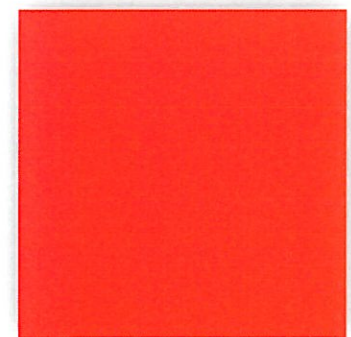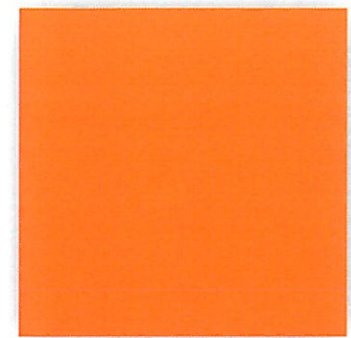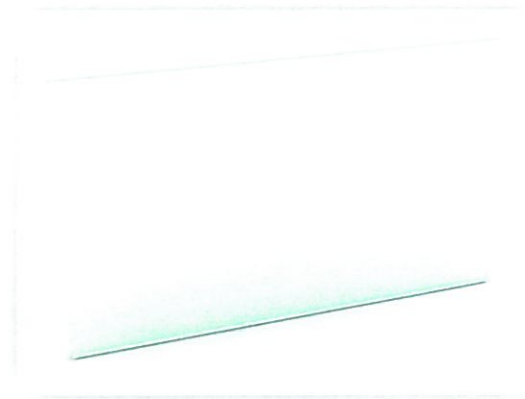# MATERIAL DEVELOPMENT

Transclucent perspex allows artificial light to filter through from inside the cupboards at night, giving a warm glow to the room. During the day, they will appear plain white and its glossy surface will reflect light well.

Translucent glass in the bathroom will allow natural light to filter through in the day and let artificial light out at night, brightening up the entrance.
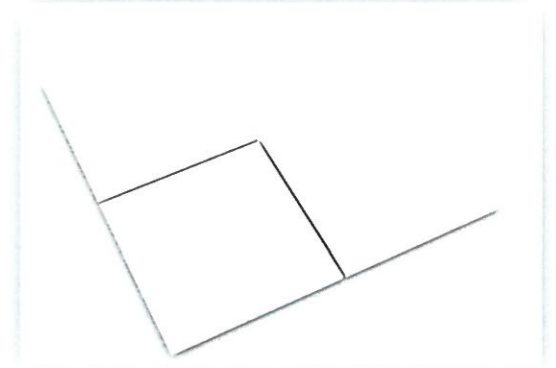
White forms the underlying palate of this apartment; however there is ample room for the client to add his own creative touch. White reflects light so this will improve lighting levels at the rear of the apartment. Reflecting the De Stijl movement, strong colour will be used but restricted to the book shelves and soft furnishings. Red has been chosen because it is one of the primary colours used in Lego and it was popular with the De Stijl movement. It provides a crisp clean contrast with the white. However, moving away from De Stijl, black has not been used as it could darken the space; instead a crisp clean modern look has been retained.
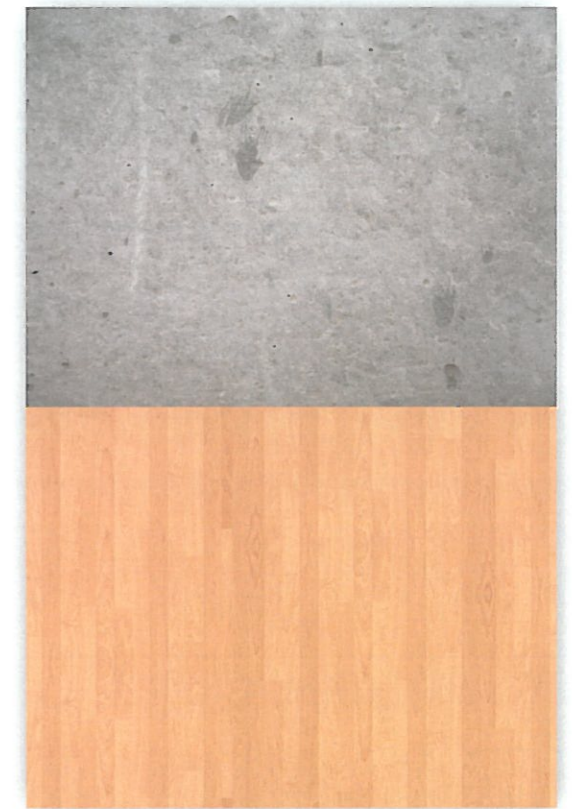
picture of perspex to come

Glass

Cupboard Door

Large white tiles in the bathroom will reflect light and be water resistant. They also complement the grid pattern of Shibata, gving the space a calm ordered feel.
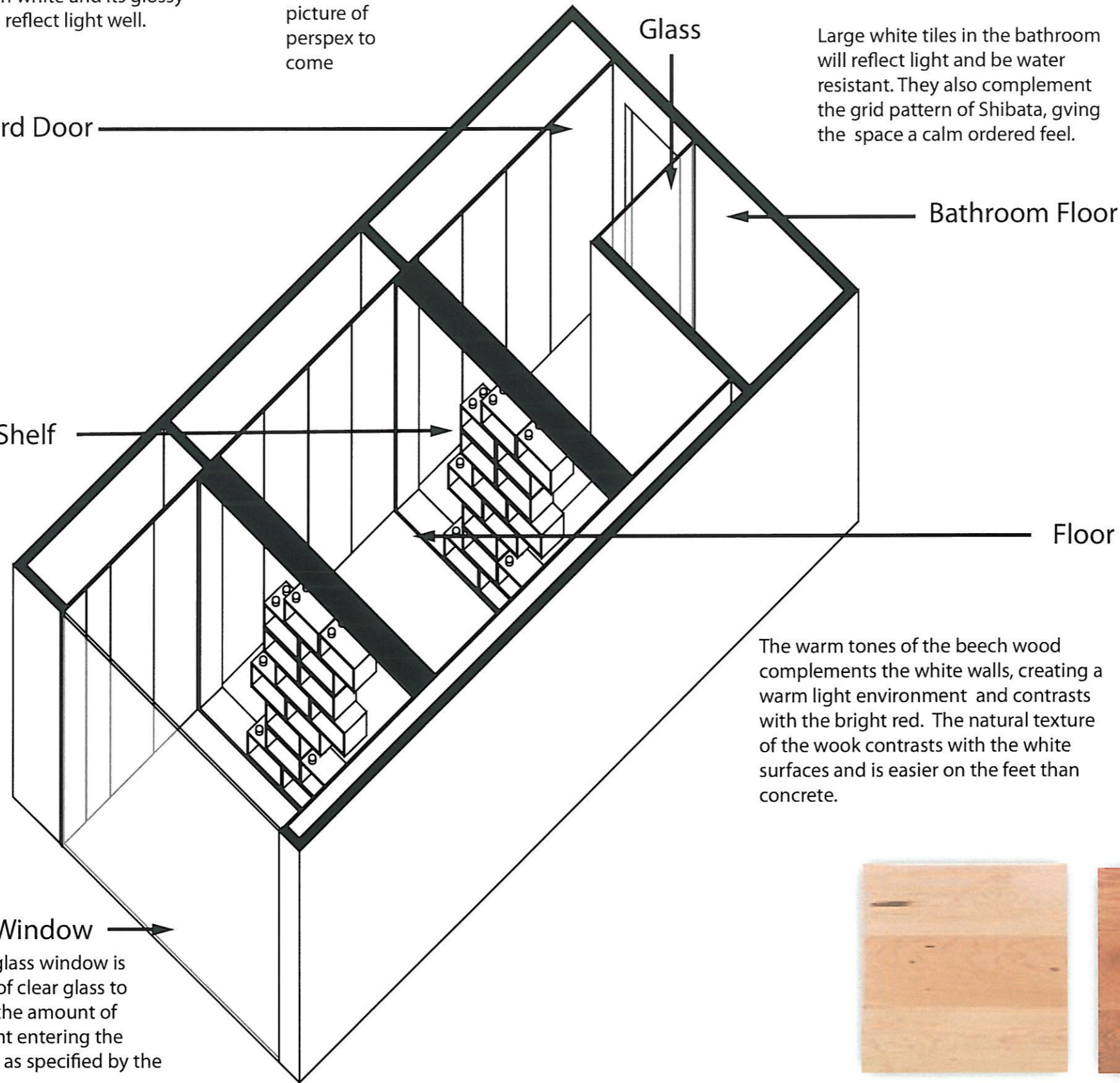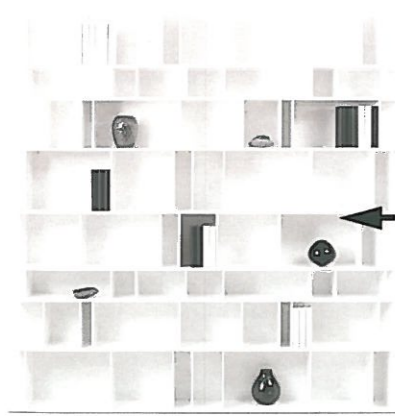
Bathroom Floor

