4

Chapter 4

Philosophy and design approach

creating places

4.1 Macro scale - Railways as public meeting places

The theoretical tools applied to the study can be divided into three levels of scale.

macro //

neighbourhood to building interior scale

medium //

unit scale

micro //

unit & details scale.

Carmona, Heath, Tiesdell and Oc (2003) argue for a conception of urban design as needing to be primarily for and about **people** and stress the importance of **creating "places"**. An important quality of urban design is its functioning across different levels of **scale**. Christopher Alexander's Pattern Language is a good example of urban design ranging from the scale of city and surrounds down to the scale of the interior.

Bob Jarvis (1980) distinguished between two **traditions in urban design** namely the 'visual-artistic tradition' and the 'social usage tradition. Over the last twenty years of the 20th century these had been condensed into the 'making places' tradition (Carmona 2003:6-8).

Visual-artistic tradition

A product-oriented approach to urban design focusing on the visual qualities and aesthetic experience of urban spaces rather than cultural, social, economic political and spatial factors.

Social usage tradition

Social usage tradition emphasised the way people use and occupy a space. It encompasses issues of perception and sense of place. Kevin Lynch and Jane Jacobs are key proponents of this approach to urban design. Lynch attempted to shift the urban paradigm in favour of appreciation and enjoyment of urban space as commonplace instead of elitist. Jane Jacobs highlighted sociofunctional aspects of sidewalks, streets and parks as containers of human activity and places of social interaction.

Making places tradition

The dominant tradition in urban design today is that of making places for people. It is concerned with the city as both an aesthetic entity and a container for human behaviours. It focuses on diversity, activity in order to create successful public places and how well the environment supports the functions and activities that take place.

Kevin Lynch (1981) identified five key performance dimensions that need consideration for the design of "good" urban spaces:

1. ***Vitality***, the degree to which places support life, biological functions and the capabilities of people.

2. ***Sense***, the degree to which users can recognise and distinguish a space due to its unique temporal and physical milieu.

3. ***Fit***, the degree to which a place accommodates and enables human cultural and social behaviour.

4. ***Access***, the ability of people to reach other people, activities, resources, places (shelters, open spaces, natural/ symbolic spaces) and information.

5. ***Control***, degree to which users of a space create and manage access to a place.

He also mentions two metadimensions: **efficiency** or the cost of achieving a degree of vitality, sense, fit, access and control and **justice** or who is getting how much of it.

Sense of place is particularly important in urban design especially in terms of *genius loci* or spirit of the place (Porter 2004:88). The shift of focus from the quantitative to the qualitative in architectural theory was awakened in 1979 by Christian Norberg-Schultz publishing his book, *Genius Loci: towards a phenomenology of architecture*. Today it encompasses any quality denoting the essence or experience of a place.

General consensus is that the creation of place hinges on three factors:

activity, land use, traffic flow, trade, behaviours

physical setting, built form, access and permeability, furniture

meaning, legibility, culture-historical associations, qualitative experience (Carmona 2003:98-99)

Lynch (1981) defines the identity of a place as the physical or experiential qualities which allows users to recognise and distinguish it from neighbouring spaces or places (create meaning). He suggests this may be accomplished through the incorporation of **sensory** and **temporal** characteristics unique to the place. Kurtich and Eakin (1993) also argue for the incorporation of temporal aspects into space (open or interior). This causes a heightening of users' awareness and thus the experiential qualities of a space resulting in the creation of place.

Jacobs (1961) stresses the formal and informal communal **activities** taking place in a **physical setting** (pavements, parks) as the prime creators of **meaning** and place.

The typical activities taking place inside stations have already been identified in Chapter 3. To recap, the simplified ancillary activities that should be accommodated in the stations are EAT, SHOP, ACCESS INFO and PAUSE.

Manuel Castells (1989) is of the opinion that the current restructuring of urban form is as a result of the transition from and industrial era (pre-1970) to an **informational era** (Carmona 2003:32). Over the past forty years the increasing speed of **electronic communication**, transportation and the pressures of **globalisation** have decreased the significance of place (Carmona 2003:20). While physical experience of a place remains important, increasing significance of electronic communications could mean that future cities are aspatial and ageographic, with the Internet being everywhere and nowhere.

