left unaltered. Dilapidated warehouses and under utilised spaces will be revitalised and the site will be strategically rezoned to accommodate the proposed intervention.

Introduction

Architects should shift their design approach from creating geometries to creating environments. Environments that "...allow others to determine the geometry." (Jones, 1992: 36)
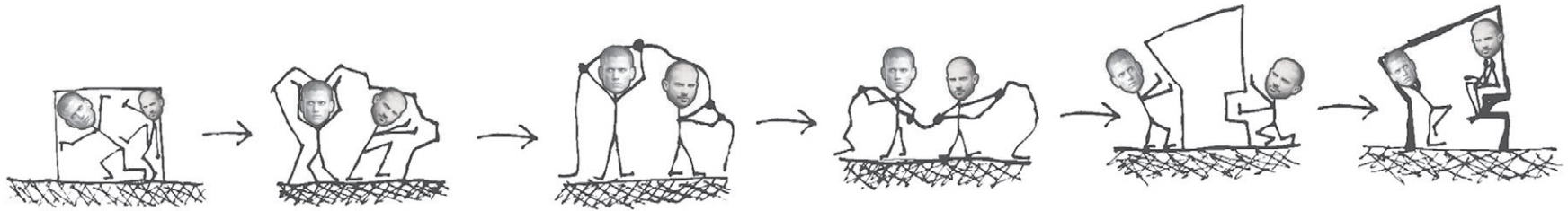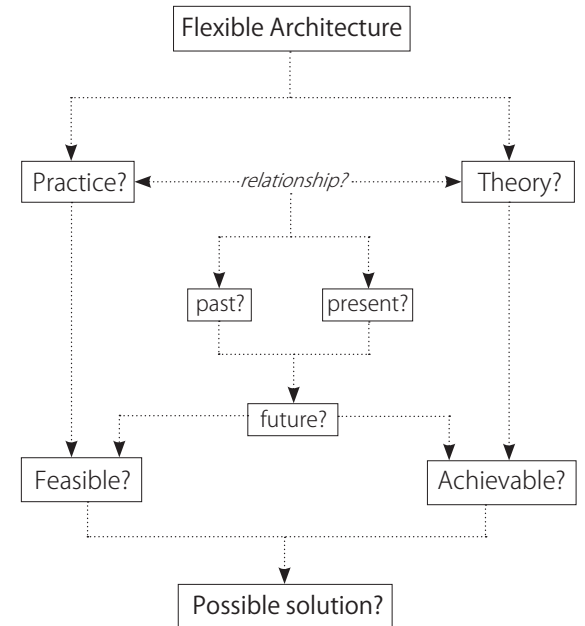

fig. 10   users altering spaces according to ever-changing social needs

Sub-Questions

Problem Statement

The permanent nature of the built environment causes the inefficient utilisation of valuable resources; as buildings are constantly rejuvenated, revitalised and demolished in reply to various social needs.

Hypothesis

Architecture has to be flexible to accommodate a variety of use patterns by current and future user(s) without having to demolish the building (in part or completely)

Pretoria West _ Industrial

Background

Established in 1892, the Pretoria West region was allocated for industrial development along with a residential suburb serving the industrial area *(Du Plessis & White, 2008: 1).

fig. 11 **1882 - 1922**

After the power station was relocated (from the inner city) to Pretoria West in 1922 (Stark, 1952: 61), industrial expansion was inevitable. Residential densities could not satisfy these demands. Thus, additional labour from various locations was necessary to fulfil these economic needs.

fig. 12 **1922 - 2011**

Currently, the neighbourhood has changed from a residential to a mixed-use suburb consisting of restricted industry, commercial industry, retail, flats and single volume residential areas (Du Plessis & White, 2008: 1). Although these zones coincide, there is a lack of integration, thus leading to a monotonous indefensible urban environment that lacks identity.

