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# 002

## THEORETICAL APPROACH + PRECEDENT STUDIES


GLOSSARY/ KEYWORDS **002**-0
THEORETICAL PREMISE **002**-1
PRECEDENT STUDIES **002**-2


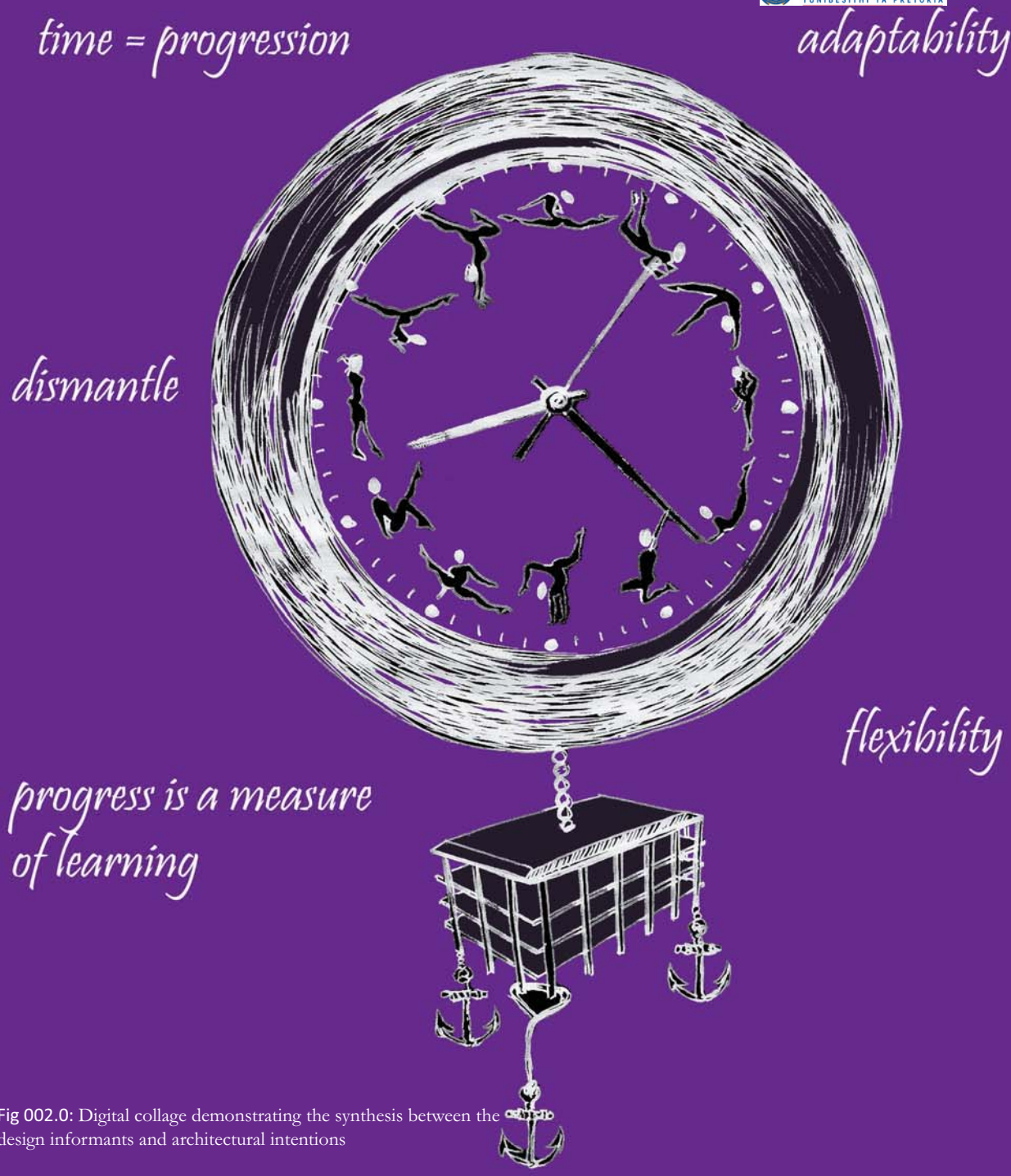


Fig 002.0: Digital collage demonstrating the synthesis between the design informants and architectural intentions

# 002 - 1 THEORETICAL APPROACH



**Sustainability** — A paraphrased definition of sustainability according to the Bruntland Commission: meeting today's needs without compromising the ability of future generations to meet their needs. Further sustainability implies using, but not depleting or hopelessly degrading, resources that are of limited availability (Porter, 2006:179)

## 002-1 THEORETICAL PREMISE

### Introduction

In a booklet published by the Australian Department of the Environment and Heritage entitled *Adaptive Reuse – Preserving our past, building our future*, a definition is presented as to what encompasses adaptive **[re]**use. According to this document environmental sustainability and awareness have been the driving forces of modern communities. Adaptive **[re]**use is therefore a process that makes use of the principles **[re]**duce, **[re]**use and **[re]**-cycle, giving many products a second or even third life, with functions often not associated with their original use (Kerr, 2004:3). On occasion only the use of the product changes.

Adaptive **[re]**use has predominantly been used in historic buildings and those with significance in a particular setting. In keeping with the ideals of adaptive **[re]**use strategies, architects and developers should gain an understanding of what it is that makes a particular building significant, and then follow a development approach which is sensitive to the host building while giving it new purpose (Kerr, 2004: 3). If a development strategy fails to acknowledge and protect the host building the entire process would prove to be nothing more than a mockery.

As stated by the Australian Heritage Division the most successful adaptive **[re]**use projects are those that **[re]**-tain the significance of the host building while including "a contemporary layer that provides value for the future" (Kerr, 2004: 5). In many cases adaptive **[re]**use is the only way to preserve a host building's fabric, and often this is achieved by the adaptation of the original use.

Warren Kerr, the President of the Royal Australian Institute of Architects, asserts his standpoint by proclaiming that many policies have been put into place by state organisations in Australia, which include the standard criteria when adapting a building of significance in order to preserve its integrity. These criteria include:

- avoiding "façadism" – the process of gutting a building and **[re]**taining the façade
- adding recognisable contemporary new work – avoiding imitation of historical styles
- searching for a new programme – which is in line with the original use of the building

The progression of a simple dwelling

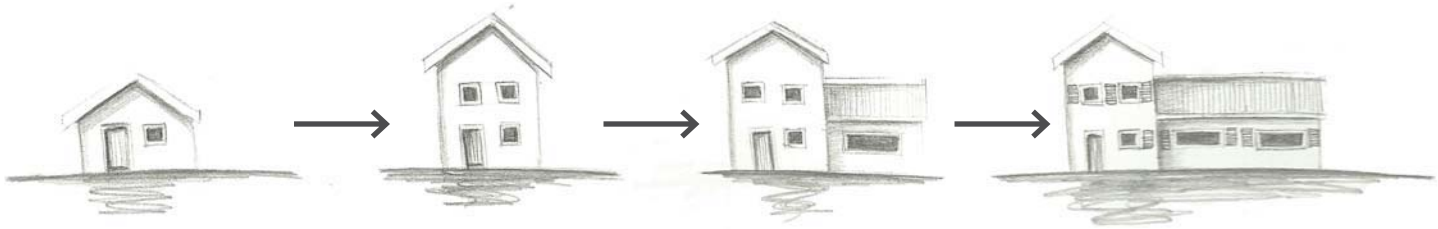

Fig 002.1.1: A simple dwelling

Fig 002.1.2: A second floor is added

Fig 002.1.3: An extension is added to the side of the dwelling

Fig 002.1.4: The extension to the side grows in size

Several benefits present themselves when adaptively **[re]**using a building, namely environmental, social and economic, as well as the creation of a platform for promoting innovation.