Book Shelf

Floor

The warm tones of the beech wood complements the white walls, creating a warm light environment and contrasts with the bright red. The natural texture of the wook contrasts with the white surfaces and is easier on the feet than concrete.
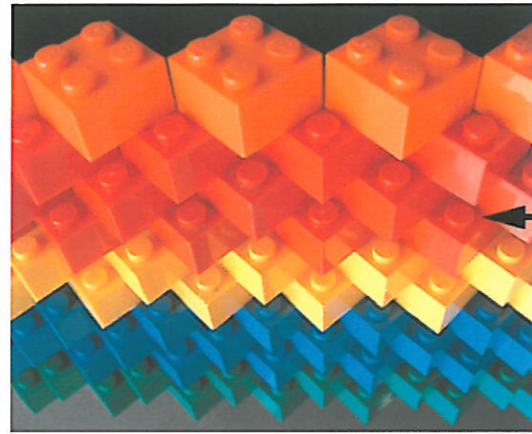
Window

The main glass window is made out of clear glass to maximise the amount of natural light entering the apartment as specified by the brief
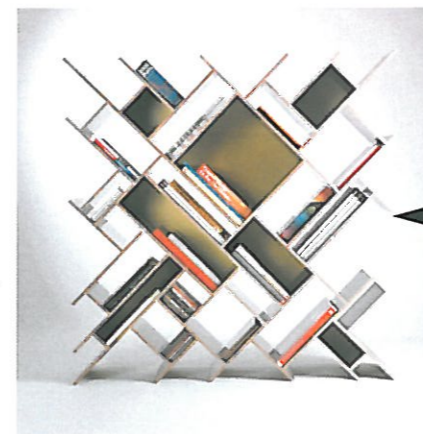
3D: Adobe Illustrator
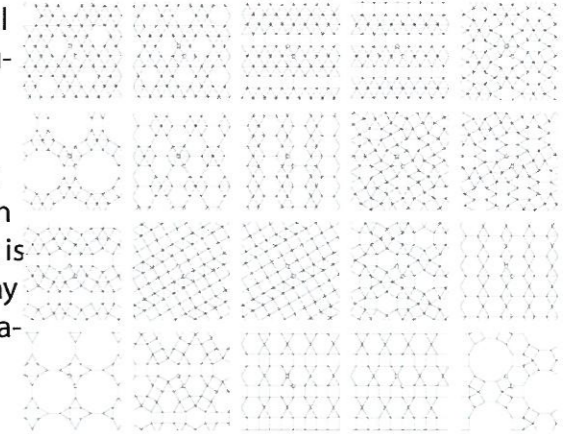
BOOKSHELF DEVELOPMENT

The vertical and horizontal planes echo the de Stijl movement. In the development below the vertical plains have been transformed to fit the size of book; improving the functionality of the bookcase.
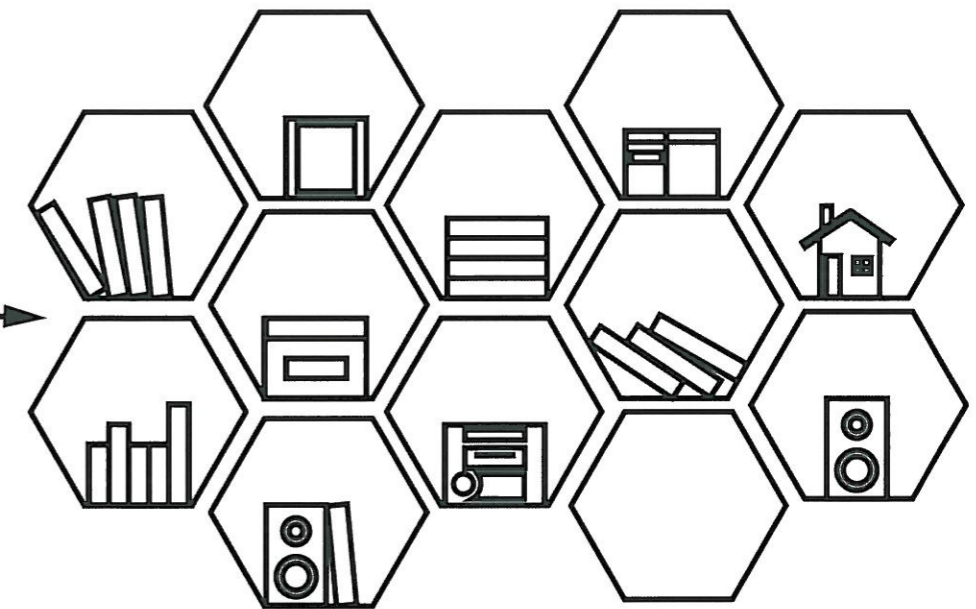
Using Lego as a building block for the shelving will increase the transformability. It meets the desgn aesthetic through its angled forms, use of primary colour and capacity to be asymmetrical.
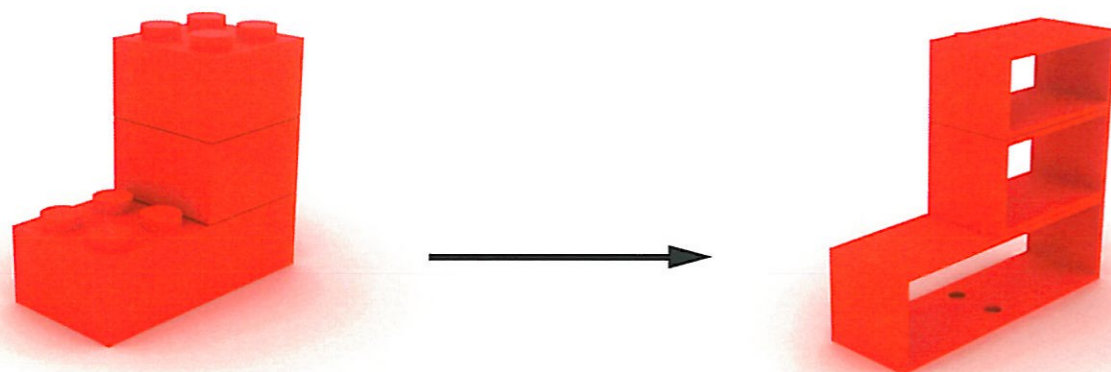
This asymmetrical diagonal book case is a creative solution to storage. Due to the shelves' angled position, there is less likelihood that the books will fall out when sliding the case however it is more difficult to add display items. Also, the transformablity of this shelving is restricted.
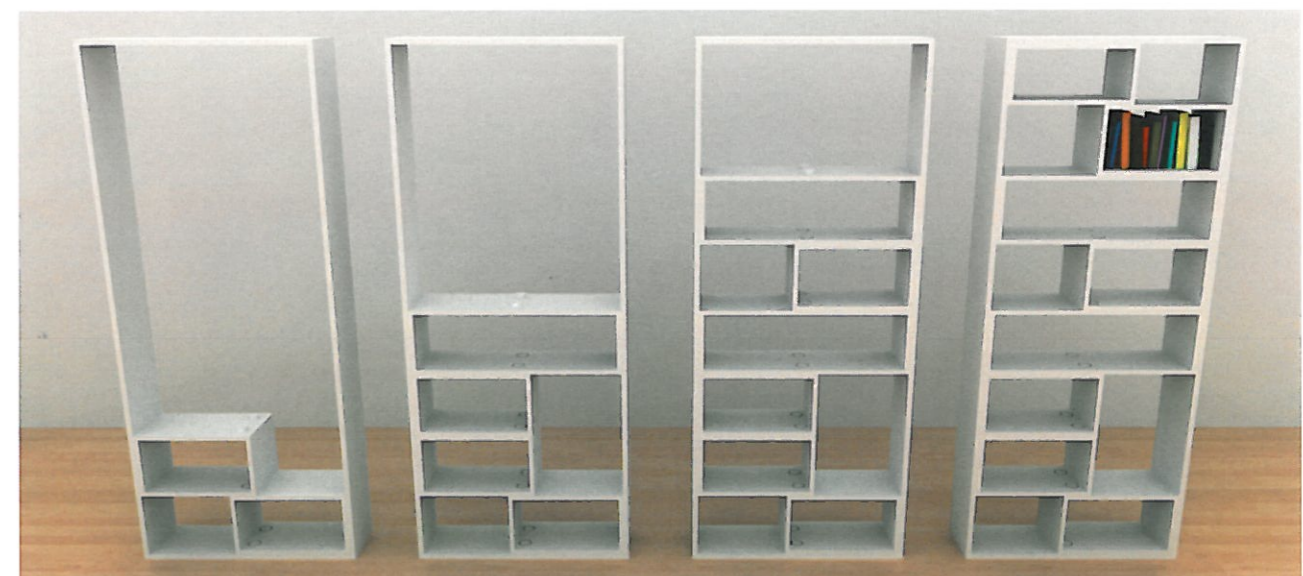
A honey comb shape bookshelf creates is an orginal and innovative style of storing books. As the hexagon has a flat bottom, it means that it can store all types of media, making it more functional. The mutiple slots also allow for books and media to be separated in a more organized fashion compared to the standard linear book case. However alot of space is lost through the separators and the shape has little connection with the brief requirements. A flexible unified bookshelf is needed in order to maximise the space in the apartment.