fig. 13 **2011**
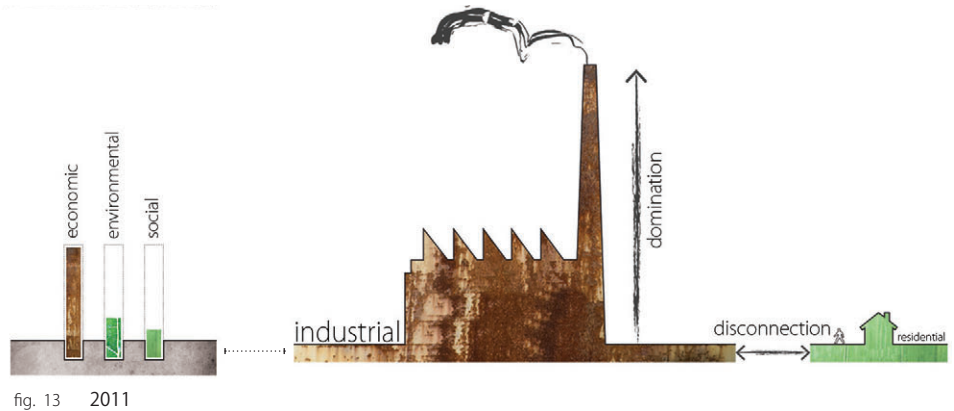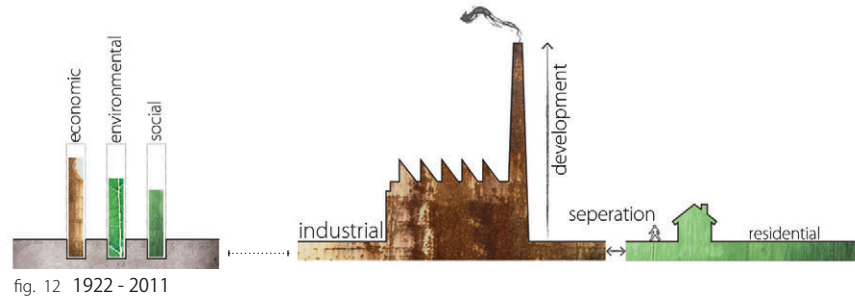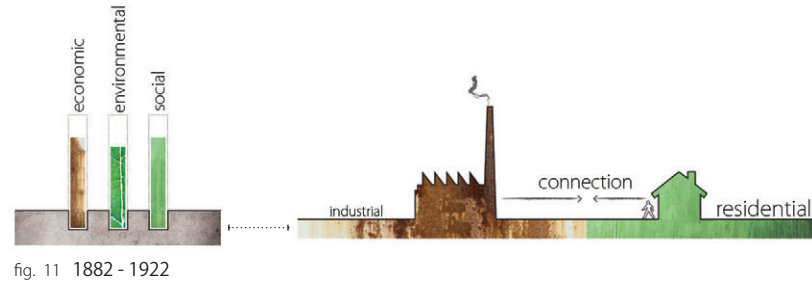
'Riana du Plessis Urban Planners' & 'Gary White Architects and Urban Planners'. 