**"Bypassing the wasteful process of demolition and [re]construction alone sells the environmental benefits of adaptive [re]use" (Kerr, 2004:2)**

Environmentally, adaptive **[re]**use makes sense as the "embodied energy" of the original building is **[re]**tained, as opposed to the amount of energy it would take to construct an entirely new building. The Australian Greenhouse Office (Kerr, 2004:4) noted an approximate saving of 95% in embodied energy that would otherwise be wasted on unnecessary new construction. New construction in the built environment in Australia accounts for approximately 40% of the annual energy and raw materials consumption, 25% of wood harvested, 16% of fresh water supplies, 44% of landfill and 45% of carbon dioxide production.

On a social level the **[re]**using and adaptation of a building holds significant benefits for the communities who value them. The Heritage Division of Australia (Kerr, 2004:5) states that when buildings are adapted successfully they have the ability to maintain and possibly **[re]**store a buildings previous significance and to achieve continued appreciation for it. It has become the norm to seek methods of **[re]**ducing costs as well as the social and environmental impacts any study area. By adapting an existing building these criteria can often be addressed.

A number of financial savings and returns can be gained from the adaptive **[re]**use of existing buildings. Embodied energy, as previously discussed, will only increase in the future, thereby making the **[re]**use of existing structures more and more viable. Existing buildings constitute a layer of authenticity that should almost always be legible, even after the adaptation has taken place.

Conservation and **[re]**storation are seen as forms of alteration. By considering issues of conservation and **[re]**-storation, the act of alteration is **[re]**moved from the realm of low art (Scott, 2008:44).

John Ruskin wrote in *The Seven Lamps of Architecture* (Ruskin in Scott,2008) that "neither by the public nor by those who have care of public monuments, is the true meaning of the word **[re]**storation understood. It means the total destruction which a building can suffer: a destruction of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed. Do not let us deceive ourselves in this important matter; it is impossible, as impossible to raise the dead, to **[re]**store anything that has ever been great or beautiful in architecture" .

What one can deduce from the extract above is that regardless of how good the intentions are to **[re]**store a building to its former glory, it will never be authentic, because it is not. The fact that alterations are made to the building implies a certain degree of forgery or fabrication as authentic **[re]**placement parts are not readily available and are probably no longer manufactured.

Therefore the intention of this thesis is to make alterations and adaptations to the building which are clearly visible and do not pretend to be what they are not. The materials and

Fig 002.1.5: Symmetry is reached by adding a new wing

Fig 002.1.6: A balcony adds to the amount of living space

Fig 002.1.7: A flat roof rounds off the progression of alterations

## Threshold Theory

Typically when one thinks of thresholds in a residential dwelling, one thinks of a house on a plot of land. Various elements begin to define the thresholds and become more private as they approach the front door. The front door is considered to be the most important threshold, which guards the interior that is most private. The typical threshold notion is challenged in the Woltemade building as thresholds occur on a horizontal as well as vertical plane.

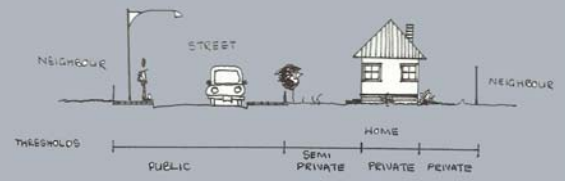


Fig 002.1.8: The conventional notion of a residential threshold

In the case of the Woltemade building the horizontal plane consists of the entrance located on the passage, while the vertical plane becomes more relevant the closer one is positioned to the edges of the building (north and south) where height is expressed as an additional dimension.

Lucien Kroll is of the belief that there are two areas of significance in a residential dwelling: the main entrance and the exit to the garden or terrace. The entrance and exit points need to be more than holes punched in the wall; they should be decorated and made unique to give them identity and reveal the personality of the occupants within (Kroll, 1986:78). This (very) theory can be applied to the Woltemade Building and its varying program.

**"It is the way people care about their living spaces and express that care that preserves the living continuity of an urban texture, and which prevents it becoming an alien project placed amongst others of its own kind according to artificial geometry" (Kroll, 1986:78).**

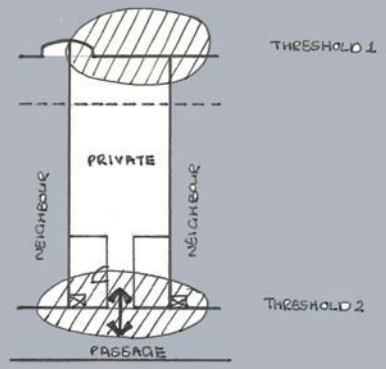


Fig 002.1.9: The current threshold condition that exists at each of the residential units

In the current state of the Woltemade building, the second condition of the exit is not being met. This thesis intends to explore methods of creating and expressing the "exit to the garden or terrace" through the addition of personalised balconies and living spaces, most notably to residential units throughout the building.

technologies used are to be in line with what is currently available on the market, therefore adding an additional layer to the existing building.

**"Intervention needs to be an art" (Scott: 2008:92)**

Fred Scott, the author of *On Altering Architecture* (2008:25), states that the degree of alteration made to a host building can be split into two different categories, the first being surface and the second being spatial, although spatial alteration can include the first category. Buildings of the past were often altered in order to accommodate new services such as electricity and sanitation, which invariably alterer the surface or spatial qualities of the building.

Surface is seen to be anything concerning itself with the colour of the building, including paint and plasterwork, while the spatial category involves alterations to the plan and section of a building. Moreover Scott (2008:95) classifies the following scenarios as alteration:

- **[Re]**taining the original spatial organization – through enlarging or sub-dividing
- Changing the existing spatial organization

A building is unavoidably ruined through any work undertaken (Scott, 2008:96). This means that once a building has been altered it is no longer in its original state. Where the **[re]**moval of old plaster, disintegrated floorboards and ceiling boards from a building is deemed necessary, they can be **[re]**placed by imitation work. These alterations will remain nothing more than imitation as the quality of the new plaster for instance is unable to replicate the layers of plaster which have been eroded by time. Scott believes that the full realization of an intervention **[re]**quires the building to be broken in order for test the possibilities of alteration to be tested.

Buildings acquire changes, whether minor or of an extreme nature, due to changes in program. These changes in program are often related to changes within the surrounding urban context.

In the case of this thesis, the building is already 'broken' as it has endured many changes. These changes range from the **[re]**configuration of internal spaces to the **[re]**moval of screen walls along the southern side of the building, and most notably the addition of the western block perpendicular to the linear residential component. These changes were largely due to changes in program and the socio-economic conditions of the urban environment.

**"Stripping back is a process of delineation of the qualities of the host building, an analysis of the given" (Scott, 2008:108).**

In Chapter 7 of Scott's book (2008:107), entitled "Stripping Back", he attempts to set up generic guidelines for the alteration of architecture:

1] Stripping back – of mainly plaster and wood
2] Making good – where original fabric is **[re]**paired or **[re]**placed
3] Demolition and **[re]**moval – of parts inhibiting future alterations
4] Installation – of new intervention

Fig 002.1.10: Southern elevation as it appeared in 1959


Fig 002.1.11: The "broken" southern façade as it appears in 2010 without screen walls above walkway walls

## The Front Door = Identity

Just as the eyes reveal the soul of the human body so a front door reveals the soul of a home. A single **[re]**decorated door in a communal passage is a bold statement and gesture which requires a huge amount of courage from the inhabitant.