This was drawn using Vray + Sketchup for initial bookshelf developments

The books shelf is constructed of separate components which can be altered at will then slid into the rectangular frame. This allows the client to create his own asymmetry.
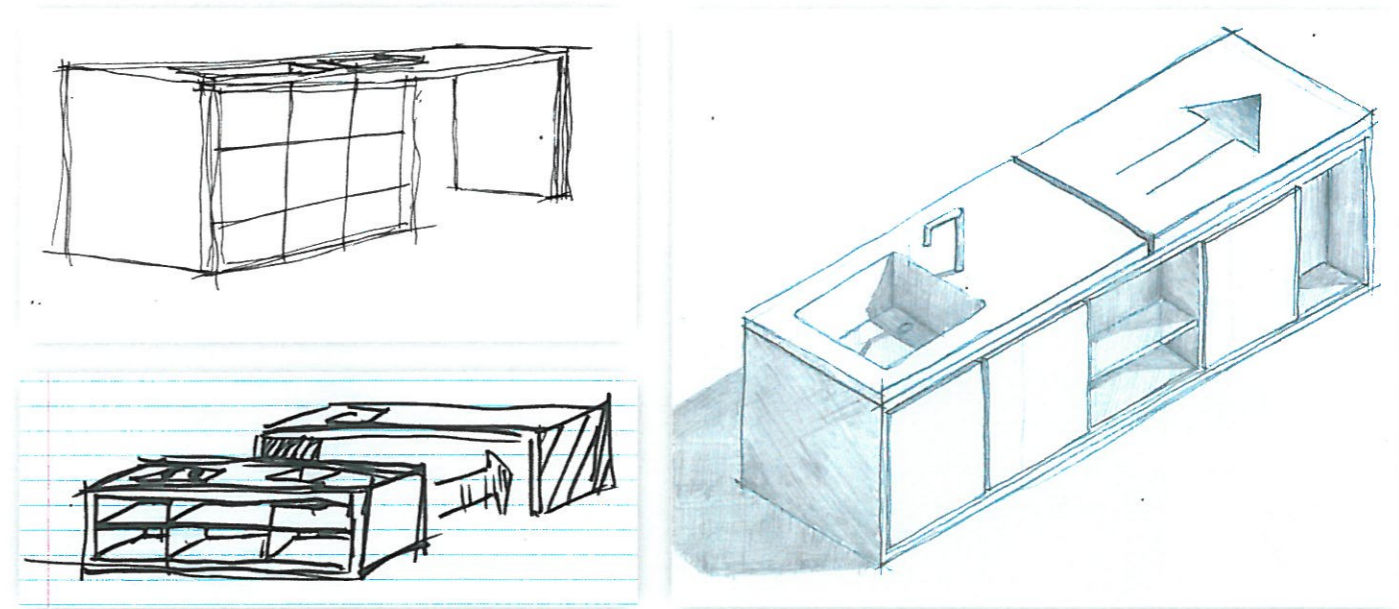
This was also drawn using Vray + Sketchup for initial bookshelf developments

KITCHEN DEVELOPMENT

This drawer dishwasher [Above second to the left] has a customisable front panel so that it sits flush inside the kitchen unit, reducing visual clutter. The appliances in the kitchen will be all integrated (including the fridge [Above Left]) to enable the unit to move as one, increasing usability when in the middle and the side of the room. It can also easily hidden behind panels when it becomes a work space. These devices have clean lines and help to retain the minimalist aesthetic.

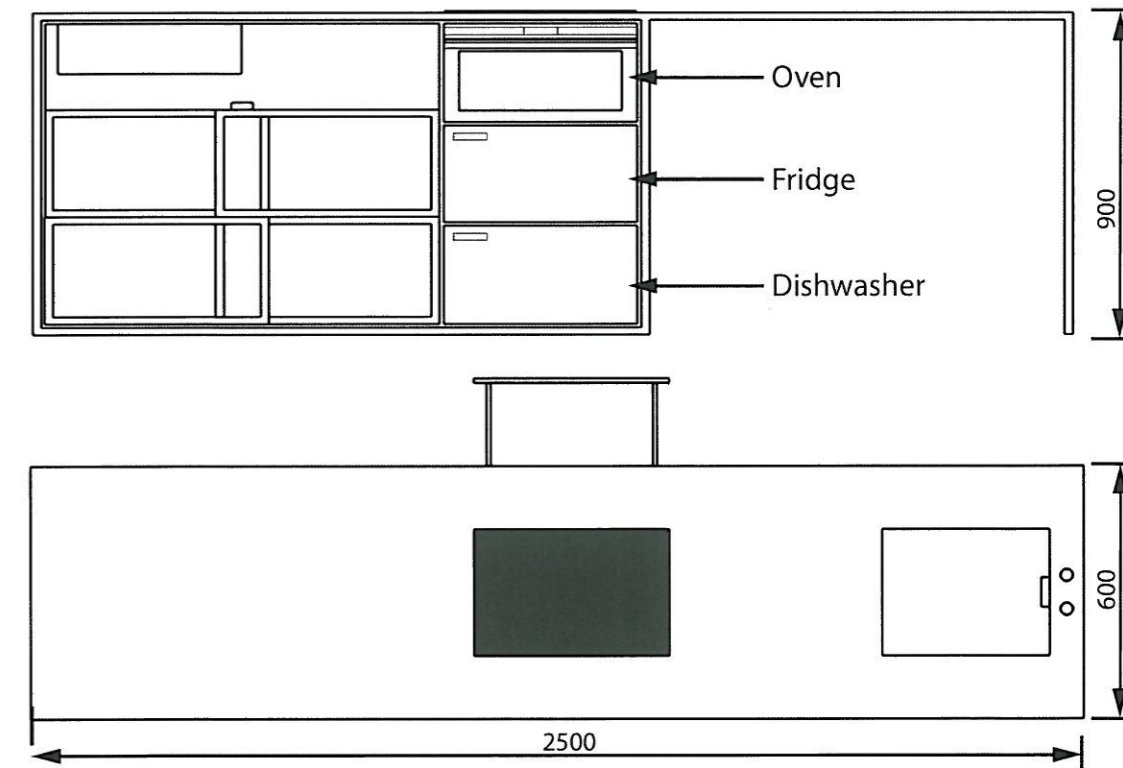These a rough initial concept sketches for the kitchen unit