2008. Integrated Compaction and Densification strategy for Pretoria West Residential Precinct. City of Tshwane Metropolitan Municipality.
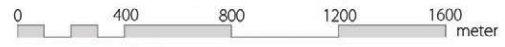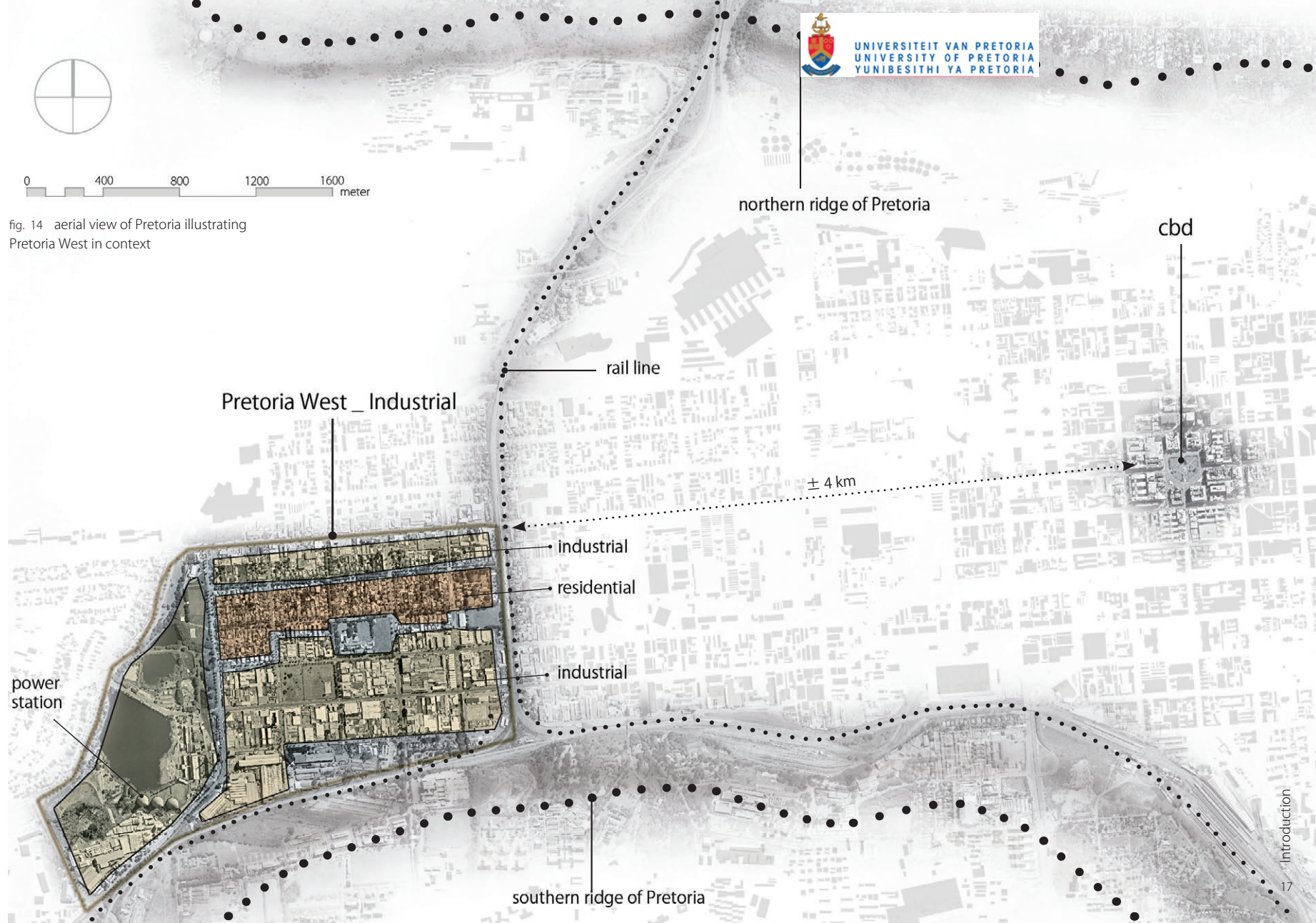
northern ridge of Pretoria