In a time not so long ago the window looking out to the street was where inhabitants expressed their identity. Beautiful ornaments or vases with plants or flowers were placed in the window and even the hem of the curtain faced away from the street (KROLL, 1986:27). The front door was an extension of the decorated window. Huge amounts of thought and detail went into elements such as the door knocker and letter box. These elements were pieces of craftsmanship. Today however, this same sentiment is hard to find. Door after door displays the same mass-produced handles, hinges and glass without any variation.

**"Diversity encourages creativity, while repetition anaesthetises it" (Kroll, 1986:29).**

A door is a tactile frontier between a public and private realm and it should be celebrated. Not all door or openings need to look the same because not every inhabitant or programme within a building is the same. The inhabitants personality needs to come through even if it is in something as simple as the door handle or type of glass used in a cottage pane window. This thesis wants to take this concept a step further and allow the real personality of the inhabitant to be expressed, whether it is through the adaptation of space outside the front door along the communal passage or through the variety of goods sold from the front door.

If adaptations of various natures are encouraged, bolder interventions will be made by the inhabitants which do not just relate to their front doors.

A better understanding by the designer is attained through the stripping back of the host building. The fundamental qualities of the host building need to be understood. Each building has a unique context with its own spatial, social and chronological aspects **[re]**sulting in a different end product in each case, even if the program **[re]**mains the same.

The notion of stripping back during an alteration implies a search for a "supposed ideal form" (Scott, 2008:111). The original condition of the building with **[re]**gards to style is unobtainable as is anything from in the past. Nonetheless, a designer needs to understand the initial design intent and the direction the original builders tried to take, and should not make changes on a whim. Any alterations made need to be appropriately **[re]**searched and should add to the longevity of the building.

According to Scott (2008:111), any perceived ideal form of a building is often ambiguous due to its usage, the failure to execute portions of the building during construction and, to a lesser extent, additions.

The point of stripping back is to establish the approach a designer may take in order to find a balance between the ideal and the actual, drawing together unrelated components to make a cohesive whole.

Stewart Brand (1994: Part 1/6) states in his television production that, where buildings that do not work are concerned, there are three possible actions the user can take: put up with it, change it or demolish it. This thesis does not intend to put up with a building that does not address its users' needs; neither does it want to demolish it in its entirety. The intention is to change it, making it more flexible for current and future users.

When faced with alterations or renovations many architects as well as designers fall back on traditional methods and materials in spite of innovations made in the realm of the construction industry (CIRA, 1998:12). Falling back on traditional methods can occur for many reasons, including the fact that designers are more comfortable working with and designing for something familiar. In addition, contractors

on site already understand traditional construction procedures (Kroll, 1986:84), after all "convention became conventional because it works" (Brand, 1994:54).

In this thesis traditional materials and methods of construction will be taken into consideration, along with the incorporation of newer and more appropriate materials and technologies.

## Pre-fabricated System + It's Components

Not much seems to have changed in perspective some twenty four years after Lucien Kroll published *The Architecture of Complexity* (Kroll, 1986:25). Up until now no single manufacturer has taken it upon themselves to develop a universally open system. If there is such a manufacturer, the development and marketing of their product has not reached the masses of the open market. Moreover, traditional methods have not been **[re]**placed by mass-produced architecture because it's systems are not fully developed and not as universal as they claim to be.

Lucien Kroll (1986: 107)believes that "construction systems" derived from models, in particular pre-fabrication, are wrongly described as being "open" and providing freedom. These systems seem too be specific and only fit similar components of the same system.

**"Having no fondness for disorder, we have prudently ignored it, and have been unable to reckon how necessary it is, how natural or how fertile" (Kroll, 1986:12).**

This thesis therefore intends to identify products and materials that are currently on the market, and use them in various combinations to achieve a simple and effective architectural solution for various programme scenarios.

A rational attitude to the planning of urban environments, results in an environment which lacks "real texture" and prevents spontaneous development (Kroll, 1986:5). In opposition to a rational procedure which painstakingly plans programs and activities for every inch of the building the hierarchy in the proposed Design Depot is based on new **[re]**lationships between previously un-associated programs. Kroll states that this approach arises from the smallest and humblest of initiatives which grows to form a textured mosaic representing the social fabric of the community created within the building. The most important principle of this way of thinking is that the tools given to the user need to be sympathetic.

**"Spontaneity and discipline produce very different ways of working and different arrangements of space and time. Sometimes these result in very different products even when starting with identical knowledge and techniques" (Kroll, 1986:19).**

Where heavily pre-fabricated systems are concerned, "*The Architecture of Complexity"* (Kroll, 1986:108), discusses two opposing opinions that are still relevant today. The first is admiration for the technical knowledge and the intricacies associated with manufacture, transport and assembly. The second, on the other hand, is the disappointment **[re]**sulting from inflexible systems that achieve very little yet **[re]**main expensive.

According to Kroll, homogenous and repetitive architecture makes it difficult for inhabitants to establish their own identity **[re]**sulting in spaces rather than places. After all it is the inhabitants "who really create the city and not planners" this very phenomenon is illustrated in the precedent of the Houses at Pessac, which can be found later in this chapter (Kroll, 1986:29).

Where diversity is encouraged a varied texture develops which tightly knits the urban fabric, this is achieved through user participation real or simulated.

In 1979 in the town of La Vallée, Lucien Kroll and his team were asked to design a housing complex using the experimental techniques of user participation. Consultations with the home owners were deemed imperative in order to fully achieve the user's participation (Kroll, 1986:125). User participation will be simulated in the thesis as many of the inhabitants and tenants are fictional.

## Current Course of Action

Benchmarks and tools have been set up by organizations such as the Green Building Council of South Africa, BREEAM and LEED, to name only a few. Nevertheless, these principles remain guidelines as no practical examples are given. Once documents such as these have been read one still does not know how to implement "green principles" (Mansfield, 2010).

It is up to individuals within the construction industry to come up with innovative methods of achieving the benchmarks provided by the Green Building Council of South Africa. Yet the methods acquired are kept under lock and key in order to give one architectural firm an advantage over another. Innovation is implemented for personal gain, not for working towards a better environment (Mansfield, 2010). It is therefore the aim of this dissertation to give practical examples and methods of implementing "green principles".

CIRA, an organisation based in the United Kingdom, aims to help designers think about waste minimization issues by introducing measures and ideas so that individuals can **[re]**view the efficiency of their designs (CIRA, 1998:25). Their series of handbooks focuses on three key aspects of minimizing waste incurred through the design process:

- **[Re]**ducing the quantity of **[re]**sources needed for construction (**[re]**ducing waste eventually produced at demolition and decommissioning)
- **[Re]**ducing the quantity of waste generated from construction and demolition sites
- Improving the **[re]**clamation of materials from the waste stream by **[re]**using and **[re]**cycling construction waste, and by using by-products from other industries

Waste should be **[re]**duced at the design stage and not as an afterthought. According to CIRA SP 134 it is best to adopt a positive environmental approach in the feasibility stages of a project.

## Conclusion

The investigation of new and innovative materials is time consuming and may **[re]**duce the amount of work one is able to produce initially. However, it is thus investigation that leads to further developments as not all design issues can be **[re]**solved in the office, but rather need practical application, testing, manipulation and adaptation. Changes that are made to a building need to be done in such a manner so as not to hamper it's future adaptability. These adaptations need to be environmentally **[re]**sponsible and embrace the use of **[re]**furbished building materials and systems that are flexible and will continue to be so. Each site throughout the city centre will have a different client driving the brief. Identical approaches are discouraged as needs differ from client to client and site to site. Universal lessons need to be identified that can be used in each case; however, each site is unique and needs to be dealt with accordingly.

