



Figure 106.

Trader with self-made selling unit

Design development

chapter

7

DESIGN DEVELOPMENT

"Interior designers and architects frequently custom design commercial and office tenant space, specifying a variety of partitioning systems, raised floors accommodating cabling, ceiling systems integrating acoustic tiles and light fixtures, and so on. Specialized "fit-out" contractors install systems, parts and other amenities for proper occupation, creating and articulating interior space." Habraken 1998:72

INTRODUCTION

"Shopping malls distinguish clearly between building and infill as well. Tenants rent empty space to be fitted out to their specifications by specialised contractors. When franchises of large chains adapt standardised details, fit-out may be completed almost overnight." (Habraken 1998:72)

Previous chapters have revealed that the activity of informal trade is in fact a dynamic one. Case studies have revealed that traders use elements and objects in the urban environment to define their space and claim a sense of legitimacy. ie. posts, surfaces acting as selling points as well as edges, boundaries or enclosures.

Most importantly there are different trader types that have specific requirements for their day to day activities and operations. There are also recurring systems, patterns and types in the projects and contexts explored. These common traits form the universal elements of informal trading. They are the basic requirements necessary in order for traders to create a sense of legitimacy along the streetscape and to allow traders room to manoeuvre within the system. As such the systems, patterns and types derived from the case studies and context, act as a framework of principles within which variations can be made.

It is equally important that within this framework, traders be able to improvise, suggest new typologies in order to create new instances. This will contribute to making the system sustainable and reinforce a sense of individuality and ownership amongst the traders, whilst fostering a sense of belonging and community.

"Variations within a theme enables individuals to define themselves within the context of a given group or society. The theme connects the user and society within a given context. In each variation, we conform in order to create" (Habraken 1998:230)

DESIGN PRINCIPLES

Summary of the basic requirements to enable legitimacy of informal trade along the streetscape. These Principles are derived from an understanding of traders' use of space derived from case studies, passive observation as well as precedent studies.

Principle 1: The Post

Principle 2: Integrate with urban fabric, Spine of activities with support infrastructure along it

Principle 3: Privacy relates to heights of surfaces and post

Principle 4: Elements from different types able to connect enabling progression

Principle 5: Adjustable trading unit that is easily packed away and stored

Principle 1: The Post

The presence of a post element is crucial in allowing the traders an opportunity to trade. A study of a variety of contexts revealed that traders do not reject all forms of control but seek a vertical element to relate to in order to trade. This vertical element, be it a tree, a wall, a municipal pole or traffic light aids the trader in claiming a unit of space. It acts as a formal sign that the trader may relate to. During day to day operations the location of a trader is described by this sign ie. "the trader at the no parking sign." Traders look for recognisable forms and signs to which they can relate in order to claim a unit of space and establish a sense of legitimacy.

Principle 2: Integrate with urban fabric, a spine of activities with support infrastructure along it

The post element is currently integrated with the urban fabric and shows signs that the traders require formal signs to indicate their legitimacy. Baragwanath Transport Interchange and Informal Traders Market functions much like the street environment, providing a legible environment along which the traders may locate themselves. Again, the forms and spaces created by the concrete element vary through the site. Traders locate themselves close to and claim trading space relative to articulated elements.

Principle 3: Privacy relates to the heights of surfaces and the post

All of the contexts studies revealed that traders arrange their possessions differently in different environments. They react to pedestrian flows and the quantities of goods that they have to sell. When they are in an environment where they cannot easily articulate their territory (high traffic pedestrian environment or wide open space) they tend to position the trading surface closer to the ground plane. When their trading area is well articulated, traders will raise the height of the selling surface.

Principle 4: Adjustable trading unit that is easily packed away and stored

The Warwick junction project revealed that some traders, particularly lower order traders typified by 1-3 vary the quantities

and types of goods sold throughout the day. As such traders need adjustable selling units and elements that can be used in a variety of ways.

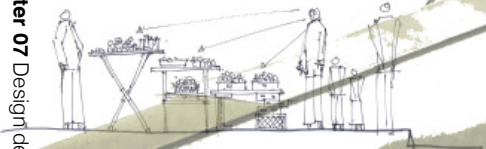
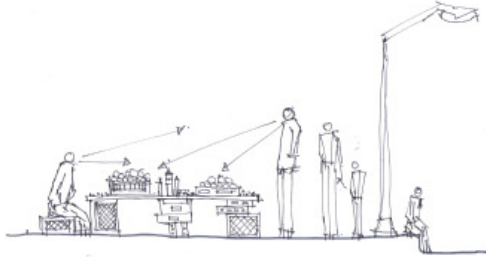
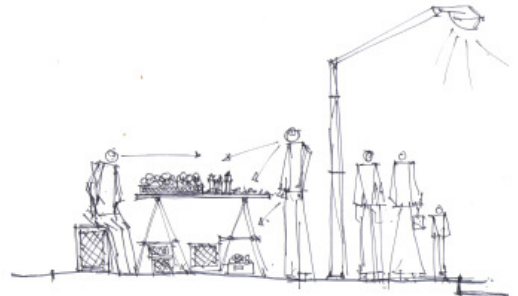
A visit to the informal trading storage shed on Proes street revealed that traders needed more compact components that could be easily disassembled and made compact

Principle 5: Where possible elements from different types able to connect in order to enable progression.

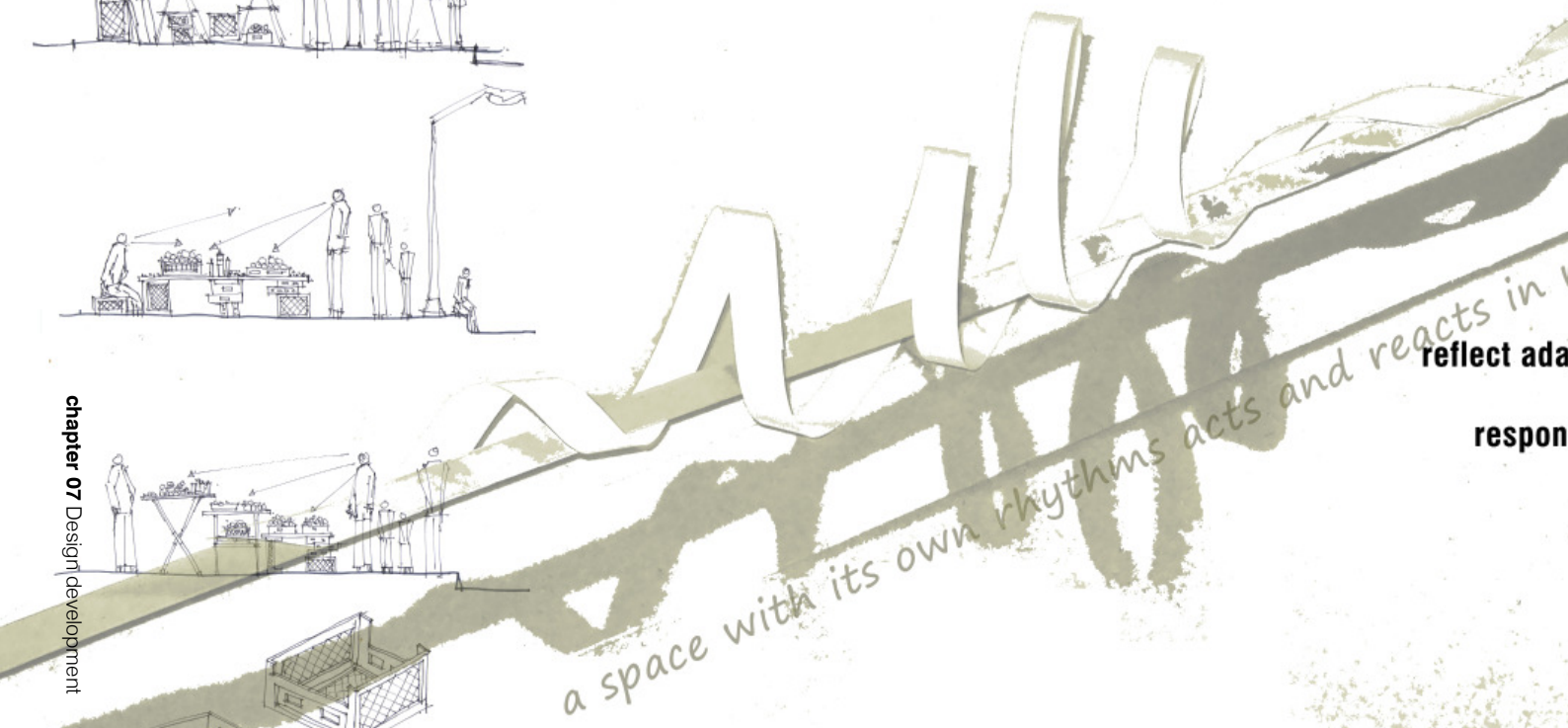
The Warwick junction project revealed that traders may not only act as a single 'type'. In some cases, as they vary the types of products sold they may act as a type 1 or a 3 or may move up in the system. Therefore, components should as much as possible, be able to be reused by different trader types.



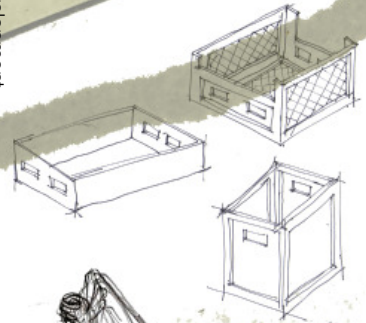
How can current site dynamics become primary and influence



chapter 07 Design development



a space with its own rhythms acts and reacts in
 reflect ada
 respon



growth

connection

support

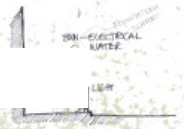
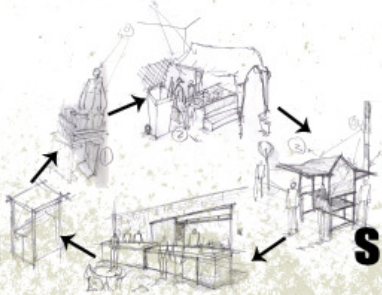


Figure 107.
 Conceptual approach



potential as design generators?

response to habitation

stability, diversity and creativity

open to a wide range of urban users

activities flowing freely

ownership and identity

Democratic street

Legitimacy

activate

'stitch'

giving form to the informal

DESIGN APPROACH

The task set out is to design a system that evolves from the dynamics of informal trade. The use of space by traders and space defining elements have been explored in previous chapters and summarised earlier in this chapter. What has not been explored are the objects that the traders use. Upon studying the site it was found that sasko bread crates are the most commonly used. These crates are sourced from the fresh produce market.

Together with Khula and Seda it is envisaged that the fresh produce market could become an even bigger partner in developing informal trade at the station precinct (refer to page 25 & 26). Once the project gets off the ground, traders could use the crates from companies freely and legally.

The Warwick Junction Project revealed that within the informal trading system there was a subsystem of porters who delivered furniture and goods to and from multiple storage sites. These porters work for wholesalers, customers and traders (Dobson & Skinner 2009:23). The porters could be responsible for collecting goods from wholesalers and delivering them onsite to traders at the beginning of each day.

SASKO CRATES

Traders use these ergonomically designed crates to display, contain and support their merchandise. It is designed to carry goods in appropriate quantities comfortably. Given that it is important that traders are able to vary their components, the crate is explored as the starting point in defining a module.

Upon investigation it was found that the sasko bread crate used by the traders was 160mm high, thereby giving it a relationship to Le Corbusier's Modular.