Three interrelated processes need to be considered in order to avoid the threat of "**placelessness**" in the contemporary urban condition (Carmona 2003:101).

Globalisation

The world is becoming more connected. Improved physical and electronic communication are shortening the distances that separates us, creating "global space". The process of globalisation is leading to increasing homogenisation and loss of meaning in places. There is a tension in urban places between the celebration of the global and the support and enhancement of the local context in which the place is rooted. The danger is that of losing the local cultural and historical meaning in favour of the standardising, commercialising global culture.

Mass culture

With globalisation comes mass culture pandering to the mass market with processes of mass production and mass media stifling or even eroding local "authentic" culture. Uniform products and places are created for people instead of being designed and created by them, overriding the local authentic in favour of the commercial.

Loss of attachment to territory

Increasingly places are created that make people feel they do not belong and consequently these environments are not cared for by its users. An increasingly mobile and transient society has increased the loss environments people care about. Communities are increasingly interest- bound rather than place-bound.

The objective of an urban framework for the Gautrain stations is the creation and strengthening the sense of place in the Gautrain stations to counter the effects of the information age, globalisation and mass culture. The Gautrain system identity already accommodates the inclusion of local myths and concepts including a nod to local African arts and crafts as translated into concrete balustrade patterns and viaduct pylons. The Hatfield area urban framework has been re-evaluated in light of the importance of the creation of place in appendix 1.

On the scale of building interior and the immediate surrounds the *re:fresh** intervention is intended to increase the levels of activities and vitality in stations. The aim is to establish the Gautrain stations not only as transport interchanges, but also as public meeting places. The design approach informs a design that contributes to and supports the place making paradigm already implemented by Gautrain architects at the larger scales of urban and architectural design.

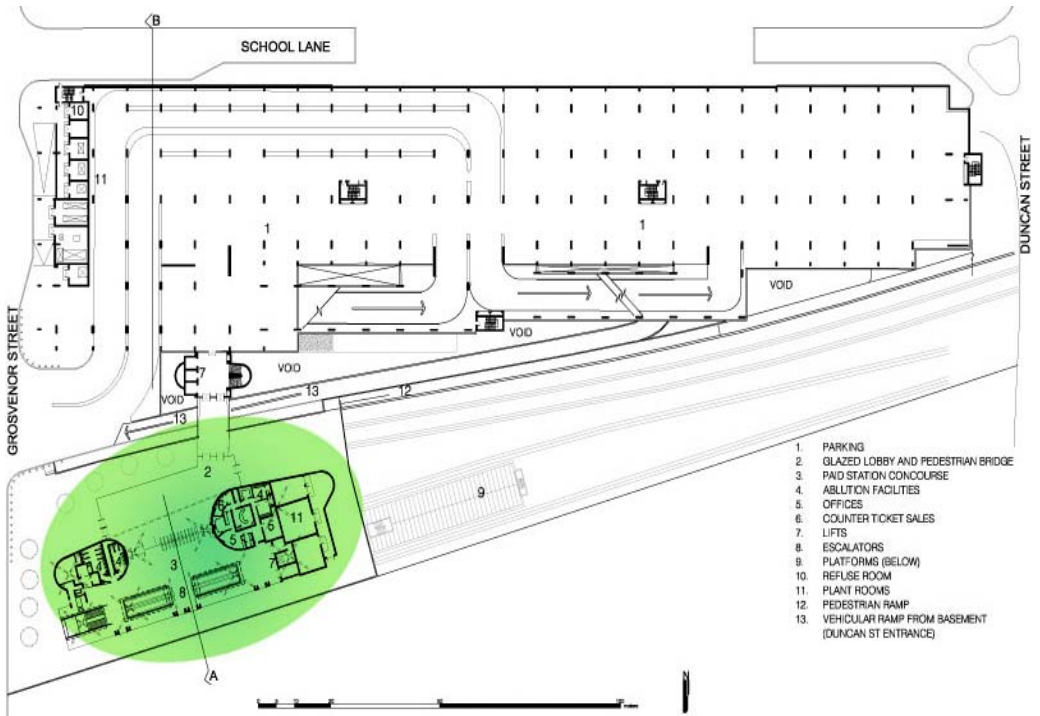### 4.1.1 Design guidelines for macro scale

The following guidelines take their cue from the place diagram regarding key attributes of successful places

(Project for public spaces: 2009) as well as being extrapolated from the urban qualities guidelines in appendix 1. The guidelines inform about desirable qualities of urban spaces from a variety of architectural theorists.