Nonetheless, the notion of flexibility should be the common thread carried throughout the design process. This thesis will demonstrate how one underutilised building can be altered in order to serve it's users and program. From this a process can be derived where the entire building and its structure is analysed, with the available building materials and structure being categorised according to what can be: **[re]**used, **[re]** cycled and sold in order to increase available capital. Once the available **[re]**-sources have been established the dilapidated building will be **[re]**furbished with minimal effort and cost. Optimistically, this process will be continued by the skilled persons moving from one building to the next, continuing to acquire skills as more buildings are **[re]**furbished.

# 002 - 2 PRECEDENT STUDIES



## 002 - 2.1 MULTI-STOREY APARTMENT HOUSE

**Name of Architect:** MVRDV
**Location:** Hengelo, The Netherlands
**Year:** 2001

Fig 002.1: Artist's impressions of the 'Apartment House' with the protruding balconies

**Points of interest:** MVRDV's multi-story apartment house with balconies **[re]**sembles a tree trunk with branches. By placing the trees at the ends of the balconies the tree symbolism becomes more accurate (www.dutchdesignevents.com). The trees serve to cool the building and filer noise and dust from the surroundings.

## 002 - 2.2 DUTCH PAVILLION

**Name of Architect:** MVRDV
**Location:** Hannover, Germany
**Year:** World Expo 2000

Fig 002.2: The Dutch Pavilion utilises a water **[re]**clamation system to distribute water throughout the building

**Points of interest:** A water **[re]**clamation system is utilised to collect the vast quanitity of water run-off and distribute it throughout the building as a grey water source (www.dutchdesignevents.com). Greenery on the protruding balconies facilitates the **[re]**moval of chemically saturated run-off before it is discharged to the surrounding area. The introduction of vegetation not only provides an attractive environment but could also be used to preserve the ecology of the indigenous natural environment.

# 002 - 2.3 WOZOCO'S APARTMENT

**Name of Architect:** MVRDV
**Location:** Amsterdam, The Netherlands
**Year:** 1997

Fig 002.3: The street elevation of the Wozoco's apartment building

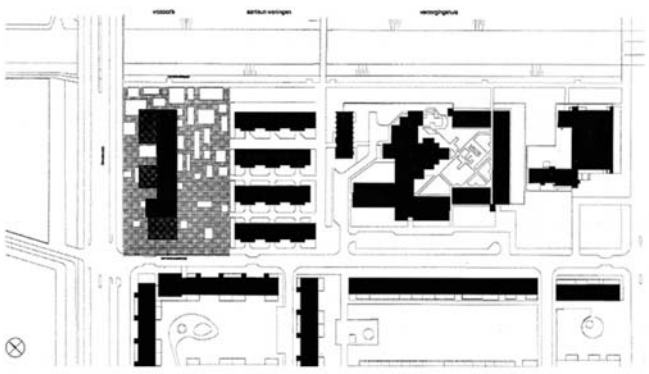

Fig 002.4: Site plan of the Wococo's apartment building indicating surrounding context



Fig 002.5: Perspectives showing the relationship of the building to the streetscape

**Points of interest:** The design evolved around the existing envelope of a **[re]**inforced concrete structure. It was decided to minimise coverage of the ground floor space through the incorporation of cantilever steel girders which form the structure of the suspended timber-clad boxes (www.cse.edu.uk). These timber-clad boxes are modular apartment units. They customise the façade and soften the monolithic scale and appearance of the building by adding character and creating a **[re]**lationship between the building and streetscape. Façade customisation is not limited to the colour or shapes of bay windows and defines the outdoor space.

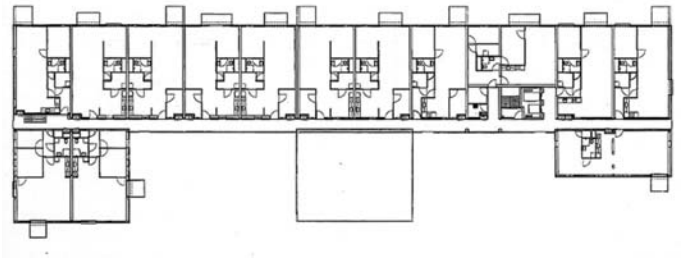

Fig 002.6: Fifth floor plan of Apartment building

Fig 002.7: Elevation showing the blurring of the solid block outline

Fig 002.8: Image of northern façade with suspended units employed to optimise sunlight and**[re]**duce coverage

Fig 002.9: The suspended units define the public space below while still **[re]**specting the human scale

**Summary of Project:** Wozoco's is a nine-storey mid-rise apartment block with 100 units of which 13 are suspended from the northern façade. The apartment was designed for people over the age of 50, and gives a higher degree of independence to the occupants when compared to conventional homes for the elderly.

## 002 - 2.4 LOS ANGELES DESIGN CENTRE

**Name of Architect:** John Friedman Alice Kimm Architects

**Location:** Los Angeles, CA, United Staes of America

**Client:** Cisco Brothers Corporation

Fig 002.10: The previous street façade

Originally South Central Los Angeles had many negative associations as many riots as well as the Rodney King beating accured here (Giovanni, 2003:166). Therefore it was decided to **[re]**name the area South Los Angeles in an attempt to attract business back to the district. Much of the area is typically characterized by festooned Spanoid façades; however, treasures can be found scattered throughout this area as
**[re]**invented warehouses of the 1920's. The L.A. Design Centre is one such example.

**Program:** Cisco Brothers Furniture Company occupies a number of warehouses distributed throughout the South Los Angeles district, known as the furniture district (Parades, 2006:166). Fransico Pinedo, owner of Cisco Brothers, decided that the company as well as other manufacturers would benefit from a showroom in the warehouse district, as rental costs outside this area were of an absurd nature.

The brief from the client was for a core building, on a limited budget, which had the potential to expand to house other avenues of the company in future. The chosen host building afforded the architects a sturdy two-storey brick structure, with high ceilings, timber floors and steel beams. These elements provided the architects with a strategy to use the givens and provide additional layering.

Fig 002.11: The street façade after the **[re]**novation

**Solution:** According to John Friedman Alice Kimm Architects, the old warehouse gave clues as to how to proceed with the **[re]**invention process. Steel columns on the outside of the building, adjacent to the parking lot, were modified and became a new façade of polycarbonate panels applied along the length of the building. The façade was turned parallel to the street with a new billboard structure erected to give the building a notable presence (Parades, 2006:167).