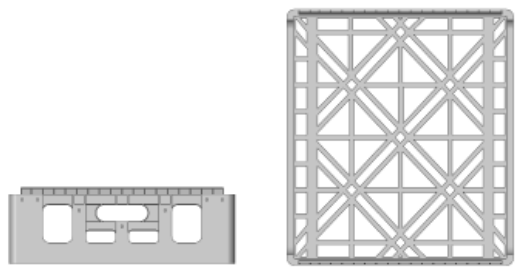


Figure 108.
Commonly used clover and Sasko crates

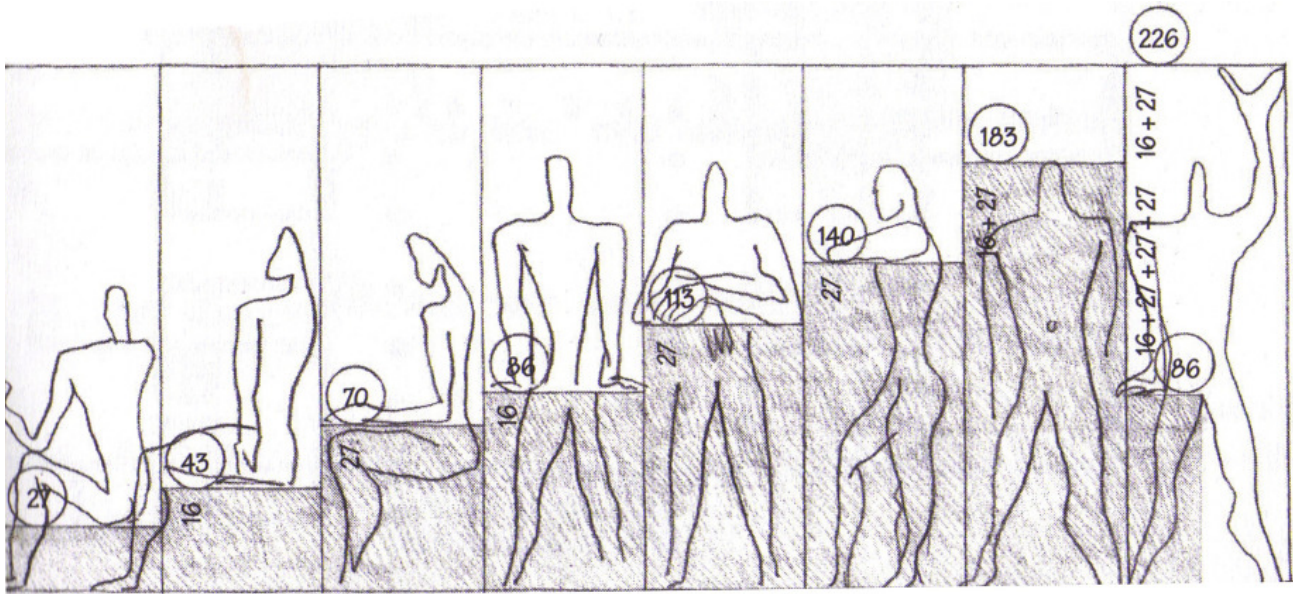
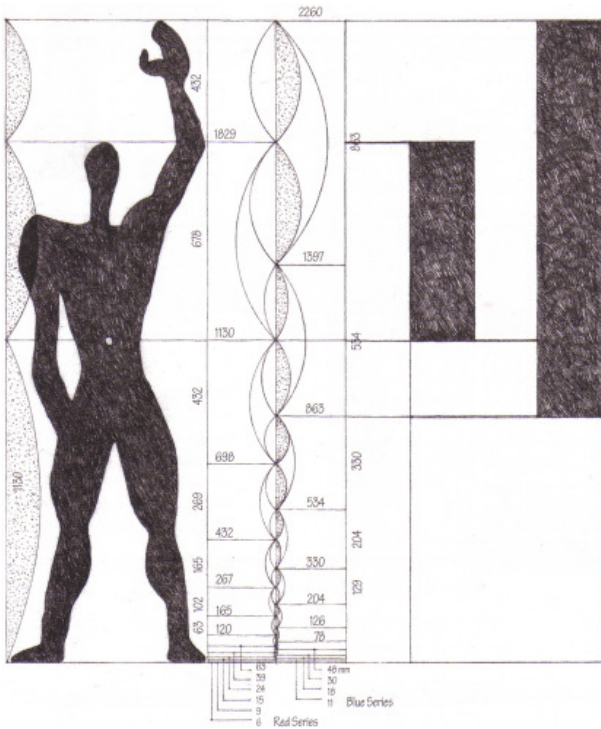


Figure 109.
Le Corbusier's Modular system



LE CORBUSIER'S MODULAR SYSTEM

According to Peter Blake (1966:138), this modular represents a culmination of Le Corbusier's life's work which sought to bring a rule of law into art. Unlike most modular systems that rely on an infinite repetition of a single dimension, Le Corbusier's module relies on an infinite series of related modules based on the ancient 'Golden section'. Le Corbusier found the link between this golden section and the human form. The following is a description of the Modular:

In general, the Modular starts with the division of the height of a man into two proportions, at the waistline. These two proportions according to Corbu, govern all other dimensions of the human body: for example, a man with his arm naturally upraised creates another Modular proportion, the distance between his head and his waist being in the proper relation to the distance between his head and his fingertips. Starting with this interlocking system of proportions – fingertips to head to waistline to the soles of feet – Corbu developed a gradually diminishing scale of proportionate dimensions (Blake 1966:138).

DEFINING A MODULE

The typical shoulder width of a man is derived from Neuferts Architects Data

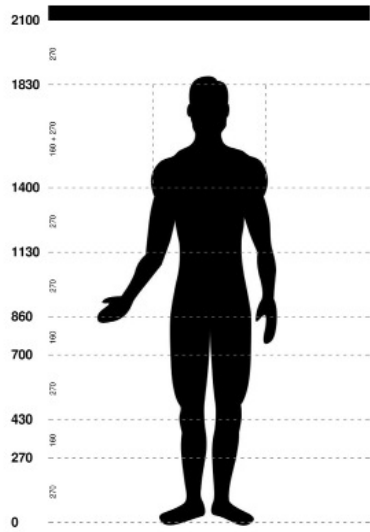


Figure 110.
Le Corbusier's Modular

The image shows a man of 1830 Height in accordance with Le Corbusier's modular. The Horizontal lines show how this modular relates to the human form.

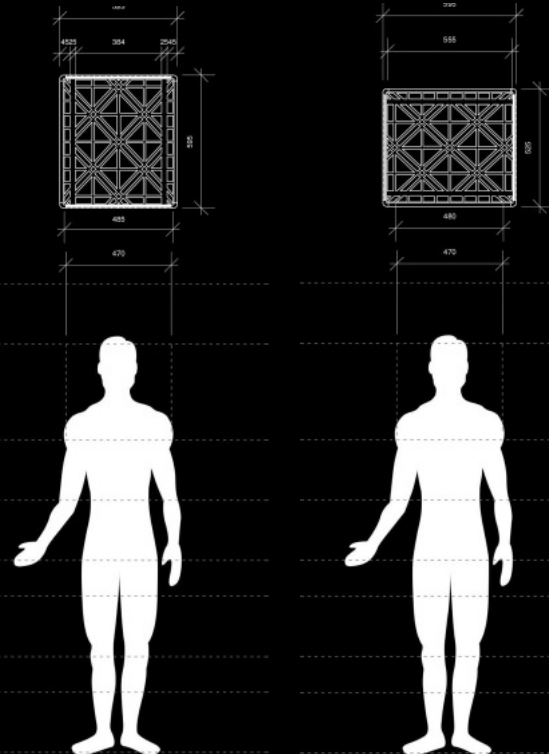
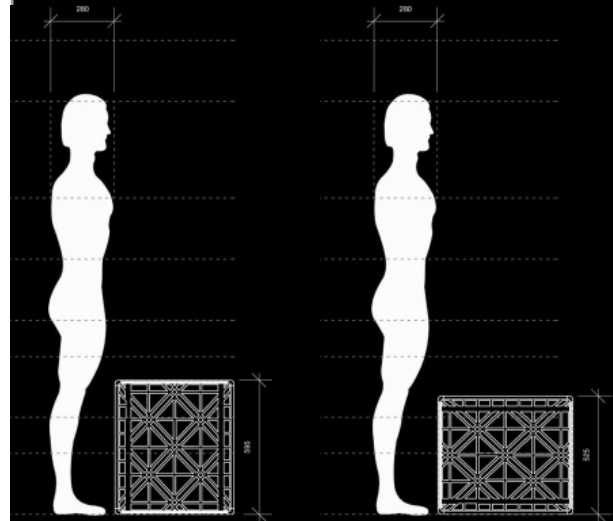


Figure 111.
Exploring the Sasko crate in relation to the human body

TYPE 01



THE MOBILE TRAVELLER

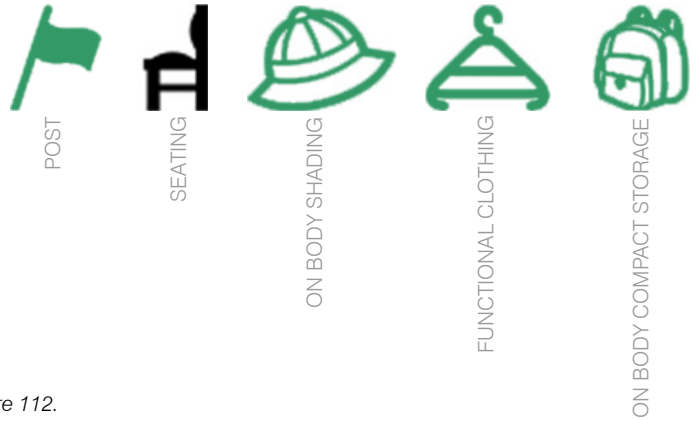


Figure 112.
Typical trader Type 1

Trader type 1 commutes the metropolitan area and is likely to occupy several habitats throughout the day. It is possible that this will be done for a longer period than the time spent at home or in a single 'place'. Thus trader type 1's habitation is the body and therefore requires an infrastructure that mediates the built environment and his/her immediate needs. This type interprets fashion as a moving form that encloses and protects this urban nomad.

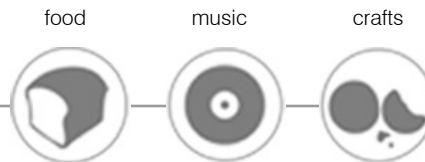
REQUIREMENTS

- On body compact storage of all goods
- Storage doubles as display
- Identity
- Open able compartments



Figure 113.
Trader Type 1 storage

ready-made limited stock



CONCEPT DEVELOPMENT

Figure 114.
Trader Type 1 storage exploration

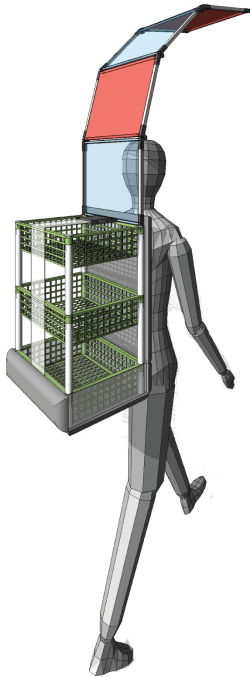


Figure 116.
Exploring Type 1 storage as a zip-up bag

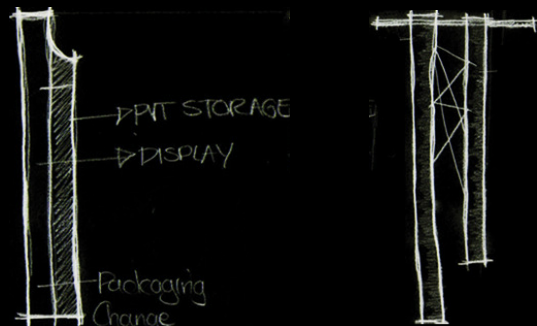
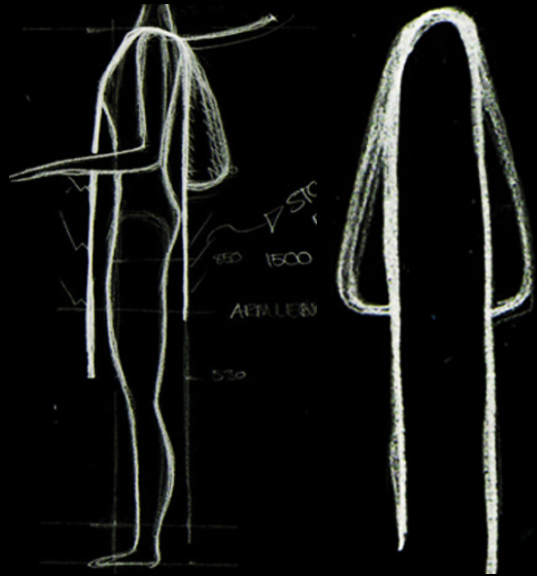
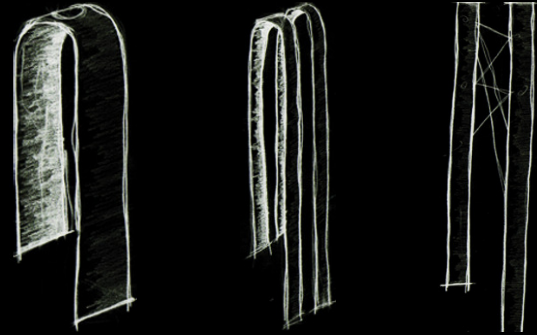