1. Create public meeting places, with space for casual social interaction.

2. Create a sense of place, by increasing legibility and incorporating unique temporal and spatial elements.

3. Incorporate a temporal dimension, indication of passage of time and space to heighten awareness and experiential qualities. (e.g. use of wood, temporary materials, design for transience)

4. Provide access to opportunities and services, including the secondary functions identified in Chapter 3, EAT SHOP, PAUSE, ACCESS INFO.

5. Enable choice of activity (e.g. more secondary activities ,shop, eat, access info available in public station building, serving the station precinct).

6. Provide complexity and diversity in terms of activities and scales.

7. Mix levels of intensity and exposure from very intensive and exposed to less intensive and more private.

8. Mix secondary and primary functions, including the secondary functions identified in Chapter 3, EAT SHOP, PAUSE, ACCESS INFO.

9. Design to allow for manipulability (small changes to present use) and resilience (able to return to original state).
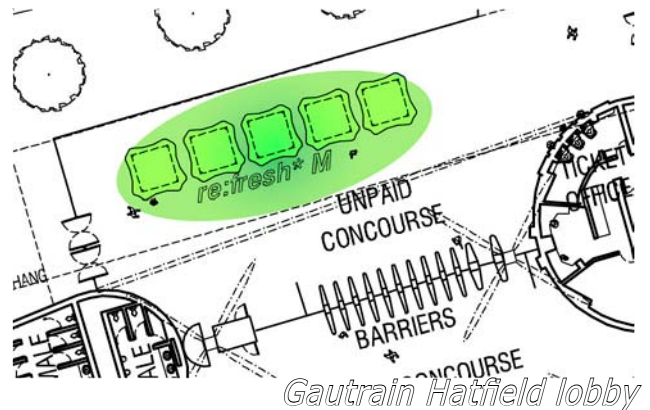
10. Increase future adaptability.

50. Place diagram indicating key attributes o f successful places in inner ring, middle ring intangible qualities and in the outer ring

Gautrain Hatfield site layout

1. PARKING
2. GLAZED LOBBY AND PEDESTRIAN BRIDGE
3. PAID STATION CONCOURSE
4. ABLUTION FACILITIES
5. OFFICES
6. COUNTER TICKET SALES
7. LIFTS
8. ESCALATORS
9. PLATFORMS (BELOW)
10. REFUSE ROOM
11. PLANT ROOMS
12. PEDESTRIAN RAMP
13. VEHICULAR RAMP FROM BASEMENT
    (DUNCAN ST ENTRANCE)

creating places

Gautrain Hatfield lobby

not to scale

4.2 <u>Medium scale - Tectonics</u>

the poetics of construction

Kenneth Frampton defines the **tectonic** as the poetics of construction or the art of joinings (Frampton 1995: 2). It comes from the Greek *tekton*, carpenter or builder, from which *architekton* or master builder would later be derived (Frampton 1995: 2-4). Frampton claims the legitimacy of modern architecture derives form the interplay between *topos* (site), *typos* (type) and *tectonics*.

Gottfried Semper's *Die vier Elemente der Baukunst (four elements of architecture, 1851)* defines tectonics as the lightweight structural frame reaching to the sky in opposition to the **stereotomics** of the earthwork, heavy elements piled up to create mass and volume (Frampton 1995:5).

Semper also described the historic differentiation of one material to another with similar tectonic qualities, such as wood to woven materials and tensile structures and earthwork to bricks and mortar and later concrete. His *Stoffwechseltheorie* pointed out occasional **transpositions of materials** in cultural history, for example Greek temples where stone was cut in such a way as to embody the traditional wood constructional details (Frampton 1995:5-6). The embodiment of the architectonic attributes of one material in another is seen as a continuation of cultural history, but also of the culture of craft in construction.