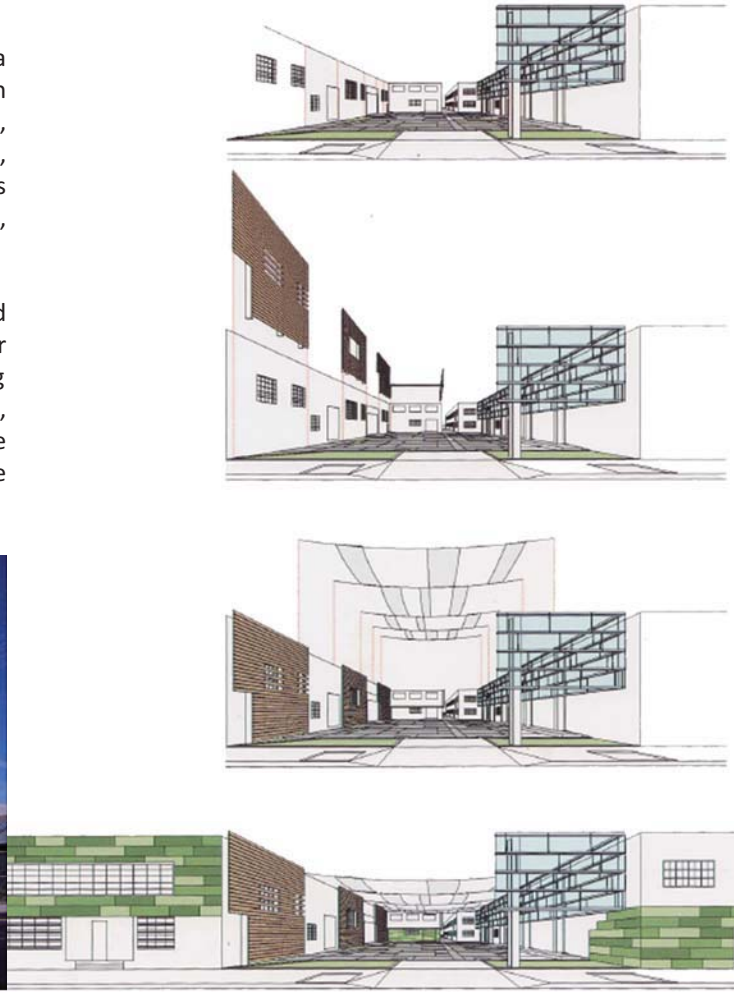

Fig 002.12: Series of images demonstrating how the various layers were placed over the existing building

Green concrete panels are wrapped around portions of the ground floor and the upper floor, adding additional interest for passing motorists, as well as visually joining the two separate buildings (Parades, 2006:167). The open space between the two buildings, usually **[re]**served for parking, is earmarked for future expansion. Suspended canvases over the parking area provide a whimsical element while **[re]**-ducing the visual expanse of the space.

Interventions within the warehouse include the **[re]**moval of sections of the first floor, and were **[re]**placing them with a hardwood landing large enough for furniture displays, as well as terraced display platforms which cleverly disguise the loading dock below. The most transformable space, according to Giovanni (2003:167), is the parking lot which also functions as a public space with a 'watering hole,' plaza and event space. The draping canvas overhead defines the space; at the same time the different shades of grey concrete blocks with planting in between add to the drama of the space. Giovanni (2003:166) sums the process up eloquently by saying that "the modest budget was spent on gesture rather than detail".

Fig 002.13: The hardwood landing for furniture displays

Fig 002.14: Terraced display platforms which cleverly disguise the loading dock

**Conclusion:** Intensity was achieved through the layering of simple materials in an unconventional manner, creating a 'spatial collage'. The strengths of the original building were **[re]**conditioned and brought to the viewer's attention. The warehouse **[re]**development can be seen as 'an act of psychic **[re]**investment in the community, affirmation rather than gentrification'.



Fig 002.15: Various layers of the building can be seen from the street edge

## 002 - 2.5 HOUSES AT PESSAC

**Name of Architect:** Le Corbusier
**Location:** Pessac, France
**Year:** 1930's

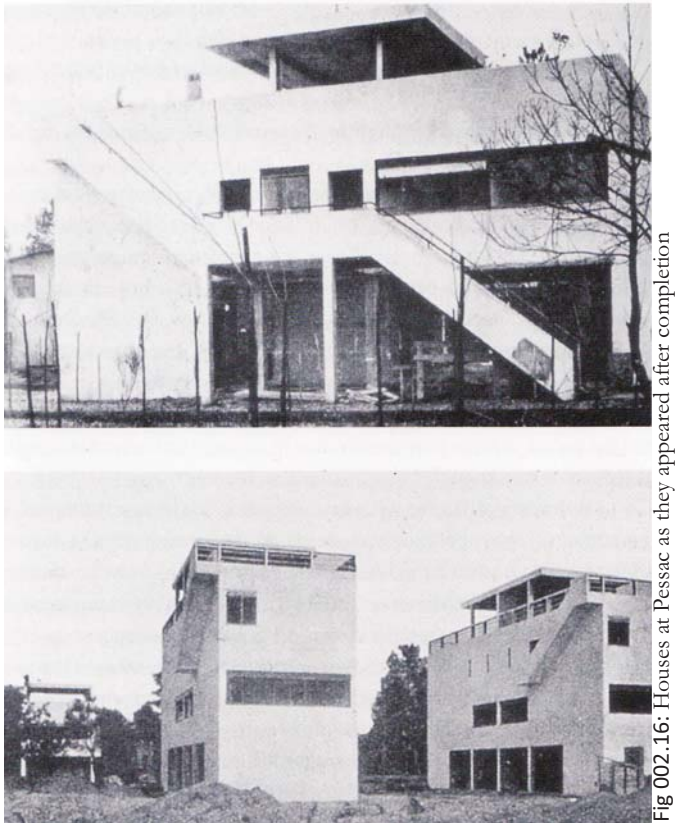

Fig 002.16: Houses at Pessac as they appeared after completion

Le Corbusier's Houses at Pessac represented his first chance to demonstrate the application of mass produced elements 'derived from the purification of standard forms'. (Scott, 2008:24).

This project started out with the noblest of intentions after the War in 1918, but the houses were ill received. This was due to a lack of amenities rather than aesthetic dissatisfaction. The lack of amenities was not entirely Le Corbusier's fault as the district municipality of the time **[re]**fused to lay water pipes for several years after the project was complete. The reason for this, according to Scott (2008:28), is that the houses broke tradition, with their simplicity and were imagined to be harems by the neighbourhood. The laying of municipal water would portray that the municipality accepted the aesthetic, and this would have gone against the beliefs of the time. Many years after the completion of the housing development, low-income families moved in. Subsequently people forgot about the contraversial nature of the development and water was installed.

**Program:** Each housing unit at Pessac is determined by a cell measuring 5 x 5 meters. This can then be broken down into cells of 5 x 2,5 meters. Houses are configured out of 6, 8, 9 or 10 cells depending on the size **[re]**quired by the occupant (Scott, 2008:26).

Fig 002.17: The façades have undergone a variety of changes

Fig 002.18: The strip window has been **[re]**placed by rectangular windows with shutters

**The nature of adaptability:** In the 1960s Philip Boudon conducted sociological studies of the extensive changes made to the units by the users (cited in Scott, 2008:27). Since these houses were so alien to the French occupants, they decided to make them more similar to their vernacular by adding planters as well as glass and metal canopies. The strip windows were either partially blocked or completely obliterated. Some exterior spaces were enclosed and pitched roofs were added by occupants to make the houses seem less foreign, while at the same time getting rid of the flat, leaky roofs.

Fig 002.19 & 20: The same portion of the house, with two different adaptations

When Boudon asked residents why they chose to alter their houses, they time and again **[re]**sponded by saying that the original attributes of the house were out of date. The most noted change was the altering of the strip window into regular rectangular windows. This is most ironic, as the large panes of glass were the pride of industrialisation and represented one of the major elements in Le Corbusier's "Five Points of Architecture."

Fig 002.21: The contrast between an un**[re]**stored and **[re]**stored unit in 2005

Further studies noted that the Houses at Pessac were extensively altered when compared to other housing developments of the same size. Residents stated that the original designs lent themselves well to alterations and conversions (Scott, 2008:27).