Figure 115.
Trader Type 1 concept sketches

"Moving elements in a city, and in particular the people and their activities, are as important as the stationary physical parts. We are not simply observers of this spectacle, but are ourselves a part of it, on the stage with the other participants...Nearly every sense is in operation, and the image is the composite of them all." Lynch 1992:2

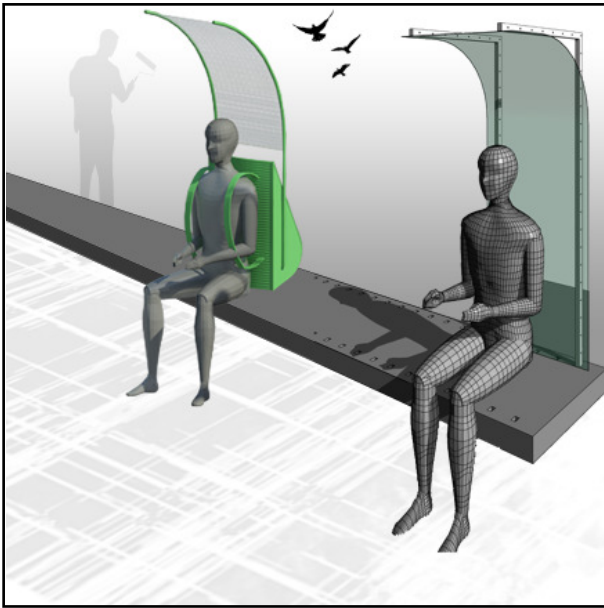


Figure 117.
Type 1 claiming space on bench

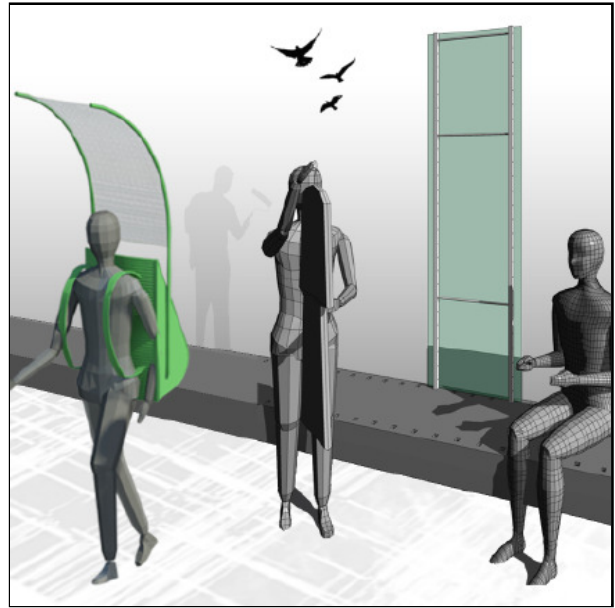


Figure 118.
Type 1 shading device as vertical display unit and post

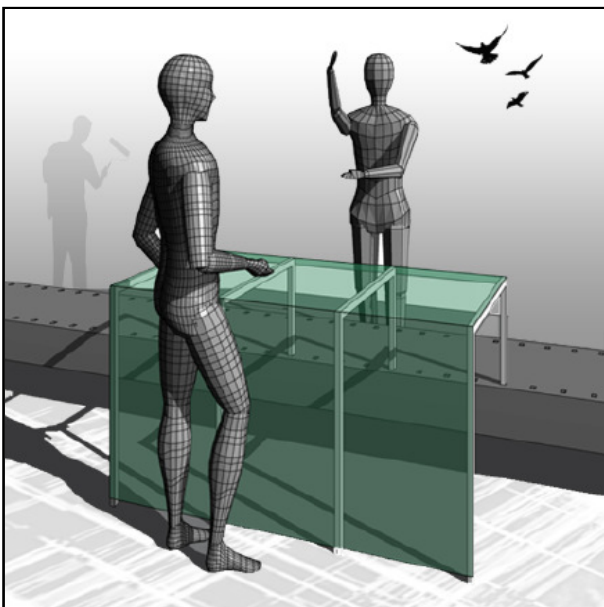


Figure 119.
Type 1 shading device as selling surface



Figure 120.
Type 1 Storage

Figure 121.
Type 1 shading device defining a realm of space for customer and trader

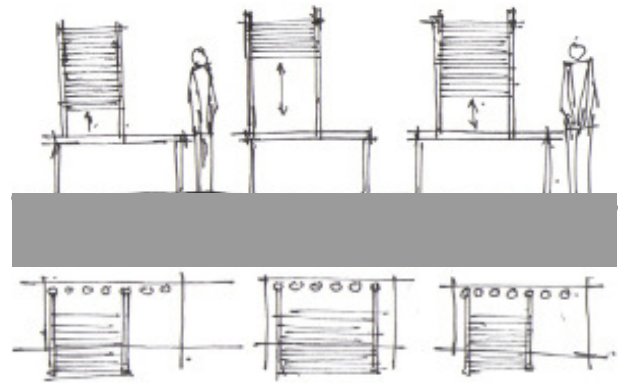


Figure 122.
Conceptual plan and elevation of Type 1 on bench

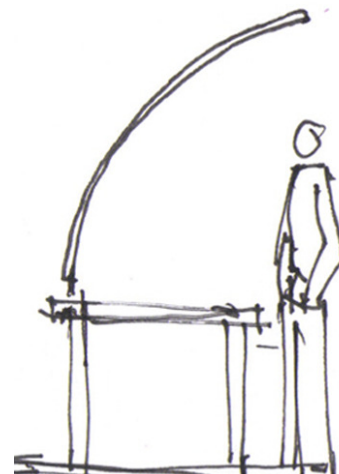
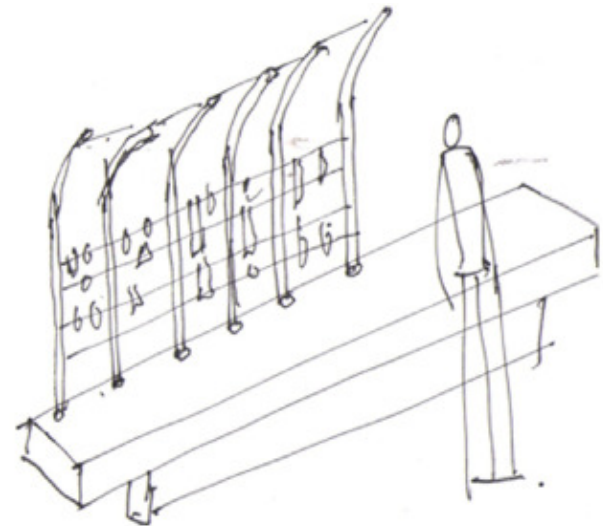


Figure 123.
Type 1 shading device in series

TYPE 02



Trader Type 2s assemble themselves and their possessions according to their own interpretations using available materials and resources in a form of collage. According to Rowe and Koetter (1996:290) collage accommodates both a hybrid display and the requirements of self determination. Collage acknowledges the leftovers of the world, preserves their integrity and gives them dignity. These claimed objects gain a new impact from their changed context, recycling use and meaning.

Traders Type 2s commonly use crates and boxes from established companies in order to display, store their goods and support selling surfaces. Typically, multiple crates are used in modular system to support surfaces as well as to vary the selling surface area and height. At times up to eight crates are used by a single trader whilst only two are used for display. As a result the trader requires assistance to carry all the components from the storage area. Fewer crates could be used to achieve the same end, whilst still allowing for a number of display configurations.

MULTIPLE CONFIGURATIONS



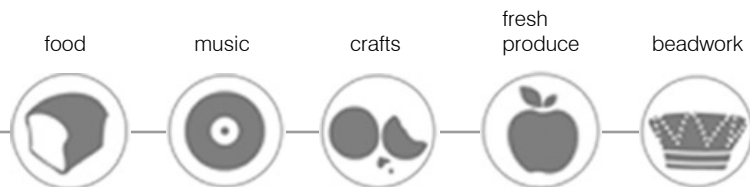
Figure 124.
Typical trader Type 2

This would add value particularly when the trader must move to a different location within the same day.

REQUIREMENTS

- Multiple configurations
- Height of selling unit must respond to site characteristics and the needs of the user
- Selling unit is adjustable to the quantity as well as the types of products sold
- Lightweight unit , easily packed away and carried

ready-made limited stock



CONCEPT DEVELOPMENT

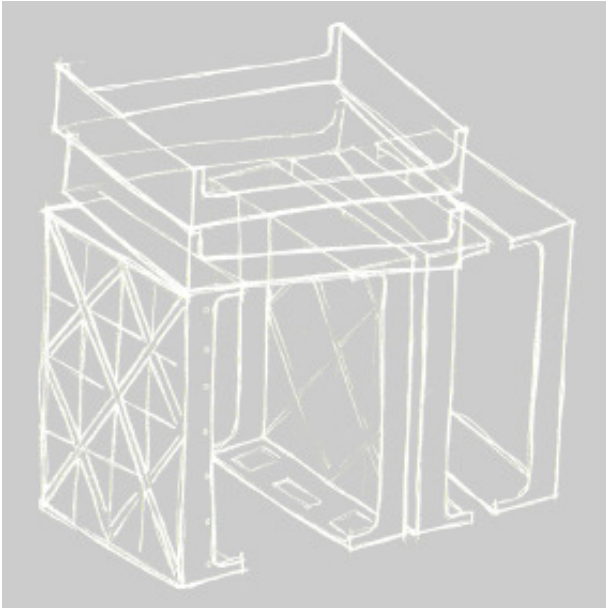


Figure 125.

Typical crate configurations

The internal structure of the crate in a horizontal position is 480mm apart. Very close the shoulder width of a man. This defines a module for the shading device used for trader type 1 as well as the supports for the trolley for trader type 2.

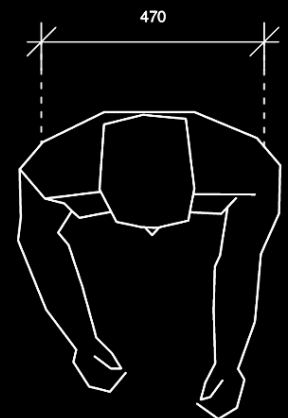
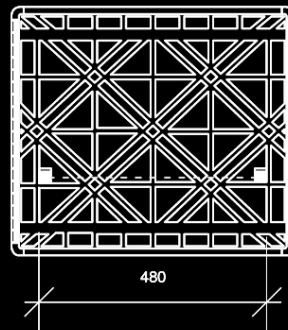
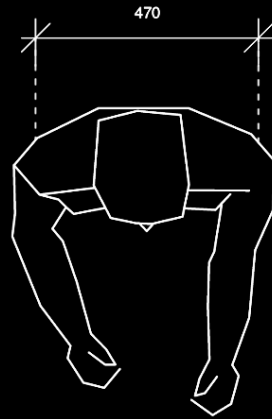
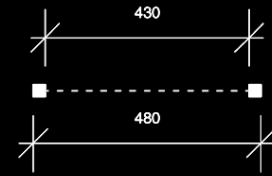


Figure 126.