This kitchen unit has been developed as it is the most transformable aspect of the department. By shifting it into the centre of the room, suddenly the client has a separate living and eating area. This unit is sleek with sharp edging. White has been used to contrast with the primary coloured red shelving (reflecting de Stijl) and the natural floor colours.

Drawers work better in this small space because, unlike cupboards, one does not need to open up the whole side to find an item. In addition it is easier to locate and sort through stored items. The client can access the drawers without leaning down.

Option One — Oven / Fridge / Dishwasher

Option Two — Oven/Dishhwasher/Fridge Behind cupboard

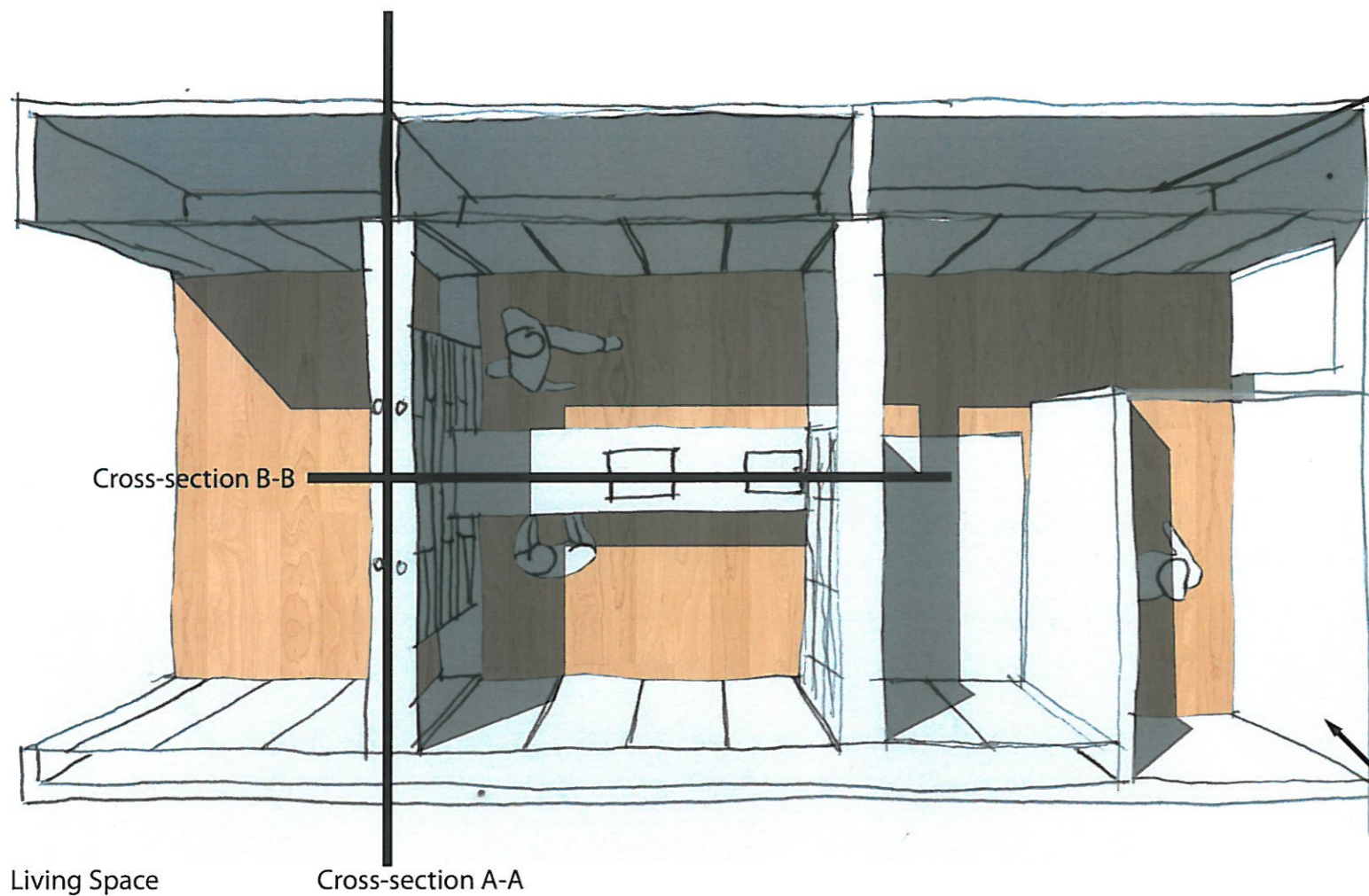Option Three — Oven/Dishhwasher/Fridge Behind cupboard

The asymmetrical lego type form has been extended to the unit to provide unity in the apartment. The drawers hide the appliances to make the unit appear more ordered.

The gap under the bench to enables seating for one and, when pulled out, two people. This improves the functionality of the unit however, it does compromise storage capacity. This will need to be addressed in the final development.
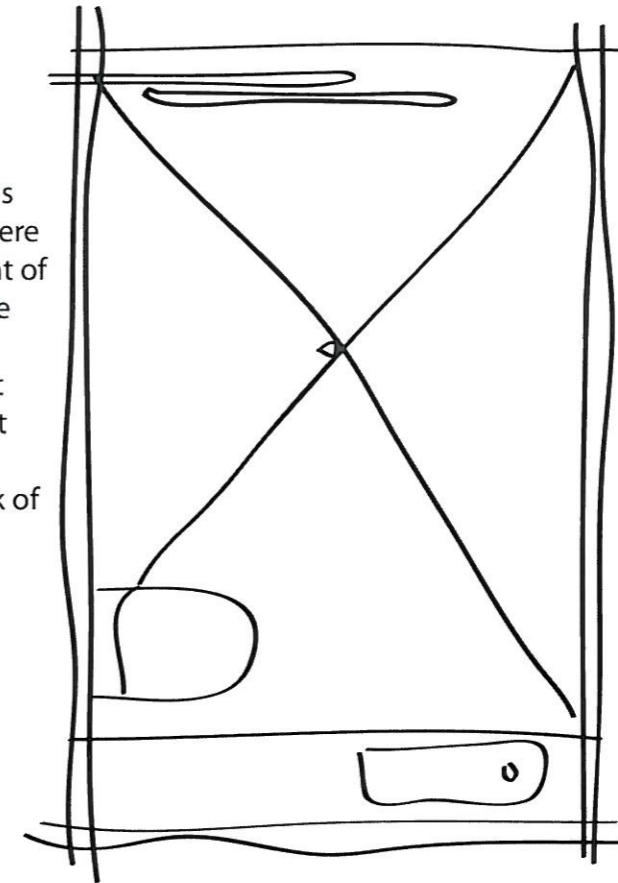