Martin Powely, in reviewing the book "Architectural design" of September 1969 (Powely in Scott 2008:27), said: "the fantastic pitched roof mutations which were once '*machines a habiter*' are now composite structures in time, carrying within their structure the memory of the previous form. They can, without irony, be compared to the cathedrals of medieval times for that reason."

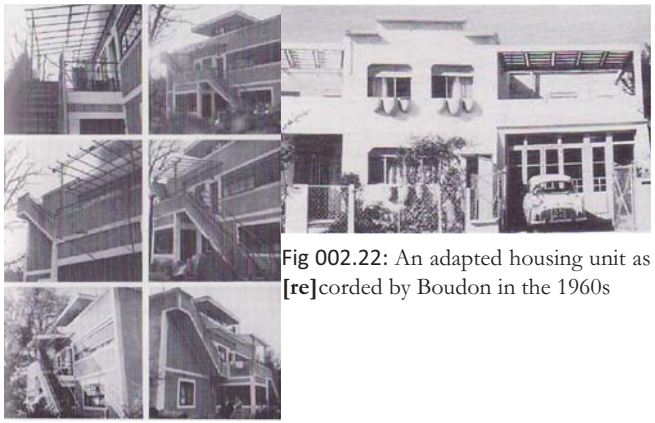

Fig 002.22: An adapted housing unit as **[re]**corded by Boudon in the 1960s

Fig 002.23: Altered houses at Pessac

Fig 002.24: The street façade after renovations

Fig 002.25: The contrast in façade according to the occupants' preferences

**Conclusion:** According to Scott (2008:32), for Pessac to have **[re]**mained unaltered would have implied a general population with the discipline of the defence force. If these homes were never altered for everyday living, it would have been counter to the liberating notion which le Corbusier set out to achieve. The essence of life implies that the family unit will shrink and swell according to events such as marriage, birth, ageing, death, and occupants moving out of Pessac.

Although all these alterations have taken place, Pessac is by no means a failure, as it demonstrates the true nature of adaptability and flexibility. The genius of the original architecture with its regulating lines and careful massing still shines through **[re]**gardless of the various layers deposited onto the building.

## 002 - 2.6 THE LCB DEPOT

**Name of Architect:** Ash Sakula Architects
**Location:** Leicester, United Kingdom
**Year:** 1970s (original building)


Fig 002.26: The previous street façade of the station sits uncomfortably in its Victorian surroundings

The LCB Depot was built in the 1970s and served as a bus station. It has however been vacant for many years and never merged with the surrounding Victorian buildings of the neighbourhood (Paredes, 2006:177). The building was never demolished because of its modest spaces and sturdy structure; above and beyond this, its proximity to St. George's Cathedral has been its saving grace.

**Solution:** Ash Sakula Architects approached this adaptive **[re]**use project by **[re]**taining the LCB Depot and constructing a new building at the rear, creating a courtyard which announces one of the entrances to the cathedral. The way, in which the station building and its edges are addressed, pulls together the surrounding urban fabric, which, according to Paredes (2006:176), "will convert the zone into a dynamic cultural neighbourhood".

Both the station **[re]**novation and the new building pursue the traditional industrial vernacular and make use of facebrick on the façades facing the street, while the rear façades enclosing the courtyard employ light light to ensure the courtyard is not dark and gloomy. The panels on the façades of the new building are made up of white and clear glass in aluminium frames, some of which have the artist Linda Schwab's artwork silk-screened onto them.

Fig 002.27: The LCB Depot renovated, showing the new facebrick, aluminium windows and café

**Program:** The station, as well as the new building, has become a centre for creative occupants such as artists, designers and film makers. The renovated station houses studios on the upper floors with a café on the ground floor. The location of the café ensures a constant flow of people through the site and provides a direct route to the cathedral from the west.

The new building also houses studios in addition to a conference room and art gallery on the ground floor. The art gallery provides a strong link to the cathedral, station building and courtyard, further integrating these components to make a single space.

Fig 002.28: Site plan of the LCB Depot and new building to the west. The cathedral grounds are indicated in green

Fig 002.29: A section in perspective showing the internal configuration of the buildings as well as their proximity to one another

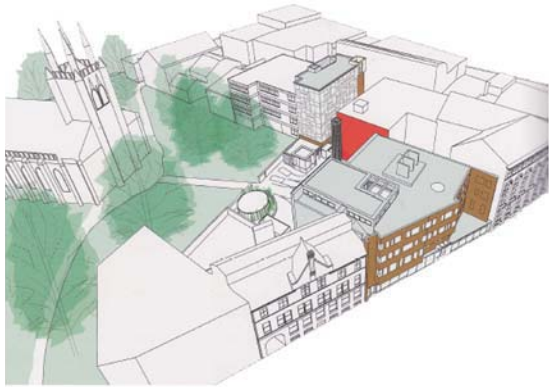

Fig 002.30: Perspective showing the proximity of the cathedral to the new building and **[re]**novated station

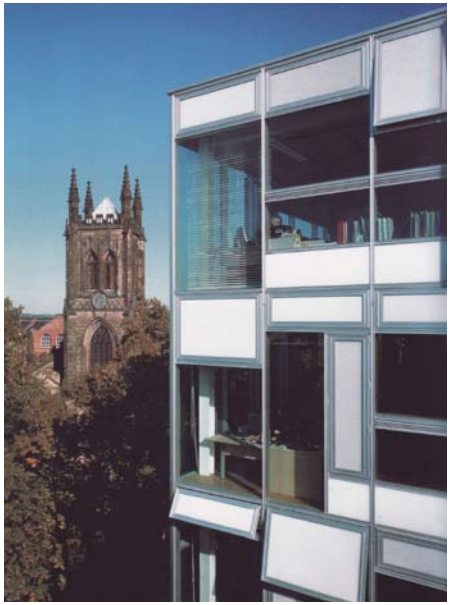

Fig 002.31: Photograph of the new building with the cathedral in the background. This image clearly shows the white and clear glass

Fig 002.32: Image of the new building illustrating the position of the art gallery on the ground floor and studios above

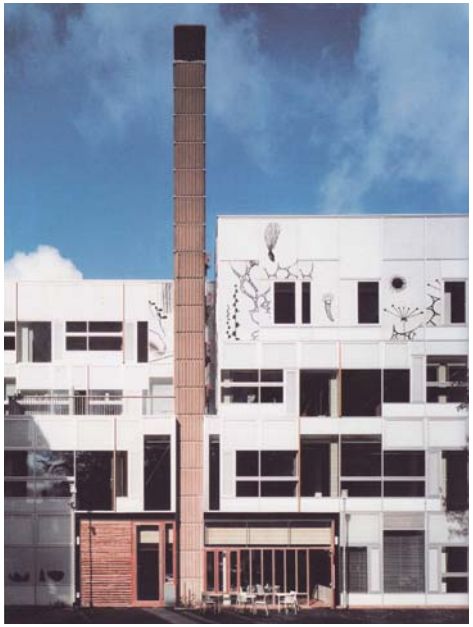

Fig 002.33: The rear of the station building is finished with clear as well as white glass. Some panels display artwork by Linda Schwab

**Conclusion:** The potency of the original building is not lost through this process of **[re]**novation. The station building has been updated by **[re]**moving the mosaic tile finish and exposing the brickwork in order to make it sit more comfortably in its Victorian neighbourhood. The window openings have been **[re]**configured and updated with aluminium frames which link with the new building constructed to the rear of the station.