Deriving a module from the internal structure of the crate

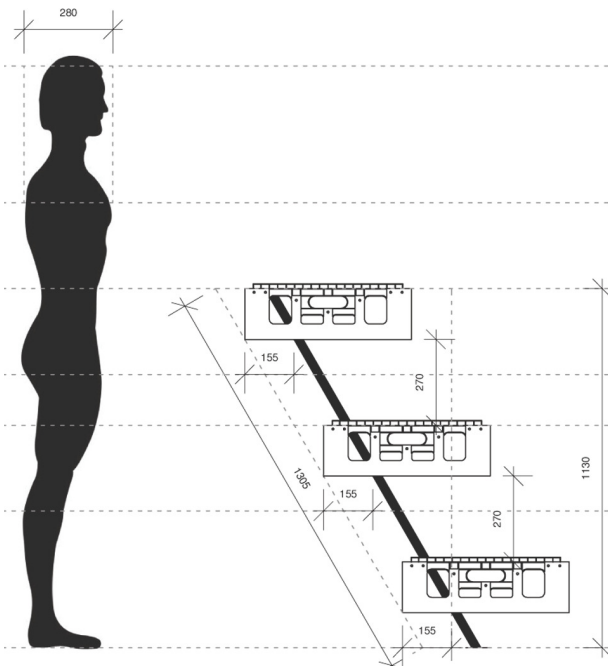
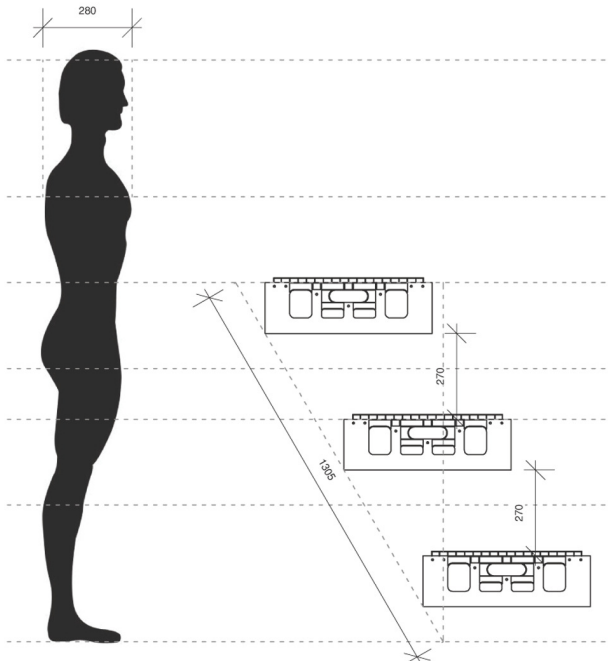


Figure 127.
Exploring crate stacking options with support

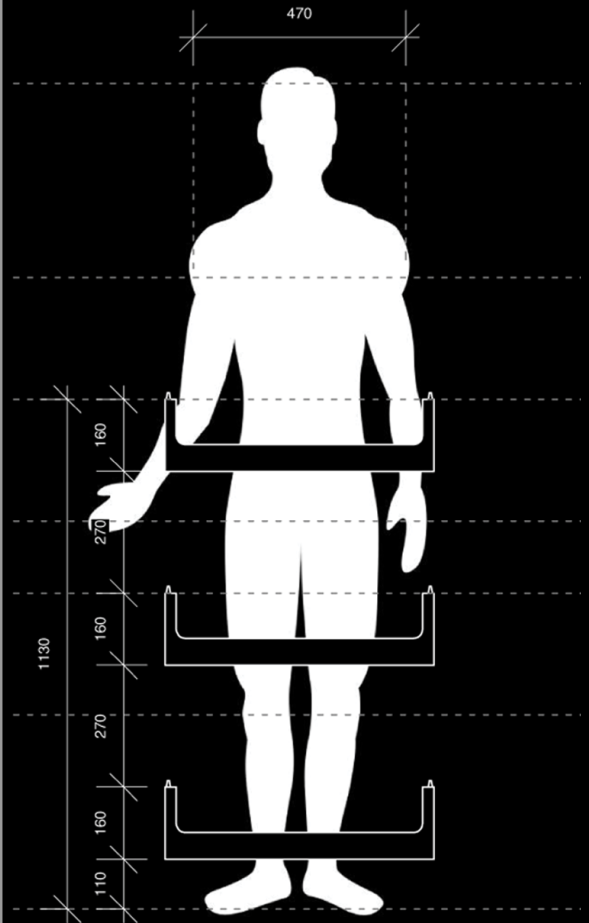


Figure 128.
Maximum crate stacking height, front elevation

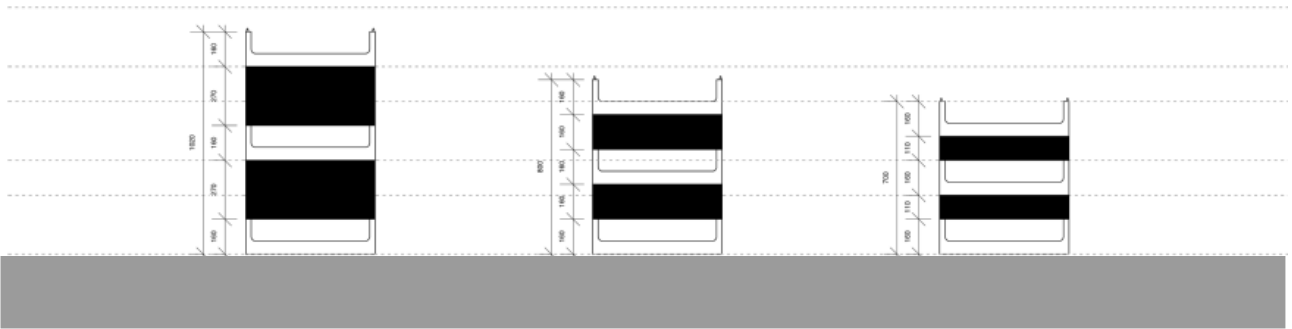


Figure 129.
Crate stacking height options

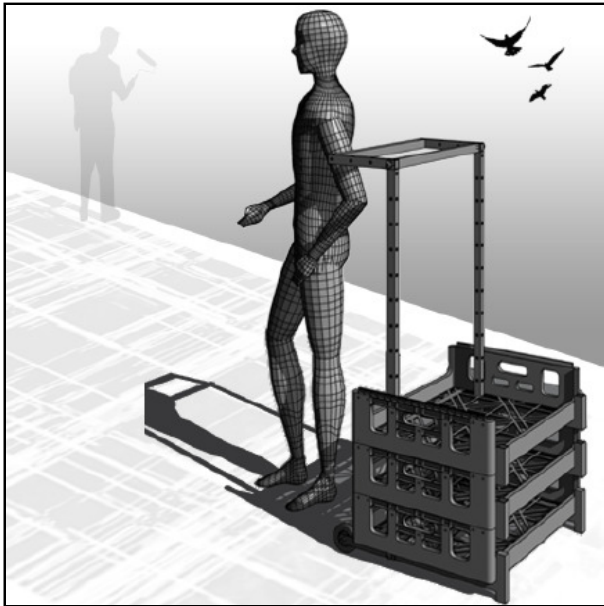


Figure 130.
Type 2 moving with crates

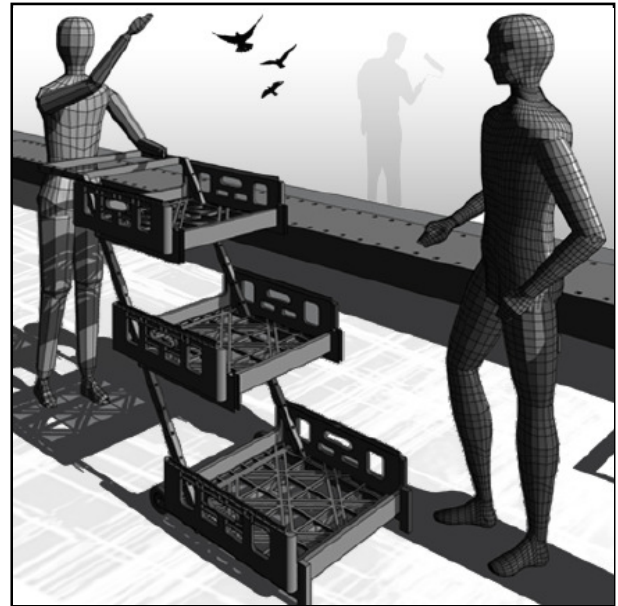
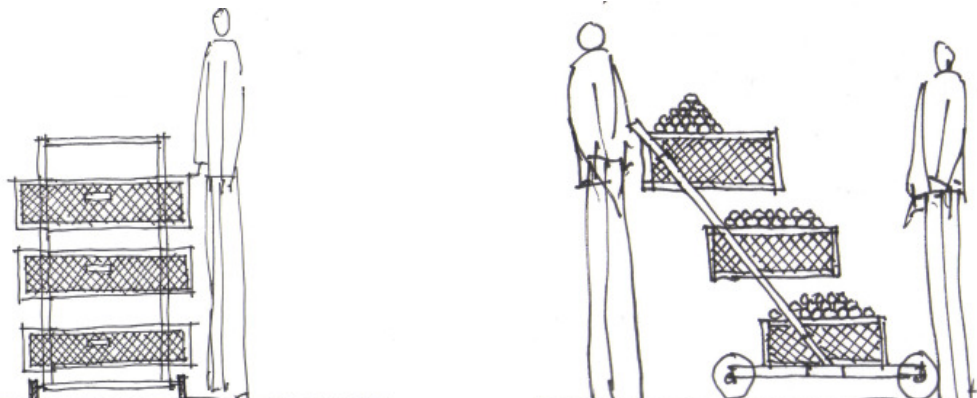