Oven
Fridge
Dishwasher

900

600

2500

2D: Adobe Illustrator   3D: Google Sketchup rendered in V-Ray (Man added in Photoshop)
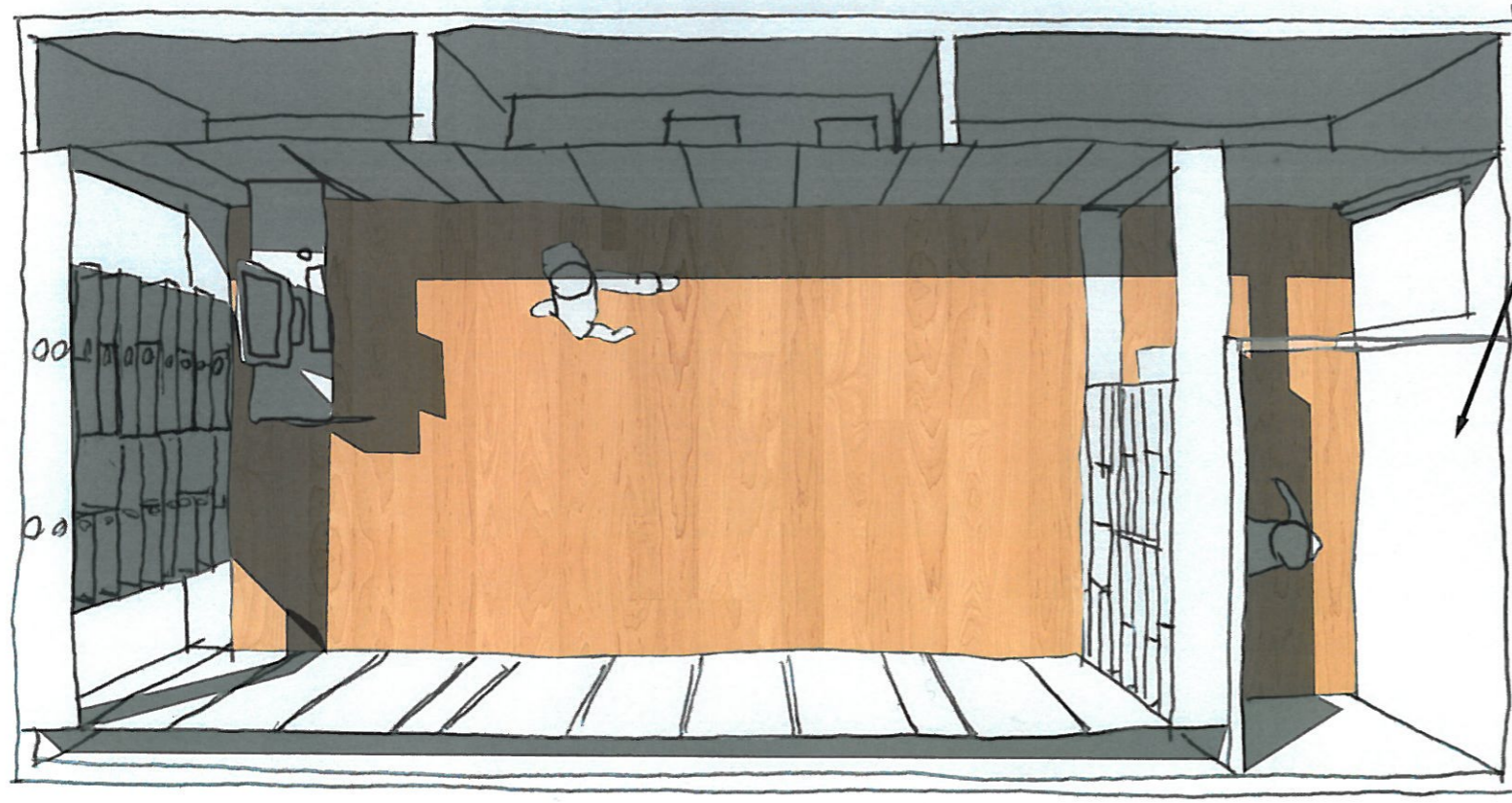
DEVELOPMENT

Washing Machine Stored in Cupboard

A strength of this design is that there is a large amount of storage area. The client can leave coat and bags at the entrance but keep the clean uncluttered look of the apartment.

Cross-section B-B

Living Space

Cross-section A-A

The bathroom has an overhead shower arrangement to reduce clutter in the room and need for a separate shower box. The wall mounted toilet at the rear uses minimum space. Some development is still needed as the sink unit will continue to get wet under this arrangement.
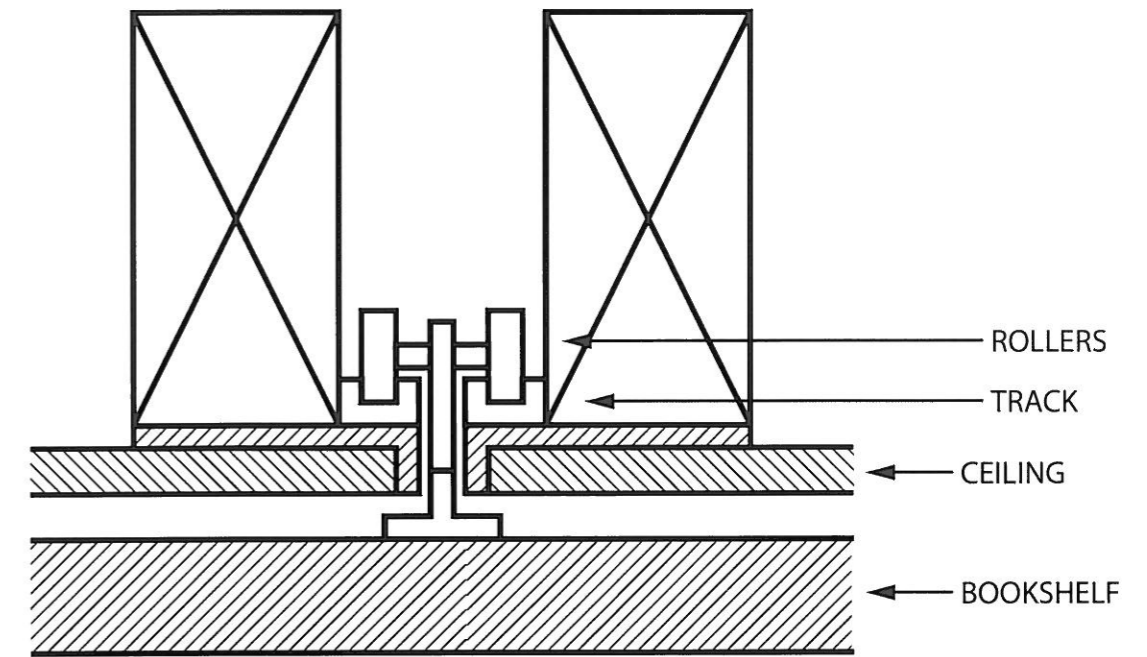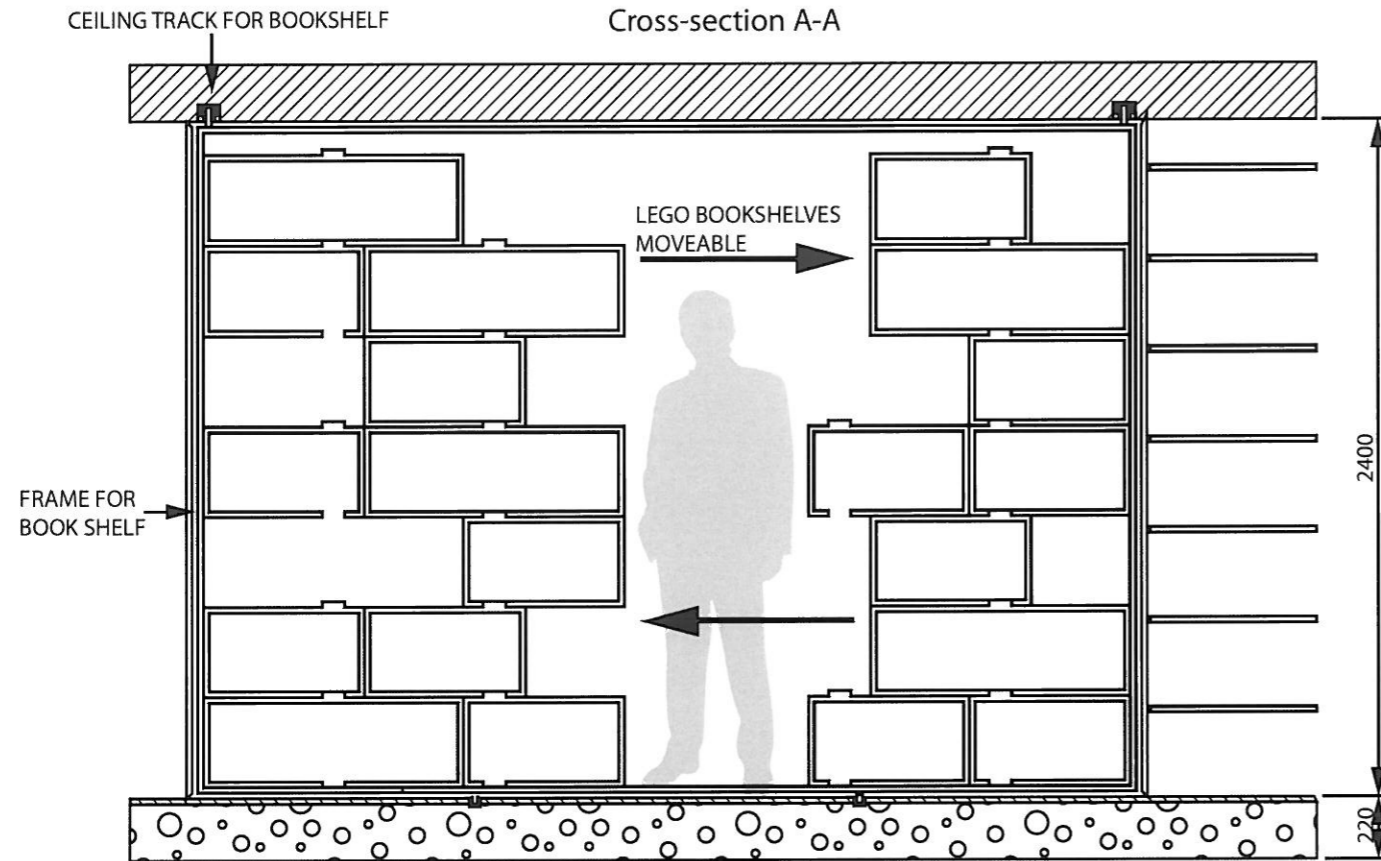
Bathroom