## 002 - 2.7 PALLOTA TEAMWORKS

| | |
|---|---|
| **Name of Architect:** | Clive Wilkinson Architects |
| **Location:** | Los Angeles, California, United States of America |
| **Year:** | Unknown |

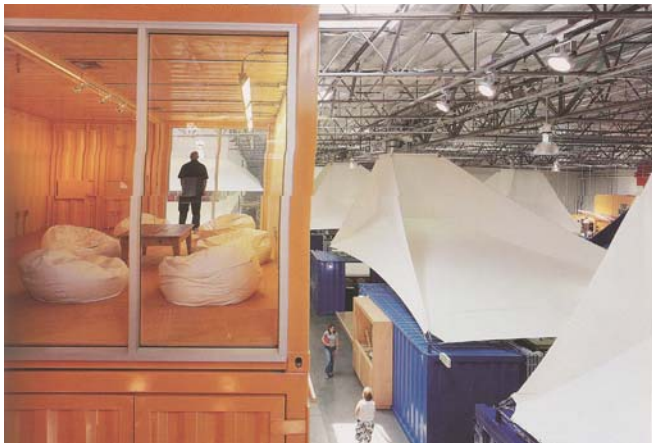

Fig 002.34: Containers provide space for offices and meeting rooms. Tensile structures are anchored to some containers to define spaces

An industrial warehouse of 46,285 square feet needed to be transformed with a minimal budget into the central offices for Pallota Teamworks, a non-profit organisation.

**Solution:** According to the **[re]**view in *Industrial Chic* (Paredes, 2003:115) the only alteration to the existing structure was the inclusion of skylights to improve ventilation and natural light. Furthermore, the new electrical and mechanical

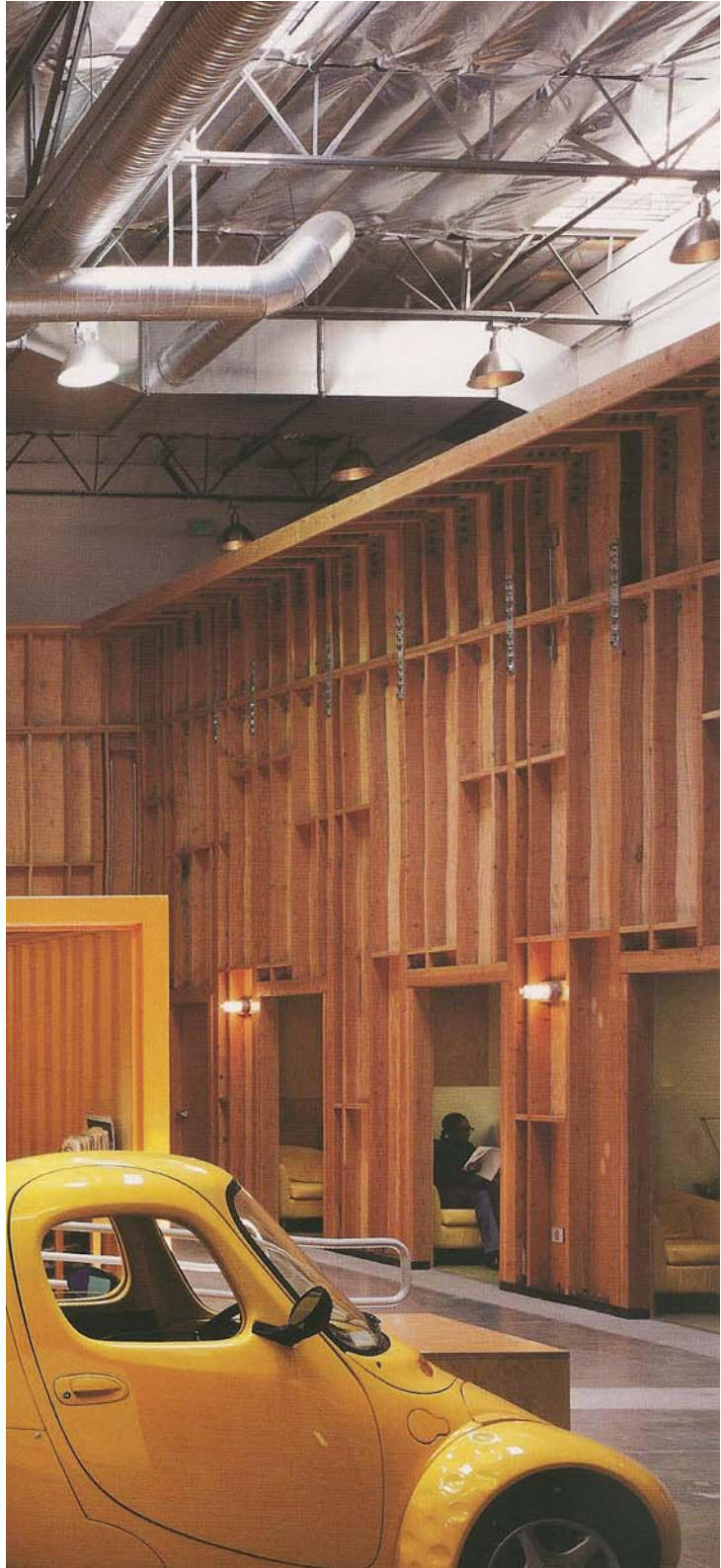

Fig 002.35: A timber structure has been added to a portion of the warehouse to provide a quiet room for employees. Spaces between the work zones are generous enough for bringing large items, such as the car, into the building

services were designed to **[re]**duce energy consumption.

**Program:** The tight budget forced the architectural team to think out of the box when zoning the existing warehouse. The **[re]**sult was clusters of **[re]**cycled shipping containers arranged in such a manner as to accommodate offices and meeting rooms (Parades, 2003:115). Tensile structures were then placed over some of the containers in order to define spaces and create work zones.

**Conclusion:** The internal configuration is a prime example of sustainable architecture that challenges the norm, while at the same time being visually attractive.

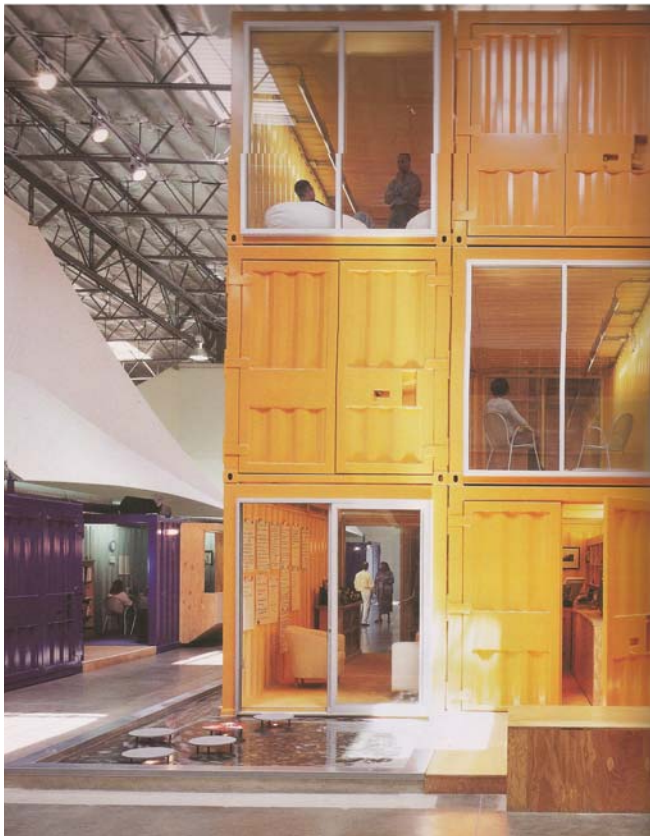

Fig 002.36: Glass sliding doors have been added to the ends of the containers to make them habitable. Further design elements such as the pond have been added for visual effect