cbd

0   400   800   1200   1600
meter

fig. 14   aerial view of Pretoria illustrating
Pretoria West in context

rail line

Pretoria West _ Industrial

± 4 km

industrial

residential

industrial

power
station

southern ridge of Pretoria

'gentrification'
Pretoria West _ Industrial

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industrial employers — economic / environmental / social — needs — transport

residents — economic / environmental / social — needs — transport
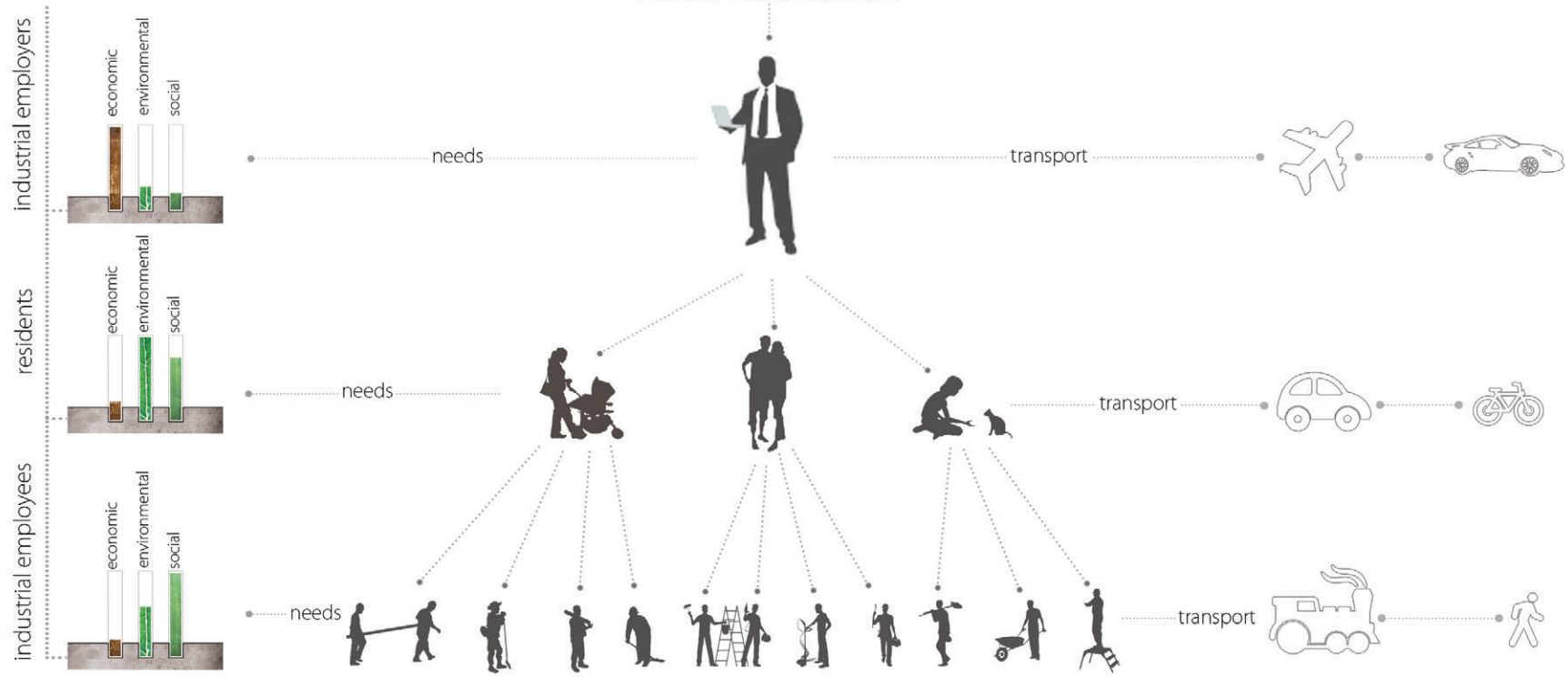
industrial employees — economic / environmental / social — needs — transport

fig. 15 urban gentrification of Pretoria West in hierarchal diagram

Gentrification

Summarised from *'(Redfern, 2003: 2351-2366) What Makes Gentrification 'Gentrification'? '* considering the relevance to Pretoria West Industrial:

Characterised when a culturally heterogeneous character of a community is altered into a more economically homogeneous community.

Class substitution of those who live in the city by a higher class who create an identity in the city
- Upper class fails to interact with those around them (lower class residents).