This development adopts ideas from each concept. The sliding bookshelves stretching across the width of the apartment (Concept 1)divide and separate the space and increase functionality. Panelled walls (Concept 2) create a rhythmic pattern along the length of the room, giving an organised grid like feel, similar to the work of Shibata and traditional Japanese architecture. The asymmetrical shelving using horizontal and vertical planes (Concept 4) filter light and give privacy. They also personalise the space, so that the client has a good creative display area. The rolling bed (Concept 3 and 4) is a very functional feature; it not only hides the bed, but adds extra space to the room and allows it function better when in work space mode.

The apartment, when in open mode and the shelves are compacted, is deceptively simple. It meets the minimalist expectations of the brief as it is clutter free with clean lines. The natural light can be controlled by placement of items on the shelving; which also frames the view. It functions well as a work space.
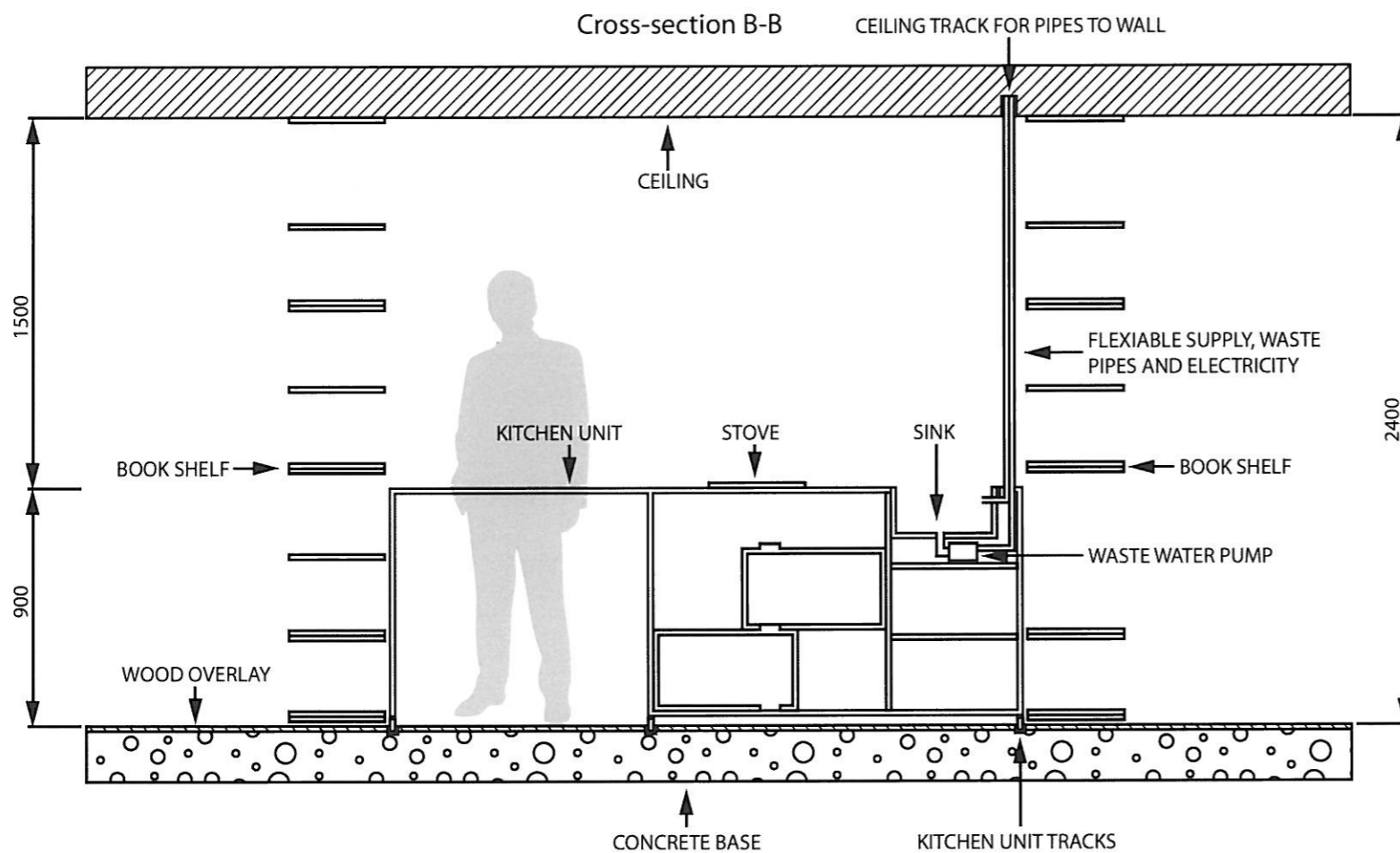
When transformed into living space, the apartment becomes more functional and easy to live in. It will be clear to visitors that this is a room of a book and media lover.