Figure 131.
Type 2 selling from crates



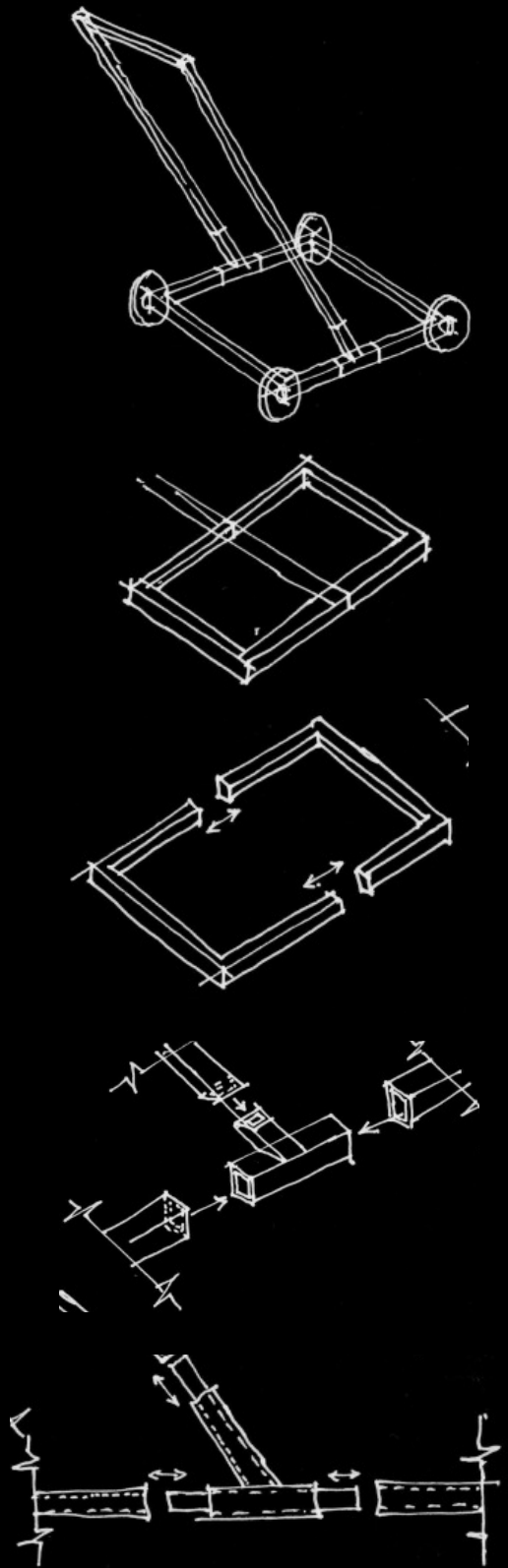


Figure 132.
Type 2 crate assembly

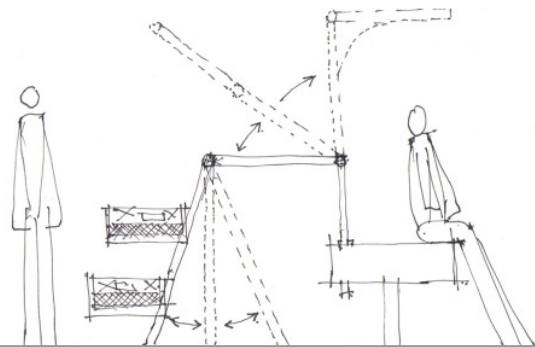


Figure 133.
Post elements used as Type 1 and 2

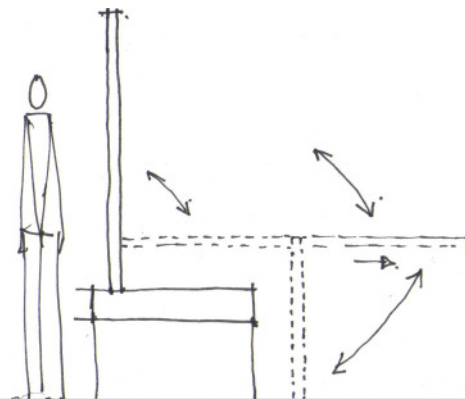


Figure 134.
Post becoming structure for surface

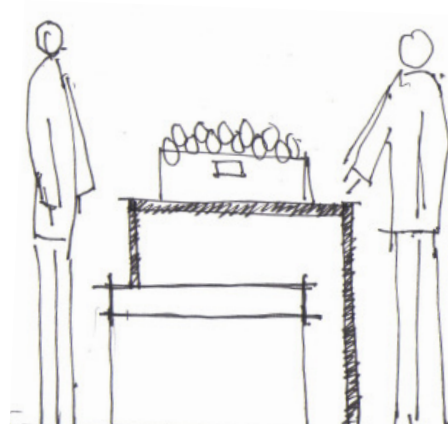


Figure 135.
Post structure as selling surface

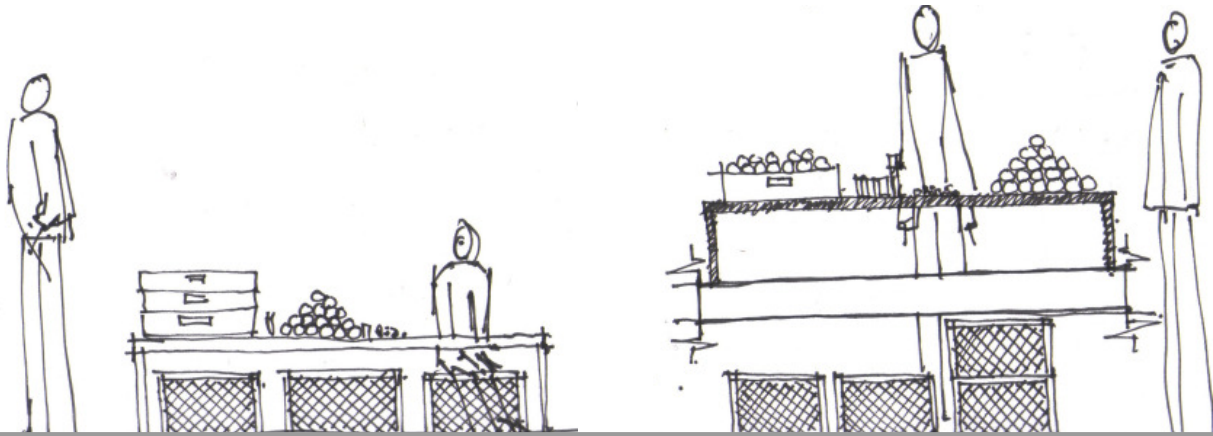


Figure 136.
Post elements as horizontal selling surface

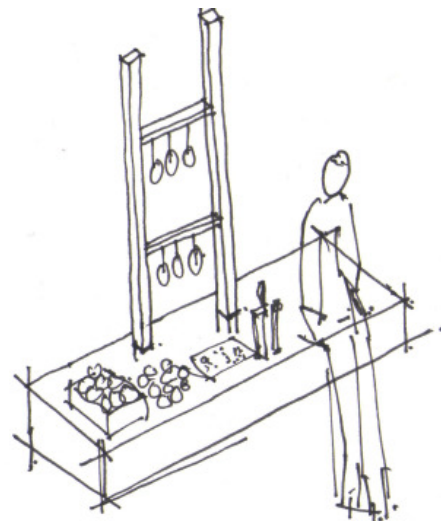
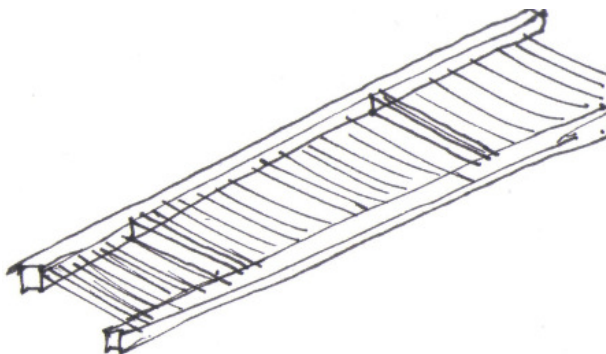
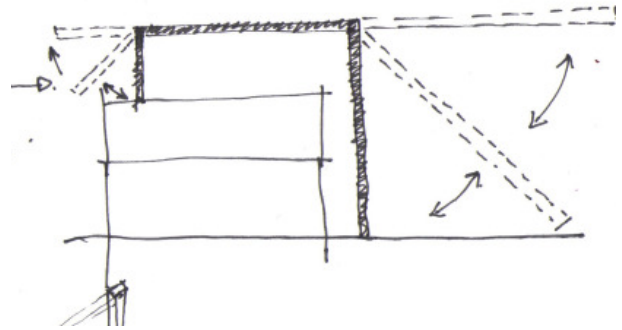
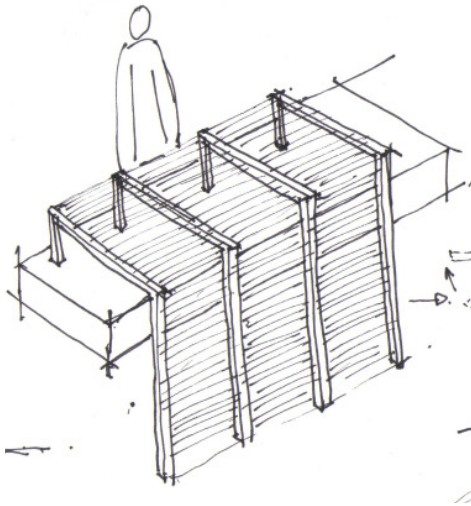


Figure 137.
Post element options

TYPE 03



Trading space for trader type 3 is allocated by the local municipality. Upon applying for a licence, traders await approval from the municipality as to where they may trade. This trader type typically uses the gazebo tent which is available from the Job shop in the city centre and the Army shop in Pretoria West at R1000 or more. The marquee tent defines a volume of space with four vertical elements.

REQUIREMENTS

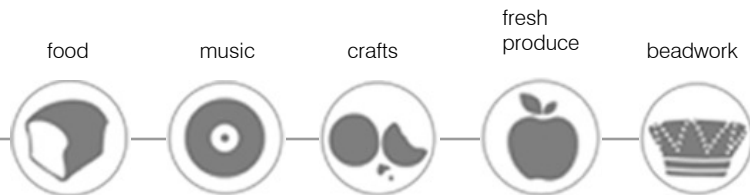
- Compact storage solution
- Shading erected daily
- Post element to aid in day to day functioning
- Demarcated selling area

COMPACT SOLUTION



Figure 138.
Typical trader Type 3

wide range ready-made stock



CONCEPT DEVELOPMENT

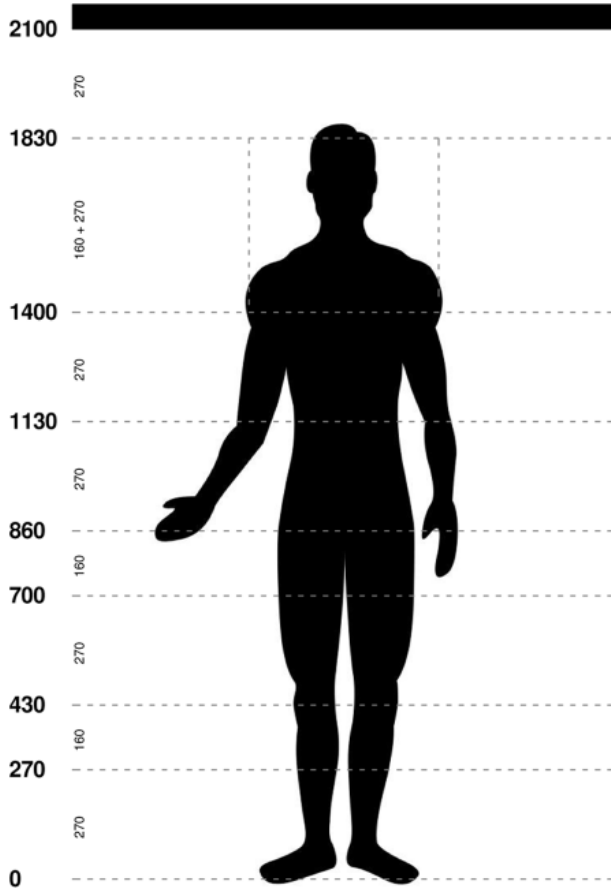


Figure 139.
Le Corbusier's Modular

barbering

clothing

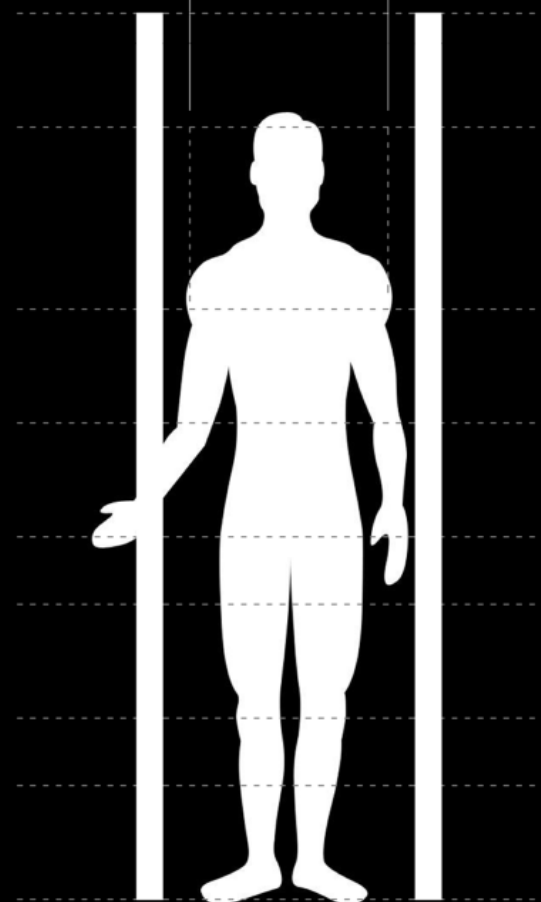
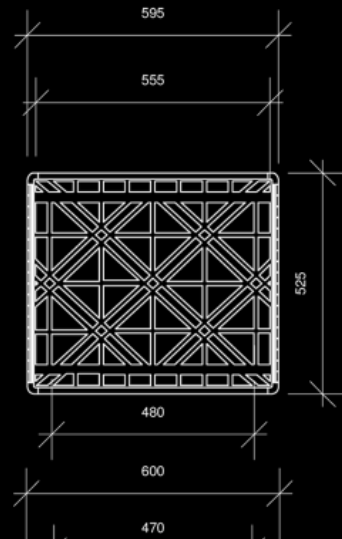


Figure 140.
Module derived from horizontal crate

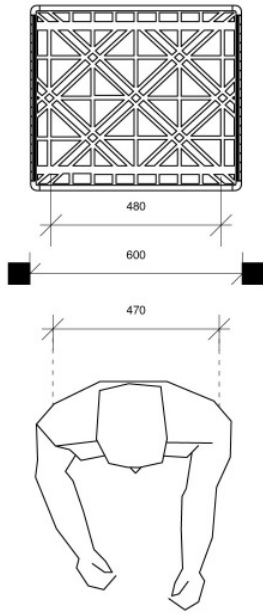


Figure 141.
Higher order trader Post elements, width of
post elements protects back of trader.