The tectonic is regarded as an antidote to the primacy of the creation of three-dimensional space in architecture to the detriment of tectonic expression, a view increasingly espoused since the end of the nineteenth century (Frampton 19951). Modern approaches have ranged from the suppression of tectonics in favour of iconography and scenography of the Postmodern to the extreme tectonic expression of Santiago Calatrava.

The increased technological character of contemporary building has seen the escalation of the level of complexity in building, precluding any one practitioner personally overseeing every aspect of construction. The concern is that architects and associated designers are losing control over constructional craft, hence the call to a return to constructional craftsmanship, even if only to ensure the various practitioners on a project design to a **tectonic paradigm** (Frampton 1995:386).

While tectonic expression is not mentioned as part of the Gautrain design philosophy there are visible signs evident in the station designs, such as the treelike columns, balustrades and aluminium glazing. No doubt it may have been more of a background influence to designers. The tree motif, an important part of the GSI, could be seen as a natural expression of the tectonic. Structural trunk and branches contain the means of providing nutrients and water to the photosynthesising leaves, supported so as to optimally absorb energy from the sun. The beginnings of tectonic expression and transposition of wood to steel as evident from the steel column design strengthen the idea of the tectonic in the Gautrain designs. It would seem fitting that with a tree concept as well as a subliminal tectonic design paradigm, the art of the tectonic and focus on the joint in the spirit of Carlo Scarpa also be incorporated into the *re:fresh** design toolkit.

4.2.1 Guidelines for the design approach

1. Work within the "materiality" of materials to find the construction method most suitable (or true) to the material, or how the material wants to be joined

2. Design lightweight tectonically expressive structure (to evoke the tectonic expression of a tree and link with the tectonic elements already inherent in the Gautrain station designs)

3. Focus on tectonic expression and articulation of joints and connections between materials

4. Make use of material transpositions as tectonic expression and highlighting of material qualities and properties

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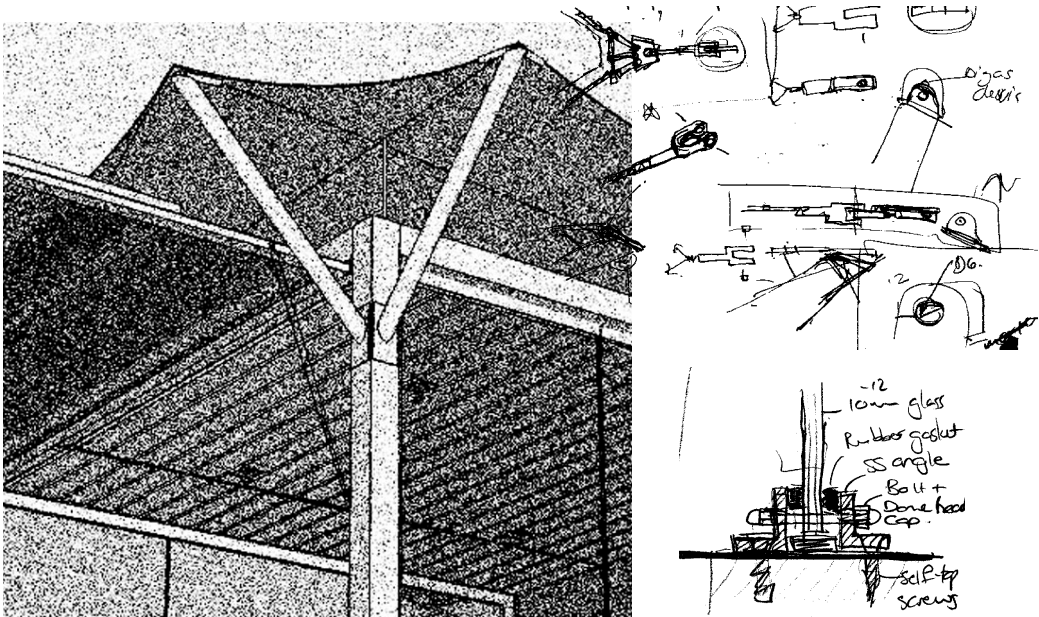
4.3 Micro scale - Performance criteria

At the detail design level the design is influenced by the cost related to the manufacture of the units, the degree of transience of the units, ease of assembly and issues related to sustainability and future use of the unit. These factors are illustrated with examples and precedents.