As the front window is north facing and does not open there is going to be an issue with ventilation, however this has been solved by adding air conditioning inside the apartment to control the temperature
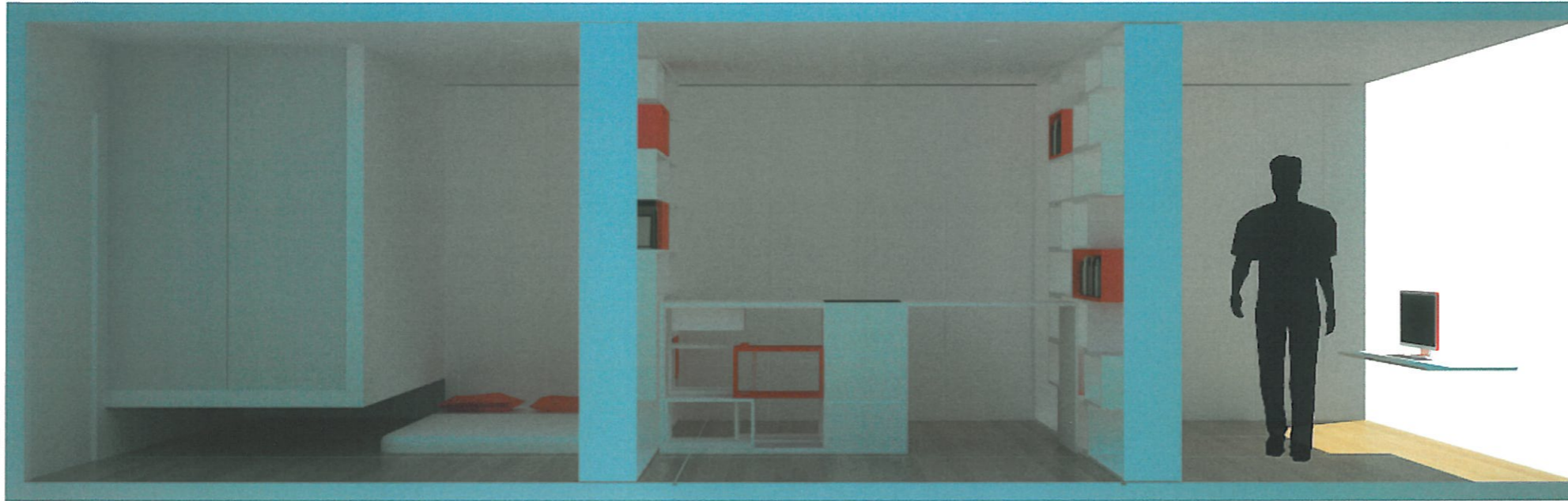
Work Space

3D: Hand sketch rendered in Adobe Photoshop

DEVELOPMENT CROSS SECTIONS/DETAIL

Cross-section A-A

CEILING TRACK FOR BOOKSHELF

LEGO BOOKSHELVES
MOVEABLE

FRAME FOR
BOOK SHELF

2400

220

ROLLERS

TRACK

CEILING

BOOKSHELF

The detail [above] shows how the bookshelves roll. The mechanism is hidden in the ceiling.

Cross-section B-B

CEILING TRACK FOR PIPES TO WALL

CEILING

1500

FLEXIABLE SUPPLY, WASTE
PIPES AND ELECTRICITY

BOOK SHELF

KITCHEN UNIT   STOVE   SINK

BOOK SHELF

2400

WASTE WATER PUMP

900

WOOD OVERLAY
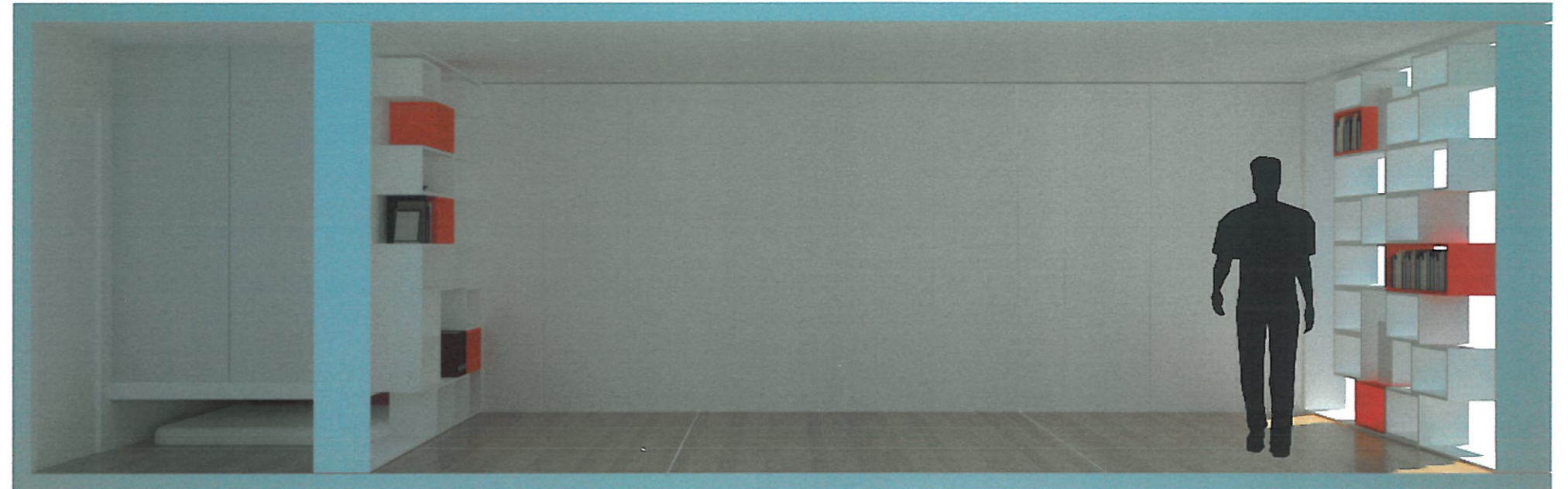
CONCRETE BASE   KITCHEN UNIT TRACKS

The cross sections and details show how functional elements in the apartment operate. The lego building block concept has been used to provide a framework for the shelving; this enables the client to alter the shelves to his functional and aesthetic needs. This will allow the client to make the most of his creativity.