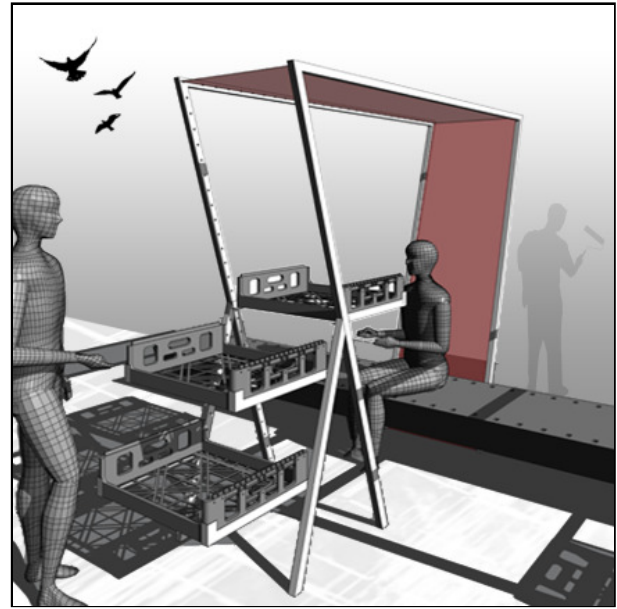


Figure 142.
Developing trader Type 3

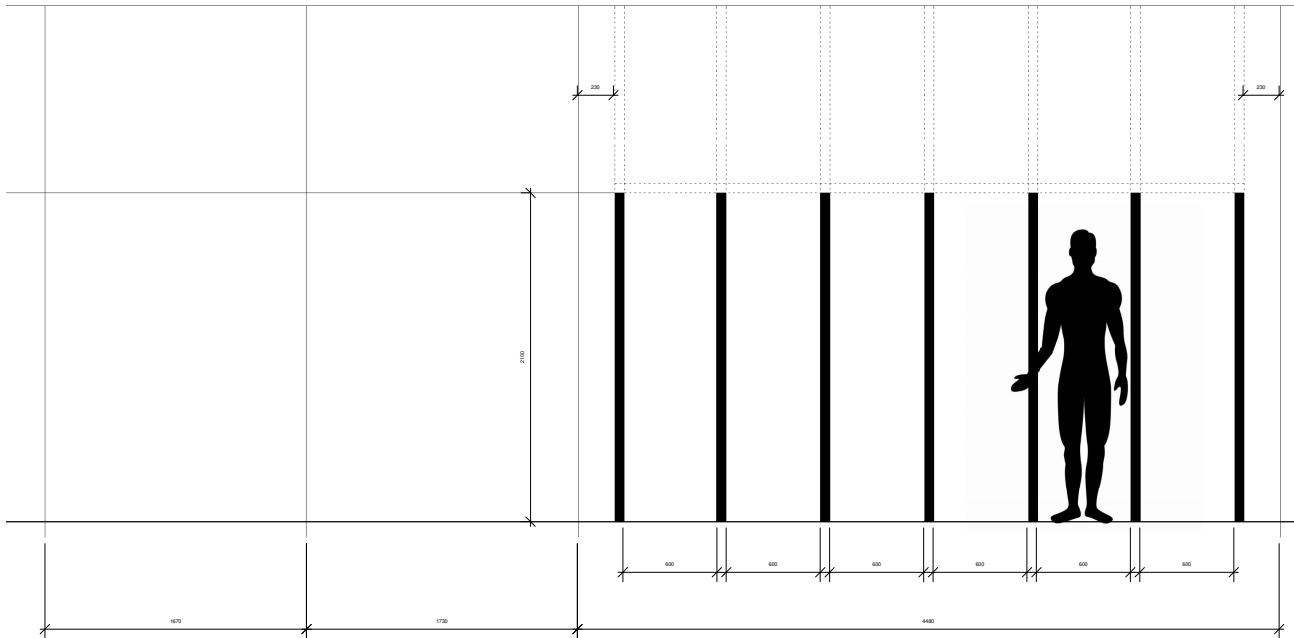


Figure 143.
High order traders' module in series

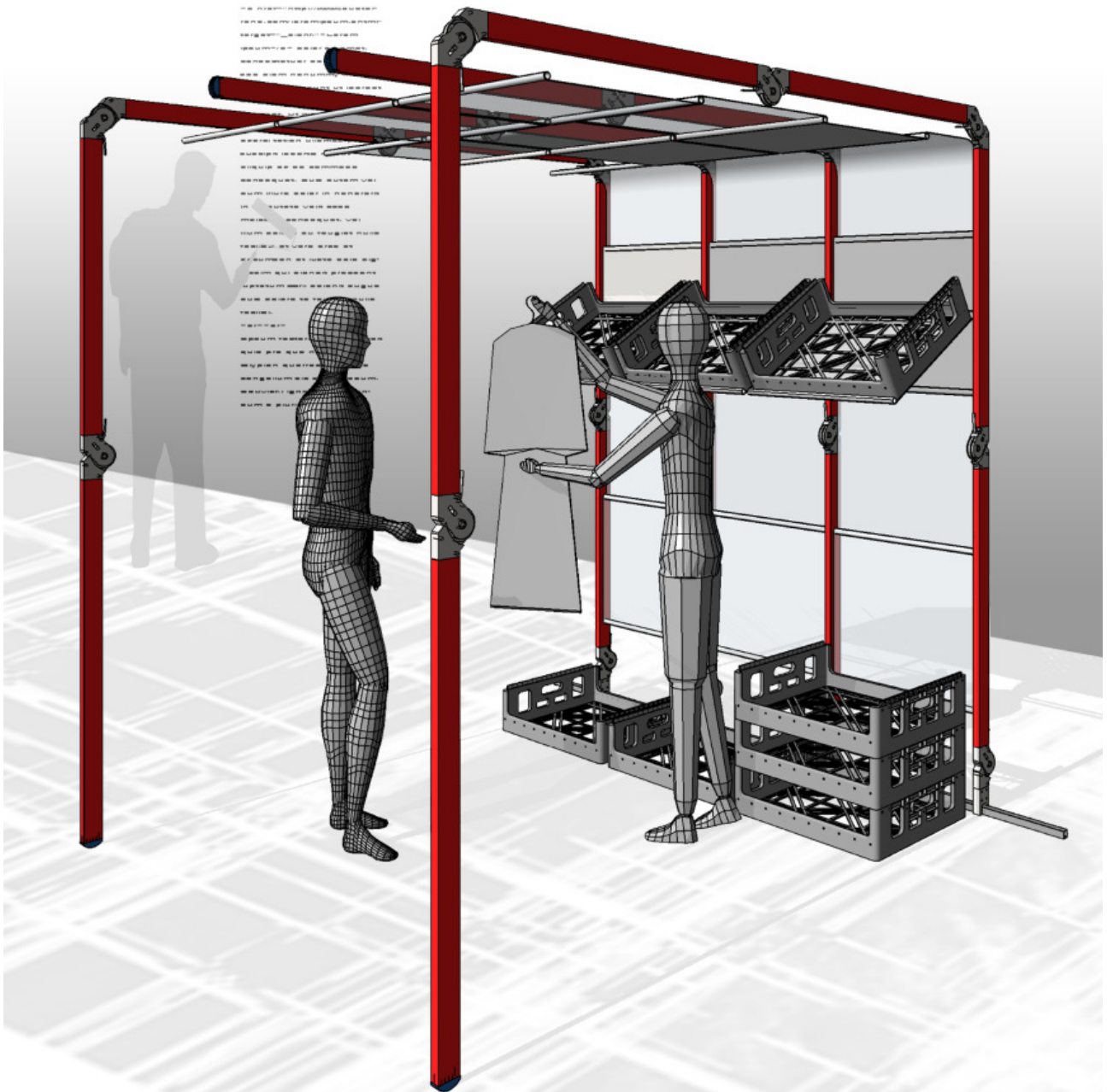


Figure 144.
Trader Type 3 in action

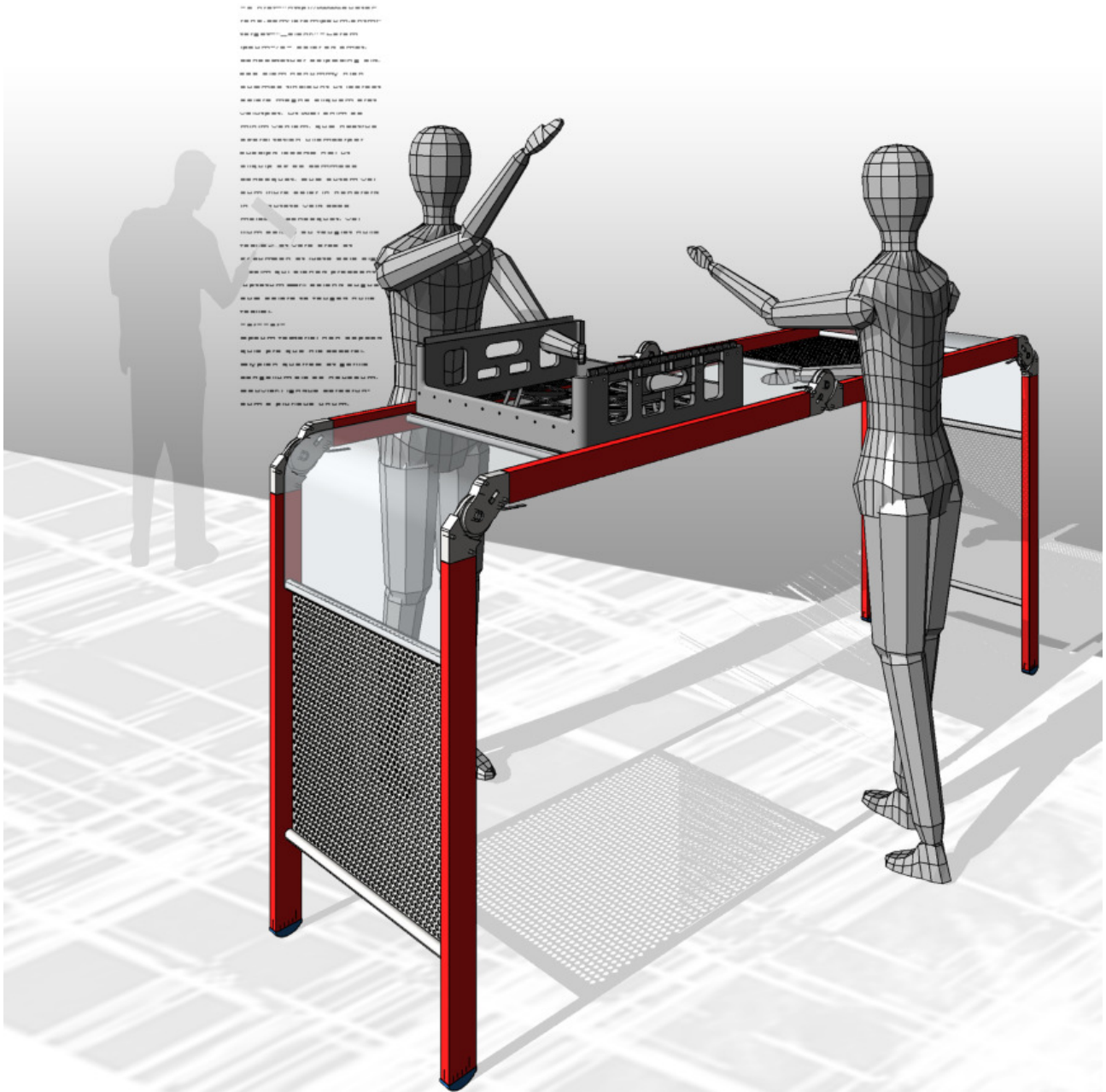


Figure 145.
High order trader Post elements as selling
surface

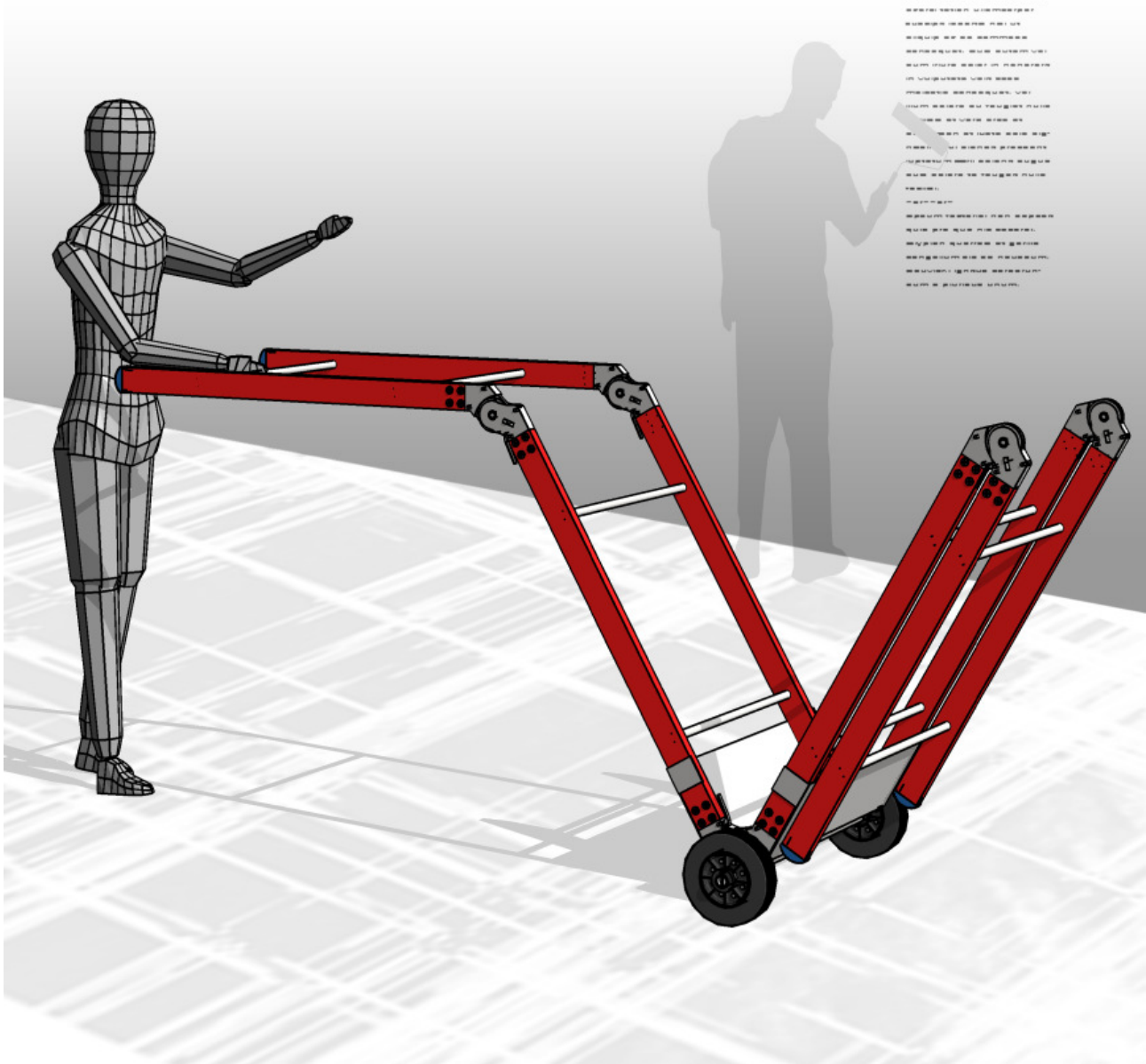


Figure 146.
High order trader Post elements as wheel-barrow

TYPE 04



This trader Type 4 is typified by the municipal trading stall which has permanent branding. This structure is bolted into the ground, providing traders with a fixed place from which to sell. Currently this branding represents the City of Tshwane. There is opportunity