Current residents are substituted due to escalating property, tax and the termination of an existing social community, forcing them to leave their historically established neighbourhood (Keating, 2000: 384).
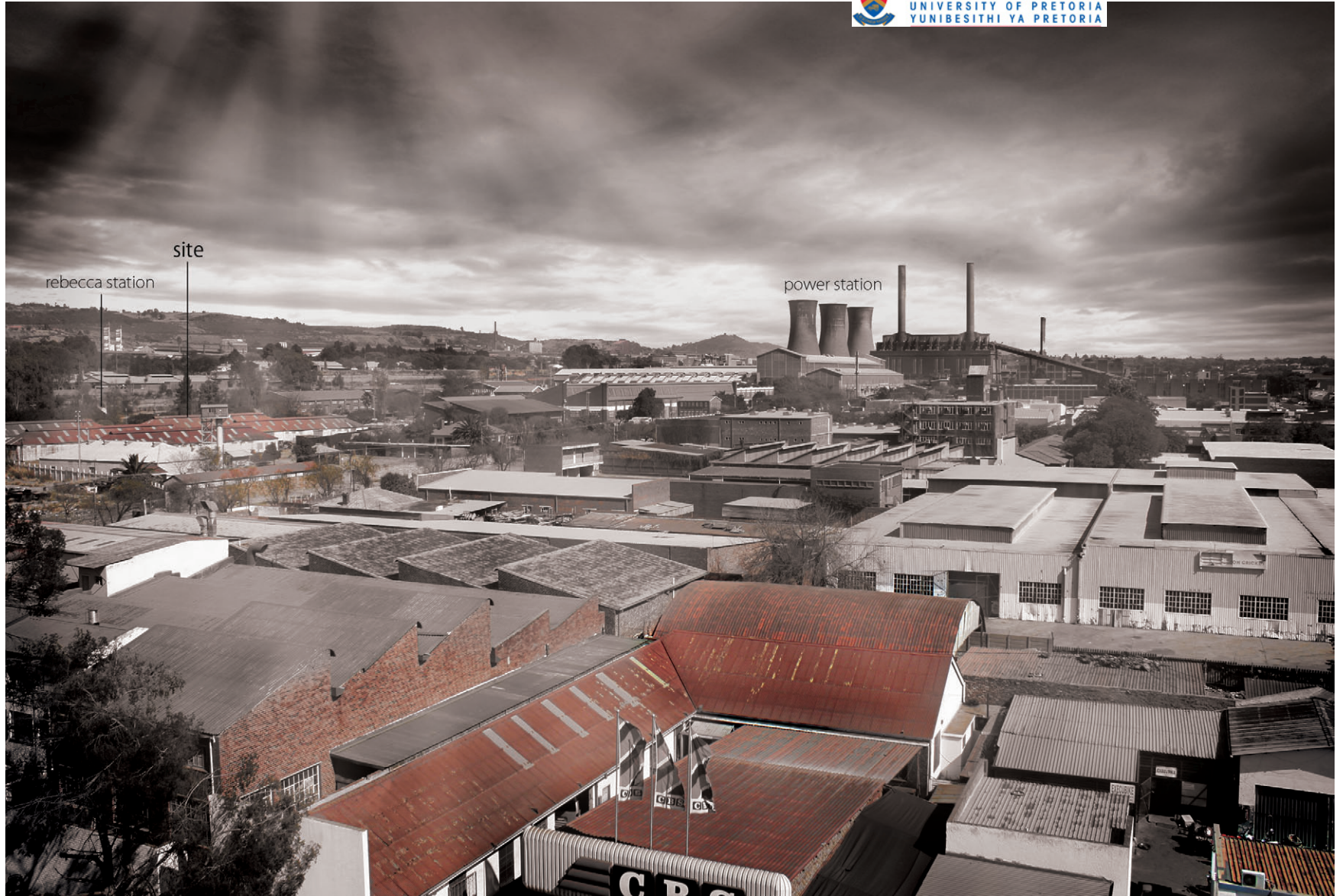
Introduction

fig. 16 Pretoria West _ Industrial (developed block North of site)

Aim

The main aim of the study is to present a flexible design strategy that would illustrate a different, yet substantiated architectural approach in dealing with prisoners after being released back into society.

Secondary objectives:

- Propose a validated solution to revitalise the Pretoria West region into a sustainable industrial environment:

    - Balancing economic; social; and environmental needs through architecture (fig 17).