Most details are hidden into the wall cavities to meet the clean uncluttered minimalist aesthetic of the client. Because the kitchen unit slides, the water piping (potable and waste) and electric cabling has been kept external; it moves along the track in the ceiling when the kitchen shifts position.
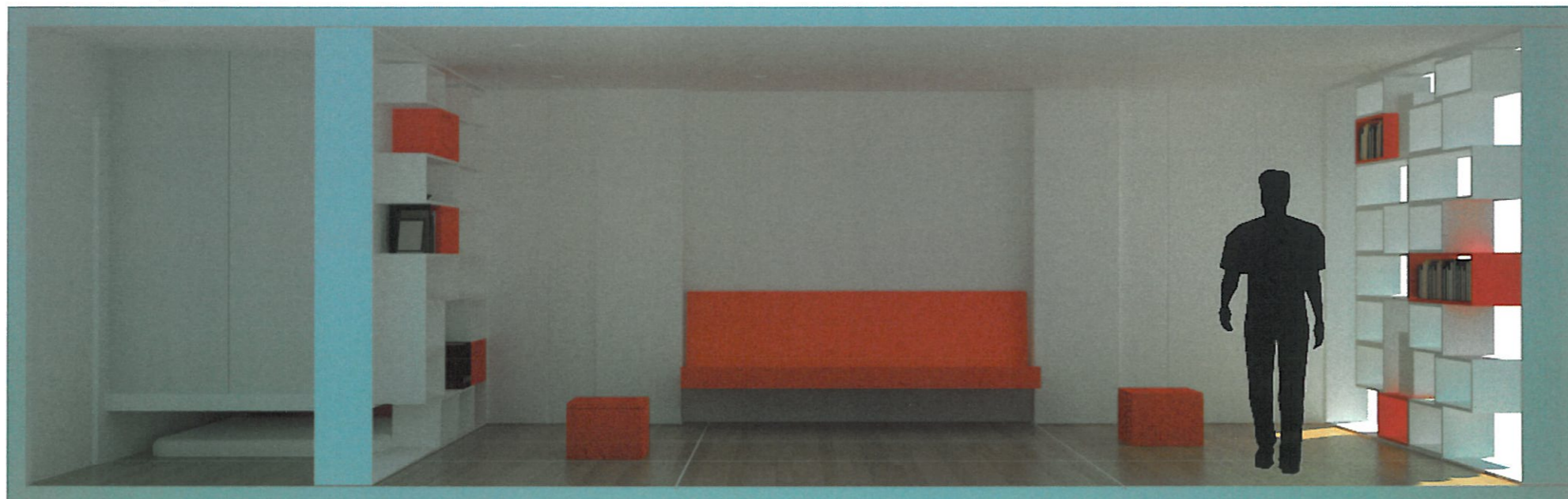
2D: Adobe Illustrator
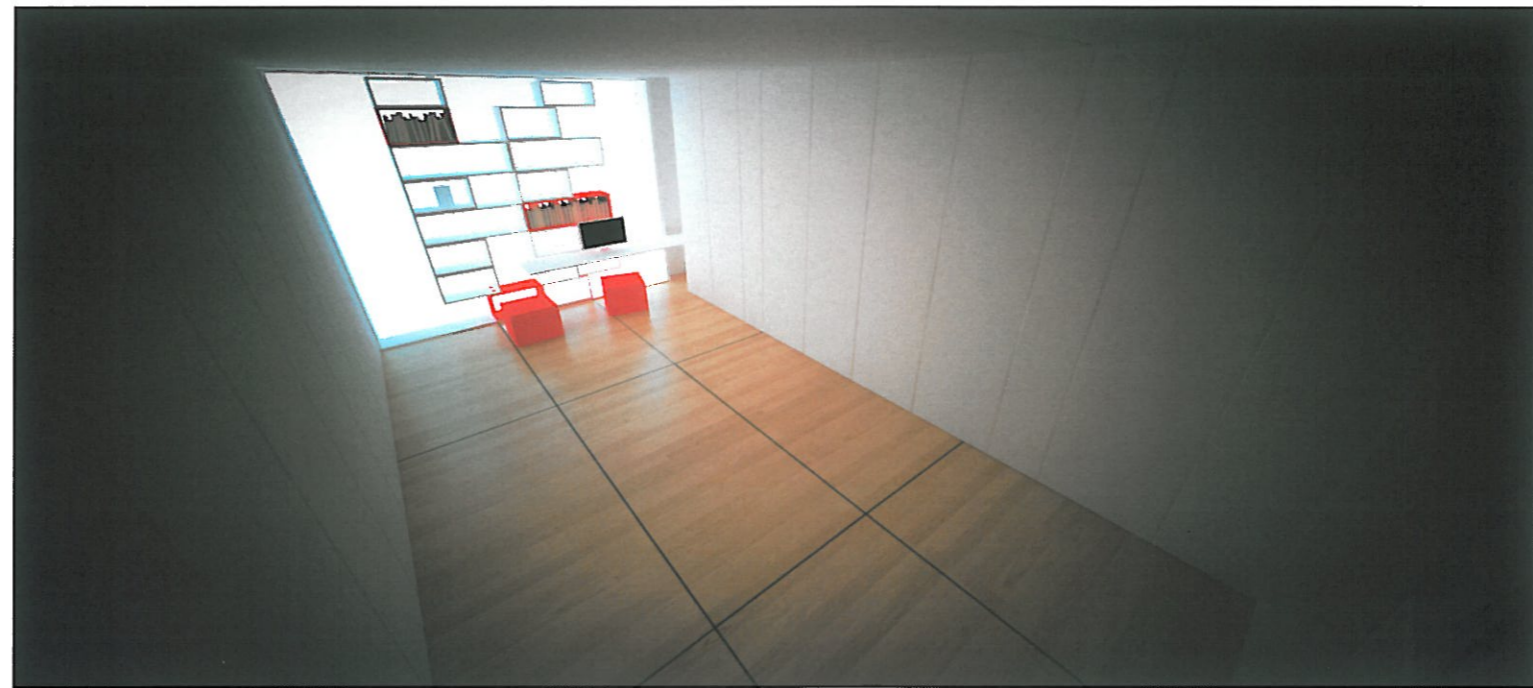
FINAL DESIGN

Bed, Kitchen and Workspace Mode

Theatre/ Lounge Mode

Open/Client Consultation Mode

3D: Google Sketchup rendered in V-Ray
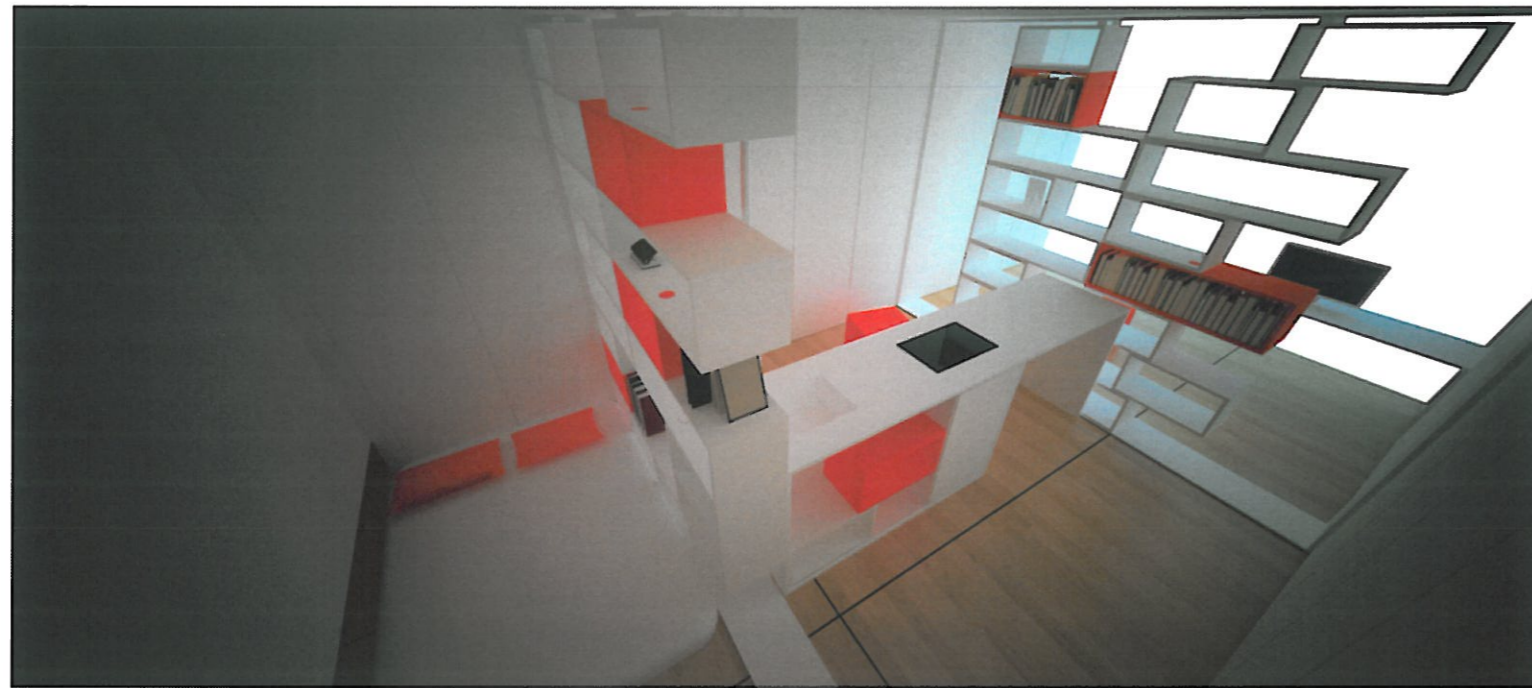
FINAL DESIGN

Apartment in work mode

Apartment with bed, kitchen/dining and work station

Apartment in theatre mode

3D: Google Sketchup rendered in V-Ray