4.3.1. Cost factors

*   Standardisation

Standardisation of the kiosk components into a system allows for a greater degree of **cost control** for the manufacturer / contractor. This does not mean that all the elements have to be combined into factory assembled components e.g. an entire wall component. Considering the location of the kiosks in different Gautrain stations it is actually preferable to employ a system that can be brought to site in **smaller parts** in order to allow easy access into the station concourses. The standardisation also allows **easy and fast assembly** and **future disassembl**y by a contractor familiar with the system.

The standardisation of the units has a number of advantages:

1.   Shorter production time means greater savings

2.   Increased quality control in factory

3.   Easy delivery and assembly on site

*   Degree of transience

The *re:fresh** kiosks are intended for use as an interim level between deployment of vending machines and more permanent facilities (Chapter 5). They would ideally be used for 3-10 years. This requires, at design level a balance between the qualities of **transience and permanence**. The units need to be, in terms of materials, **durable** enough to withstand wear and tear of use in a public place and maintain an acceptable standard of finish.

BoKlok kit houses

Sweden, Norway, Finland, Denmark, UK.

IKEA

Designed by Swedish flatpack furniture giant, IKEA the BoKlok house offers affordable, stylish living. Unlike other IKEA products, these houses or flats are not bought in IKEA stores. The walls and floors are factory manufactured as closed panels or cassettes and then assembled on site by a local approved builder. Walls come finished with service conduits, windows and doors. Roofs are assembled on site and craned into position. The interior fitting are all manufactured by IKEA.

Home buyers may customise their flat with a variety of external finishes and colours and the interior layout allows a measure of flexibility in space organisation.

[Home Architects 2008: 2-3]
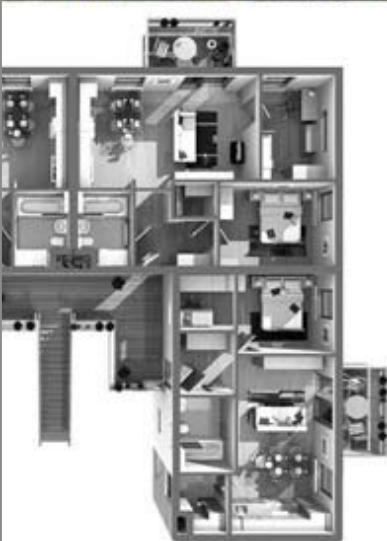
FACTORY MANUFACTURED = REDUCES COSTS = ENSURES QUALITY

Cellophane House

MoMA exhibition. Home Delivery: Fabricating the modern dwelling. New York, July 2008

Kieran Timberlake Associates

Part of the MoMA exhibition was the exploration of the modern prefabricated house. Cellophane house is a four-storey single family home comprised of factory made components assembled onto a structural aluminium frame. The use of components allows the materials to retain their discrete identities, while allowing for future disassembly and recycling instead of demolition. The "kit of parts" nature of the house is a low-cost and sustainable housing option. Personal taste and budget are accommodated in a range of choices regarding material, texture and colour. Ultimately this project merely provides a framework for designers or clients to customise to their tastes. This fits the architects' view of the role of the architect not as the reinventors of infrastructure, but as the procurers and editors of materials from the vast pool of building materials available.

[MoMA 2008: sp]

Site assembled components

Casettes with integrated services
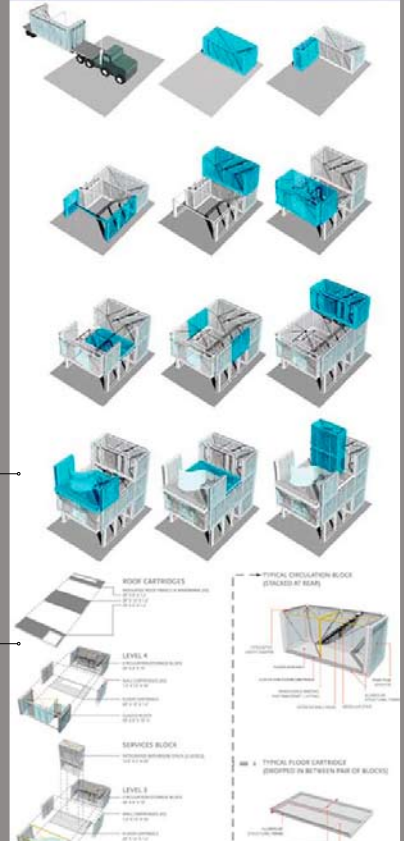
COMPONENTS ALLOW FUTURE
DISASSEMBLY
= SUSTAINABILITY