for this trading stall to have a greater impact, in a way that enhances the appearance of the entire environment. Private sector investors can be offered opportunity to advertise. Advertising income generated can be used to pay for street maintenance and trader facilities. Income can also pay for skills training programs. This will contribute to making the system self sustaining.

REQUIREMENTS

- Post element is fixed and permanent supporting branding
- Post element establishes precinct identity through branding
- On-site storage of a range of products

PERMANENT STRUCTURE

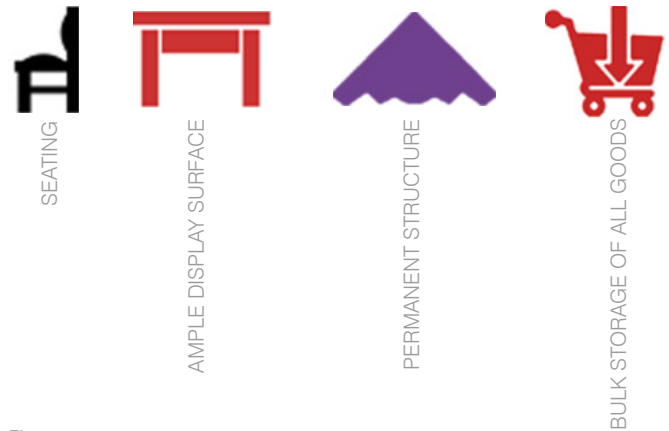


Figure 147.
Typical trader Type 4

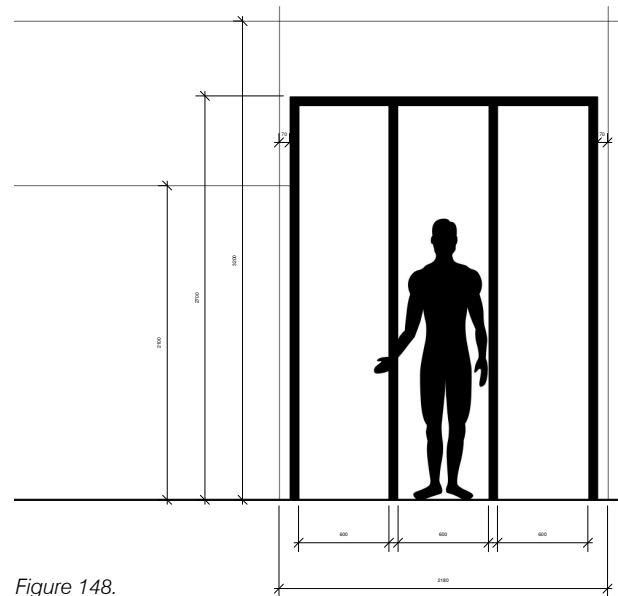
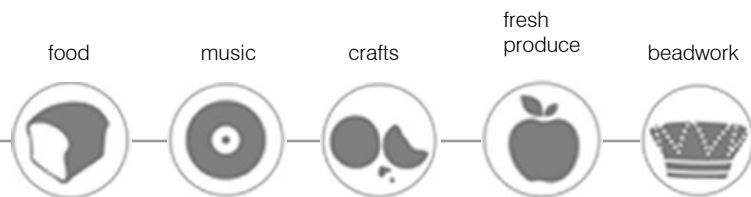