    - Present a product where the living (residential) and working (industrial) environment can coincide.
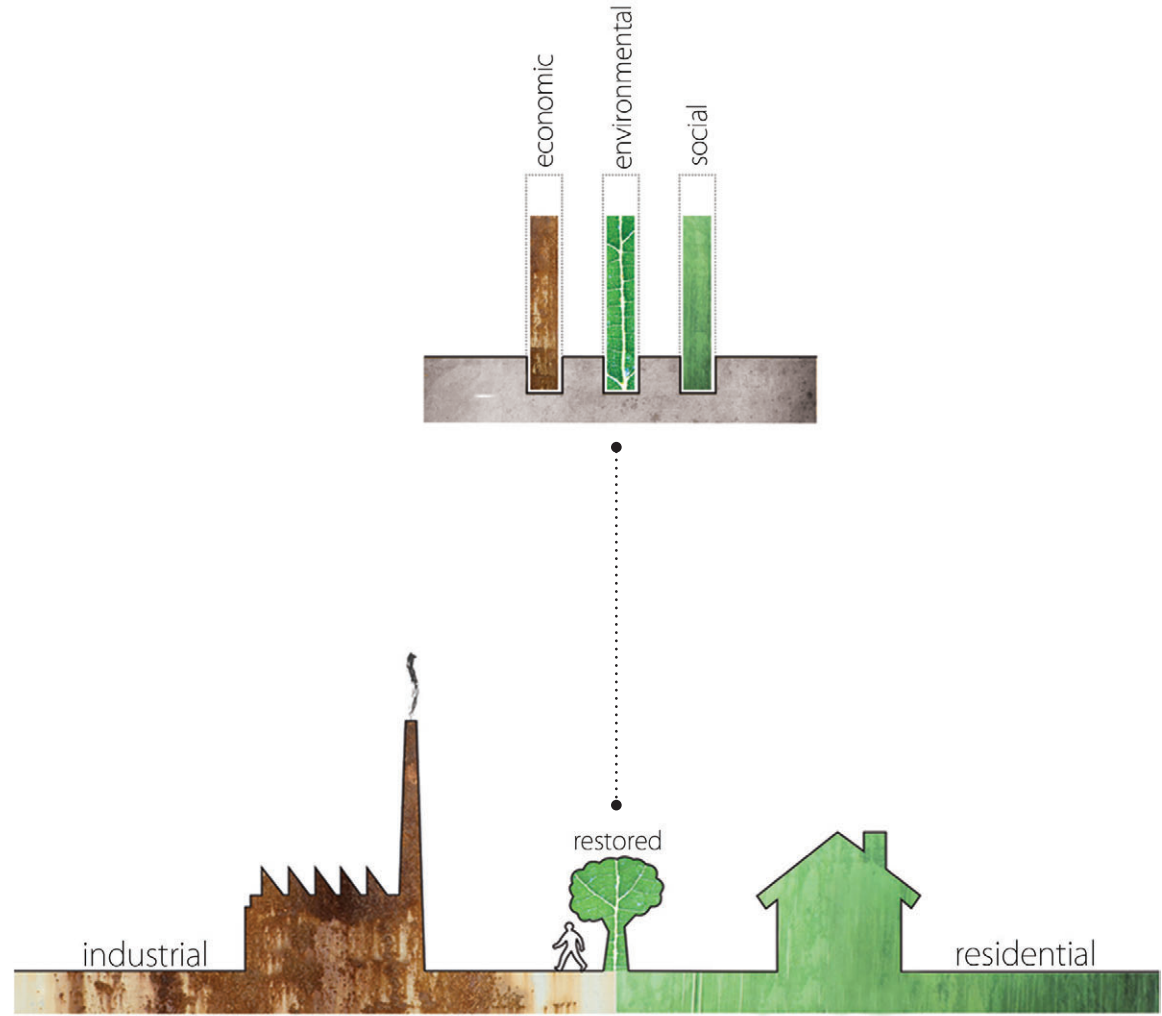

fig. 17 sustainable industrial environment by strategically balancing economic, social, and environmental needs (see fig. 11 - 13)

Methodology

The dissertation hypothesises the advantages of architecture as being 'flexible' in an action-reaction manner.

Recent research has addressed this in several different aspects:

Built Flexibility

Flux of modern society and their constantly changing needs

Flexible Building

Physical mobility of the built form

> 01. Siegal, Jennifer. More Mobile. 2008. More Mobile: Portable Architecture for Today.

> 02. Kronenburg, Robert. 2008. Portable architecture. Design and Technology.

> 03. Fox, Micheal and Kemp, Miles. 2009. Interactive Architecture.

> 04. Scott, D. F. 2007. Architecture or Techno-utopia. Politics after Modernism.

> 05. Sadler, Simon. 2005. Arhigram: Architecture without Architecture.

> 06. Ley, Sabrina and Richter, Markus. 2008. Megastructure Reloaded.
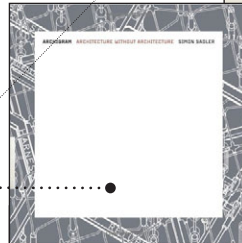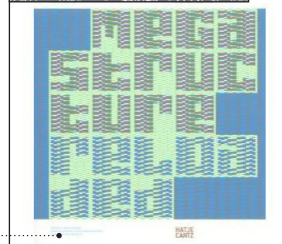
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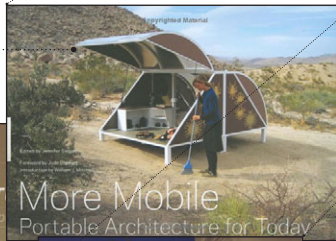
> 02

> 03

> 04

> .05

> 06

Although the author's study developed from the idea of a building being adaptable to any given environment, the idea of flexible architecture responding to a specific environment informed the design process. To certain extends this expand previous research on the topic: where technology, science and society is considered as the primary design generator (Sadler, 2005: 14).