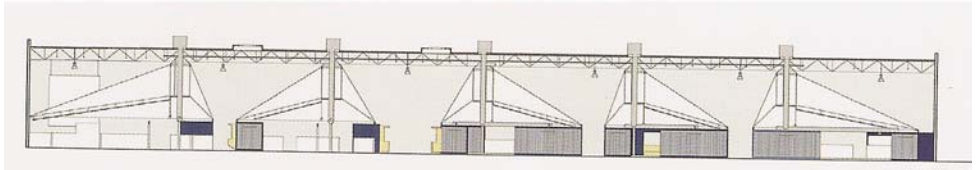

Fig 002.37: This section of the building (the lower portion of the plan below) has tensile structures anchored onto the containers

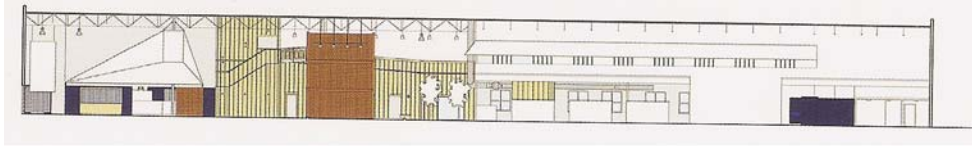

Fig 002.38: The section above is taken through the 'courtyard' portion of the building where the pond is located

Fig 002.39: The floor configuration of **[re]**cycled shipping containers is used to form 'work zones'

## 002 - 2.8 DALLAS THEATRE CENTRE

**Name of Architect:** Joshua Prince-Ramus
**Location:** Dallas, Texas, United States of America
**Year:** 2001

Fig 002.40: This side of the theatre can open and close according to the event being held

Joshua Prince-Ramus, principal of Rex Architects, is of the opinion that rchitects and architecture have come to serve decorative purposes only (ted.com). Somewhere along the line architects have forgotten how to bridge the gap between creation and execution. There have been advances in technology and construction, yet a large portion of architects take a step back. Joshua Prince-Ramus proposes that architects "stitch" creation and execution back together and stop presenting objects and start offering processes.

This phenomenon is beautifully illustrated in the "Home for the Dallas Arts" otherwise known as the Dee and Charles Wyly Theatre.

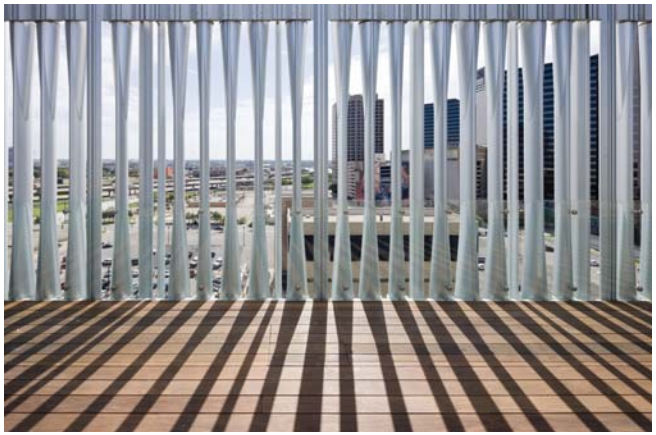

Fig 002.41: A view from the rooftop terrace through the skin of the building

**Solution:** In order for this to occur Prince-Ramus identifies three key areas that need to be addressed: **issue**, **architectural position,** and **manifestation** (ted.com). The issue with **[re]**gards to the Dallas Theatre Centre was that the previous building was dilapidated and characterless. However, the building allowed the art director to change it as and when he saw fit. The position that the architectural team had to follow was to design a building that was not a pristine object in the landscape, but one that allowed for the same degree of flexibility as the preceding building. The manifestation occurred on a vertical plane as opposed to the conventional horizontal plane.

Fig 002.42: The theatre seating which can be folded and packed away

By following these processes Prince-Ramus is able to demonstrate how he **[re]**gains "the lost art of productively losing control" (Prince-Ramus). This means that client and architect are empowered to critique the building according to the position identified as an issue.

**Program:** The extraordinary thing about this particular building is its ability to metamorphose according to the event taking place. Not only can the flat floor configuration be changed to raked seating, but the perimeter walls are able to fold away and engage with the spaces outside. In order to grasp how this is possible it is important to consider the core concept of the project – the "super-fly stage." The "super-fly stage" refers to the fly tower which is able to pick up the pristine elements, including the proscenium arch, and render the rest of the space provisional. This then allows one to "screw, cut, paint, drill, nail and **[re]**place with minimum cost" (Prince-Ramus).

By spreading previously associated functions of a theatre across the fly tower and auditorium, the art director gains unprecedented freedom to create different stage and audience configurations. The building is based on a series of technologies which have already been successfully implemented and have fail-safe measures, one instance being the balconies which operate in the same way as a score board lift. By employing this technique, the balconies are able to be completely **[re]**moved from the space in order to facilitate a different event.

Fig 002.43: The main theatre can be **[re]**configured into a variety of forms with minimal time and a few stage hands

Fig 002.44: This side of the theatre opens up onto a public gathering space

**Conclusion:** This affords the art director an opportunity to bring any activity to fruition within this "floating object". For example each act of a play can have a different background with the exterior gradually becoming the backdrop for the theatre performance, or vice versa.

Fig 002.45: The site plan of the theatre complex

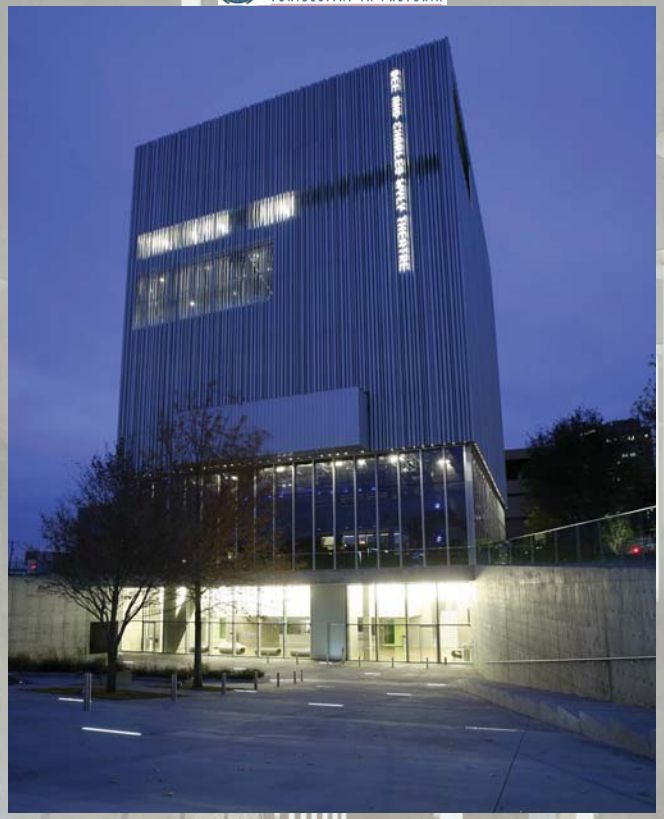

Fig 002.46: A view of the theatre building showing the lobby below with the theatre space above

Fig 002.47: Interior view of the lobby below the theatre