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Bradbury street community workshops / market stalls

Dalston, London, 1999

Hawkins/Brown

The Bradbury street market stalls formed part of the second phase of an urban regeneration project in the East London borough of Dalston. The market stalls are permanent, lockable stalls for small businesses, facing a car park. The stalls are robustly designed from robust, durable materials with simple details. With a back-to-back layout, tenants are offered the possibility of renting or buying a neighbouring stall in order to expand their business. The robust nature of the stalls allows for easy refurbishing, repair and customising of individual stalls.

[Hardingham 2002: 232-235]

ROBUSTNESS
DESIGN FOR EXPANSION / ADDITION

ENTRANCE STALL STALL ENTRANCE

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Adaptability //

Paper temporary studio

6th Floor Terrace, Centre Georges Pompidou, Paris, 2004

Shigeru Ban Architects

After winning the competition to design the Centre Pompidou's new facility in Metz, architect Shigeru Ban received permission to construct a temporary studio on top of the Piano & Rogers landmark. Arches constructed from cardboard tubes with timber block connectors and steel stiffeners created the roof. This was then clad with wood panels and PTFE (poly tetra fluoro ethylene) and PVC membranes. The interior was finished with timber decking, carpet tiles and Vitra furniture. Structural bookshelves support the arched roof.

In order to discharge their duties competently, this structure would have had to allow a feeling of substantialness and required services such as power and telecommunications. Yet, since this was a transient structure, it would have been important that no trace of the building remain once demounted and no damage be caused the Centre Pompidou building surface. This balance between transience and permanence is a fine line and would require a lot of design consideration.

[Jodidio 2006: 78-81]
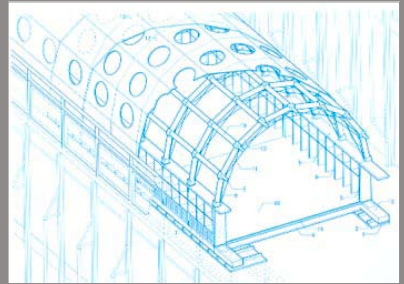
TRANSIENT PRESENCE

Kiosks

Various

Looking at the samples of various kiosk types represented here, it is possible to distinguish two important factors in kiosk design, namely:

*   the level of transience or how temporary or permanent the kiosk is, and

*   size.

The kiosk's transience could be equated to how easy it would be to move, remove or disassemble without causing major disruption and damage to the immediate environment. The small paper, drinks, info kiosks at top would rate more transient than the platform-side built-in kiosk at bottom.

It is interesting to note that the level of transience does not necessarily correspond to the size of the kiosk. The more permanent kiosk at bottom is almost half the size of the Panini Pronto Kiosk second from top. Therefore, a small kiosk footprint does not automatically make it more transient

[Comet Catering Equipment Company (Ltd) 2006: sp]

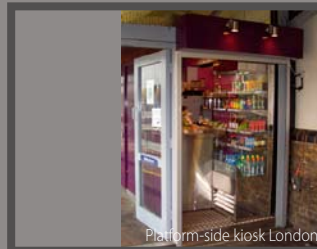[displays4media.com] 25 July 09

TRANSIENT

Panini Pronto, Excel, London

West Cornwall Pasty Company, Gatwick Airport London

Fuel Juice Bar, Birmingham

PERMANENT

Platform-side kiosk London

4.3.2 Sustainability factors

Stuart Walker (2006:114-118) set out to compile a list of the aesthetic identifiers of unsustainable contemporary product design. The following is a simplified version of his aesthetic typology of unsustainability. These aesthetic identifiers should be avoided or limited when producing the *re:fresh* ∗ design products.