Figure 148.
Development High order Post element module for permanent branding

permanent structure



CONCEPT DEVELOPMENT

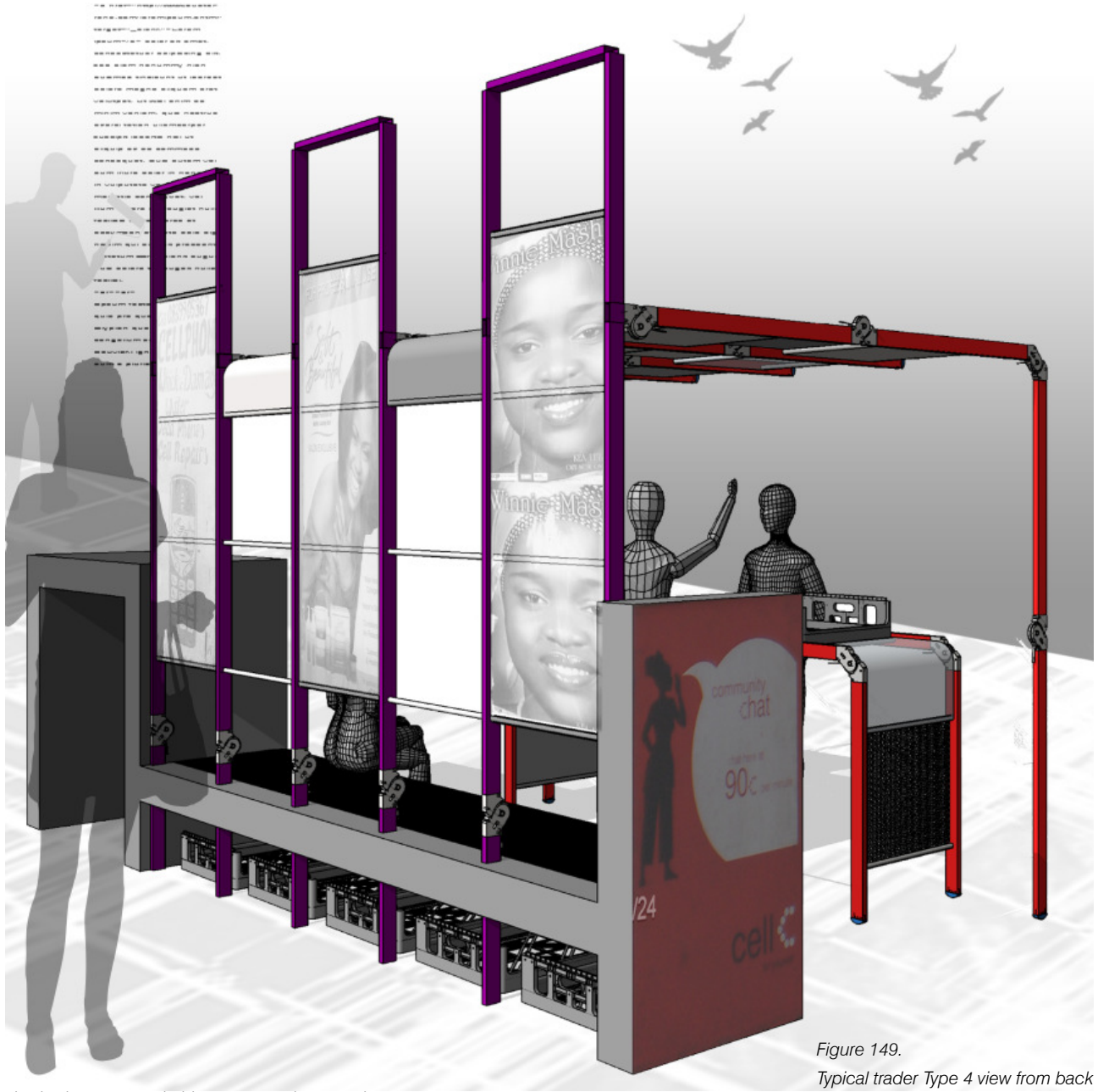


Figure 149.
Typical trader Type 4 view from back

barbering

clothing

shoe repair



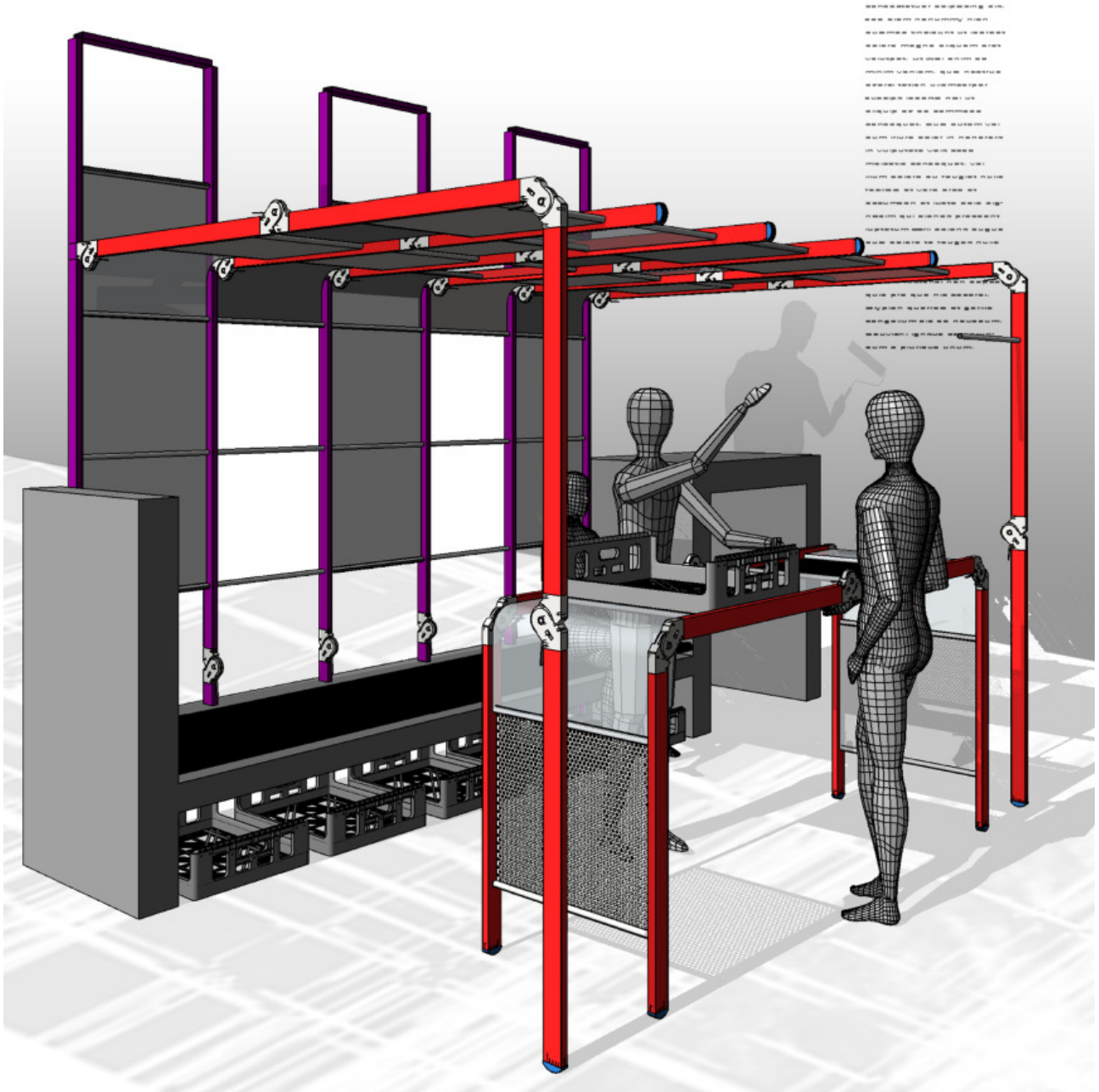


Figure 150.
Typical trader Type 4 - Type 3 post elements used



Figure 151.
Typical trader Type 4 in action

TYPE 05



ATTACHED TO BUILT FABRIC

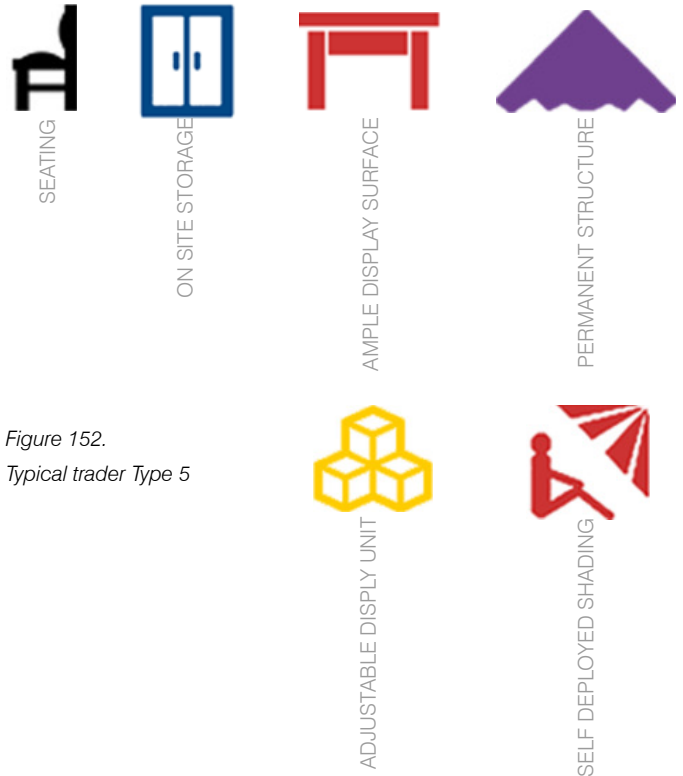


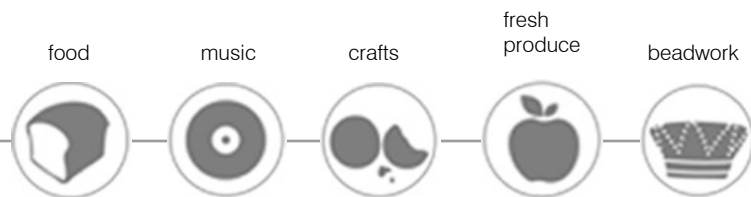
Figure 152.
Typical trader Type 5

Trader Type five is the most dependent on built environment infrastructure for its functioning. This trader is only a step or two removed from the formal realm. Trader Type five may progress to become a formal shop owner or choose to remain in the informal realm. The advantages of remaining in the informal realm are that this trader will be able to vary the type of merchandise sold more readily than a formal shop owner. The informal trading realm is more easily adaptable to changing market conditions and customer demands because its aim is to sell goods to commuters in appropriate quantities at convenient times of day.

REQUIREMENTS

- A fixed structure with his own services
- Fixed post elements with branding
- Ability to sublet a portion of the selling space as well as have subtypes

make and manufacture inside



CONCEPT DEVELOPMENT

Figure 153.

Type 5 claiming a portion of the formal realm, unit closed



barbering

clothing

mealie
cooking

sewing

shoe repair





Figure 154.
Trader Type 5 unit open



Figure 155.
Trader Type 5 unit sub-divided

"The inhabitants explore and define their identities through the interior as they interpret their meanings for themselves, creating images that speak both to the individual who has created it and the world at large." Quinn 2003:126-127

DEVELOPING A MODULE FOR THE BENCH

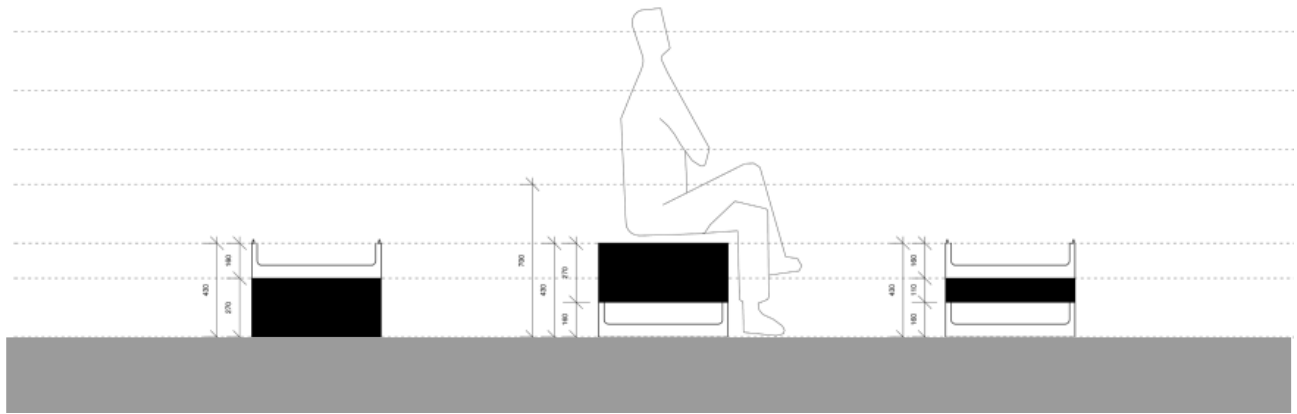


Figure 156.
Developing bench height from crate height

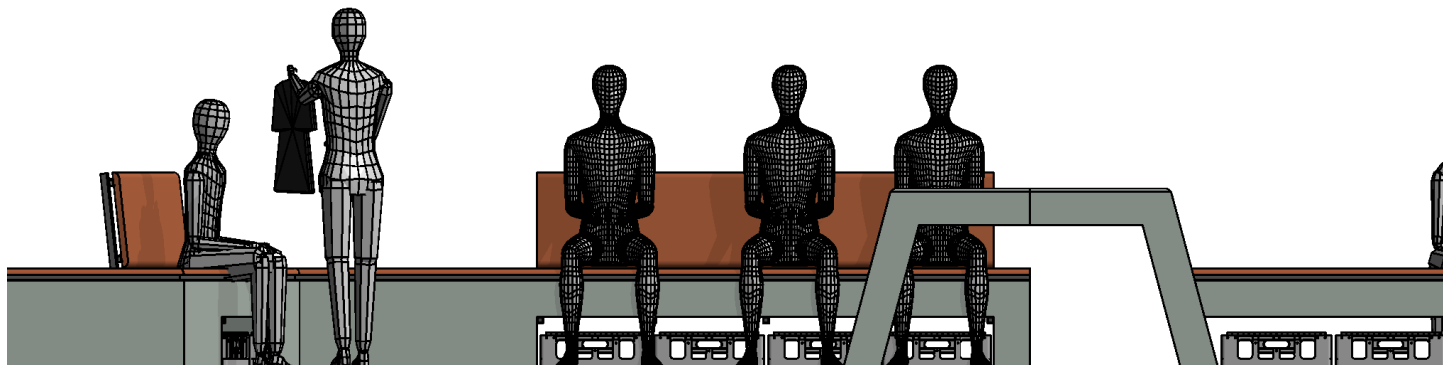


Figure 157.
Bench for a democratic street elevation

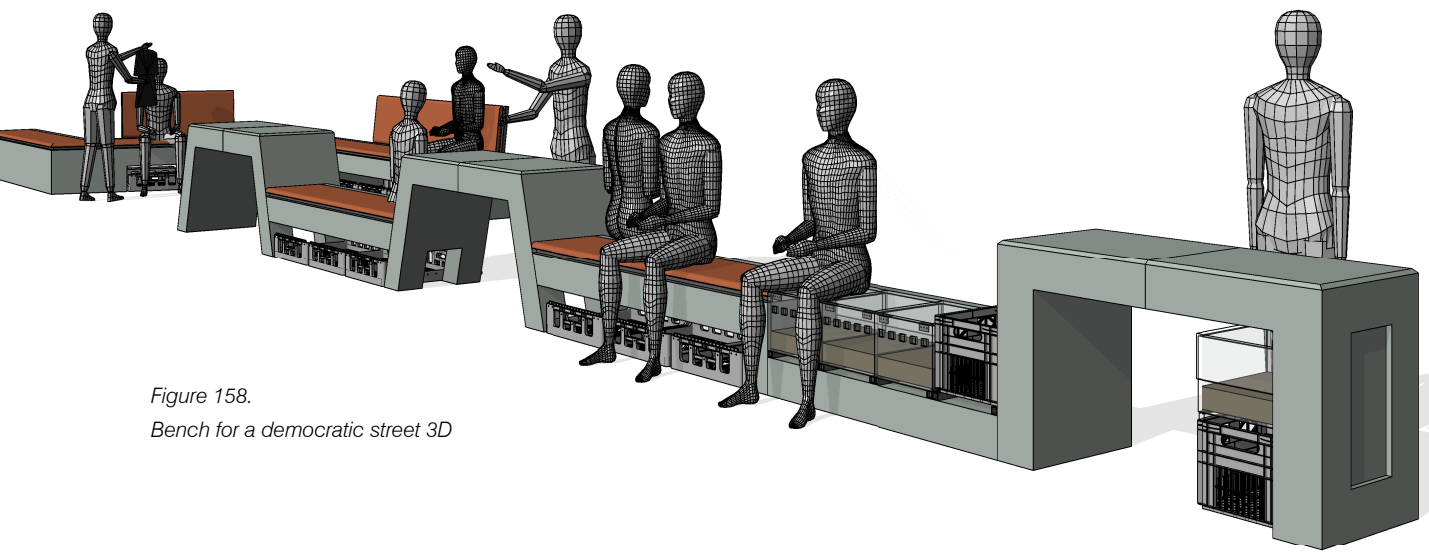


Figure 158.
Bench for a democratic street 3D