Aesthetic identifier	Description	Relationship to unsustainable practices
Culturally neutral or bland	A result of mass production for global consumption. Cultural and regional distinctiveness is absented in favour of homogenised aesthetics suitable to mass market.	Designs with such aesthetic neutrality fail to consider or respond to the local context or place and fall within unsustainable practices.
Pristine polished and fragile	The production of flawless forms and surfaces is usually driven by capital and energy intensive production methods using non-recyclable, non-renewable resources.	With everyday use "perfect" products and surfaces quickly deteriorate in appearance leading to consumer dissatisfaction and premature disposal. The quality of finish increases the amount of packaging required for delivery. This practice increases waste generation.
Concealing and disguising	The exterior of a product or component is perceived as an "envelope" or casing. It is usually a moulded or press-formed shell with little relevance to functions of the interior workings or services it conceals.	This is a barrier to product comprehension. It prevents identification and engagement with the design products. It hampers product repair and maintenance, shortening the component life span.
Cold or remote	Materials are unfamiliar and remote in terms of users' understanding.	This is also a barrier to product comprehension. This quality can decrease one's ease or comfort with a design product and decrease the values attached to it . This lack of regard increases disposability and detracts from user identification with a design product.
Curved rounded and smooth	Many contemporary designs include curved forms, often made of plastic, that can be readily injection-moulded. Hard edges are eliminated and forms become smoothed.	This "moulded" aesthetic is indicative of energy and resource-intensive processes that are environmentally damaging and frequently socially problematic. Manufacture often occurs in low-wage economies with poor worker conditions and lax environmental policies. This characteristic could be indicative of environmentally and socially unsustainable practices.
Fashionable or showy	Designs pandering to short-lived trends, colours, patterns quickly lose their fashionability.	Quickly outdated designs cause premature "aesthetic obsolescence", waste and consumption and user dissatisfaction.
Complete and inviolable	This aesthetic quality is a result of overall presentation of a design in terms of sophisticated forms, finishes, materials.	Most products demand passive acceptance by users. Nothing can be contributed by the user. The user can not truly care for it without being able to engage with, maintain or repair it. This can again lead to lack of valuing and premature disposal.

∗ Adaptability

The standardised nature of the units does not mean that they should all look alike. Like the approach followed by the designer participating in the MOMA housing exhibition (Cellophane House), it is possible to include **randomness**, **choice** and the resulting **diversity** in a modular building design.

It is also important, in view of the proposed formal traders plying trades as diverse as take-away coffee bars, convenience shops, gift stalls and newspaper kiosks, that the basic unit be adaptable to various uses if rented to a different tenant. As the tenant or function of the unit may change over **time** would depend on

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the use of the unit and the influence of the users.

The adaptability of the unit increases its **sustainability** in terms of future **use, re-use or adaptation** as seen in the previous table. Not only that, it provides **choices** to the future tenants, allowing them to expand a thriving business without having to relocate or having to reinvest their capital outlay.

Osman and Königk (2008:115-116) argue that the ability of the built environment to be continuously adapted and transformed is particularly relevant to issues of accessibility and affordability in South Africa. This related to idea of **Open Building**, or the ability (and flexibility) of the built environment to be adapted and accommodate change. Even though their study related urban housing and community facilities, it would be able to be applied to smaller interior architectural retail and refreshment facilities within the South African context. The adaptability of the *re:fresh** units over time would spell the success of the project.

Adaptability requires not only a durable construction and material application, but also a **robustness** of design and detail in order to ensure the longevity and repairability of the units.

4.3.3 Guidelines for the design approach

1.	Design for easy manufacture and site assembly

2.	Manufacture factory finished components where feasible (e.g. pre plumbed wall panels)

3.	Keep components small enough to allow easy delivery and access onto station concourses (door sizes are limiters)

4.	Design for easy future disassembly without deleterious effects to the materials / elements joined together

5.	Design for minimum damage to existing station floor and wall finishes upon future disassembly

6.	Balance visual and perceptual presence of the units with their level of relevant transience

7.	Material cost needs to be low enough for level of transience as well as sustainable where possible

8.	Materials and joints need to allow for future adaptability, expansion / addition, disassembly and repair

9.	Materials need to be durable enough for heavy public use

10.	Joints need to be simple and robust