

## Hellmutstrasse

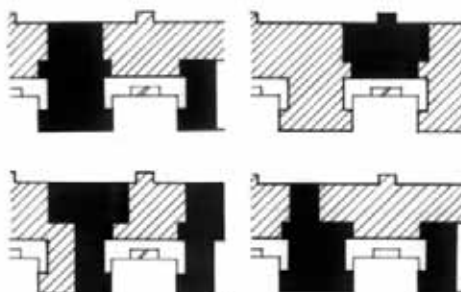
Zurich, Switzerland, 1990  
Architecture Design Plannin, ADP

The four-storied building with 32 flats (at present) is owed by a housing-cooperative and self-management community (WOGENO). The tenant association (Hausverein) was formed in 1984 and began to develop a building program together with invited architects. Envisioned an adaptable system as a way to accommodate the different wishes of the tenants. Adaptability is achieved by three measures: introducing a plan divided into three zones, locating fixed openings in

### 赫爾幕街改造

(瑞士，蘇黎世) 1990

這座高四層，集體所有，由住戶自我管理的住宅，現有32戶。1984年成立住戶產權會後，就請建築師協助擬定建築設計任務書。任務書要求設計應滿足不同家庭的需要。經招標選中的ADP設計所的方案提供了一種適應性體系。平面上分成三個功能區，承重牆上預留開通的門洞，室內分隔用靈活組合的牆櫃。預留門洞開啓或封閉可方便調整套型大小。封閉材料以石膏板為主，精心設計可達到分戶牆的隔音要求。管井設備功能區貫串平面中

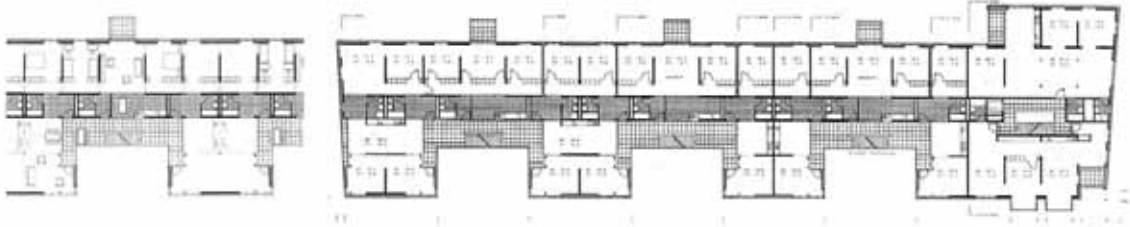


load-bearing walls, and providing movable wall cabinets. The installation zone in the center of the building gives any apartment unit several possibilities in changing size with few restrictions from the position of the kitchen and the bath. Openings in the load-bearing walls which throughout the whole zone of the rooms can be closed or opened. Allow the apartment size and room relations to be changed. Wall openings were filled with gypsum-panels constructed carefully to meet sound insulation standards. Dimensions of rooms are either 4.0m or 4.5m which are anticipated to adapt to different ways of furnishing.

部，使套型的靈活劃分不受廚房衛生間的制約。承重牆間有4米和4.5米兩種，適應不同傢俱佈置。



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





## Wohnüberbauung

Davidsboden, Basel,  
Switzerland 1991  
M. Erny, U. Gramelsbacher and  
K. Schneider

This apartment block surrounding a semi-public courtyard was built in an old industrial quarter in Basel in 1991. A tenant self-management and adaptability concept was given as a program requirement in a competition held by the Basler Christoph-Merian-Foundation (CMS) and Patria, an insurance company. In the part of the building which belongs to CMS the tenant association and a participatory design process

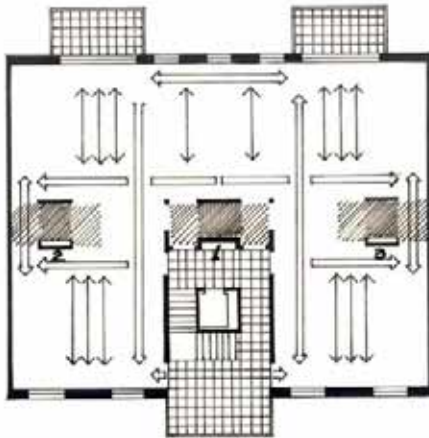
### 達衛波頓住宅

(瑞士，巴塞爾) 1991

這座住宅位於巴塞爾市一個舊工業區，庭院式佈局。由一個房產基金會和一個保險公司共同興建。建築招標任務書要求結構適應性，以方便住戶參與。在建造和管理過程中，只有基金會的住房實現住宅參與，這有賴於基金會主席的支持和兩位社會工作者的協助。住宅設計的適應性體現在兩個方面，一是套型的靈活變化，二是住宅內空間的劃分。室內分隔牆，廚房和部分衛生間隔牆用輕制石膏板。在基本結構建成後，由住戶參與設計出符合心



Grundriss / 2. BEWÖHNUNG WOHNBECKUNG DAVIDSBODEN

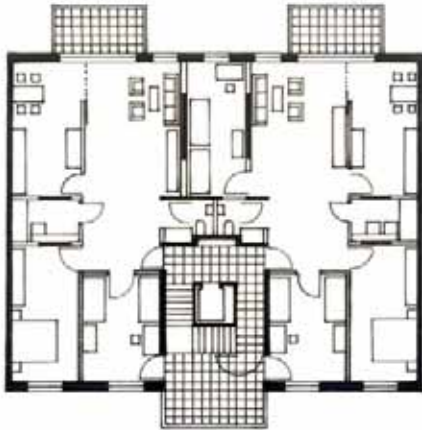




were carried out with the help of two social workers and the building manager. The potential adaptability works on two levels. First, apartment combinations are possible among the flats on the same floor and accessed by the same staircase. Second, the interior of each flat provides the greater extent of flexibility. The partition walls, kitchens, and a part of the bathrooms are changeable. They were built after the major structural construction using tenant participation. The partition walls are made of gypsum-board.

意的套型 -

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





## Überbauung "Neuwil"

Wohlen, Switzerland, 1966  
Metron Architect Group

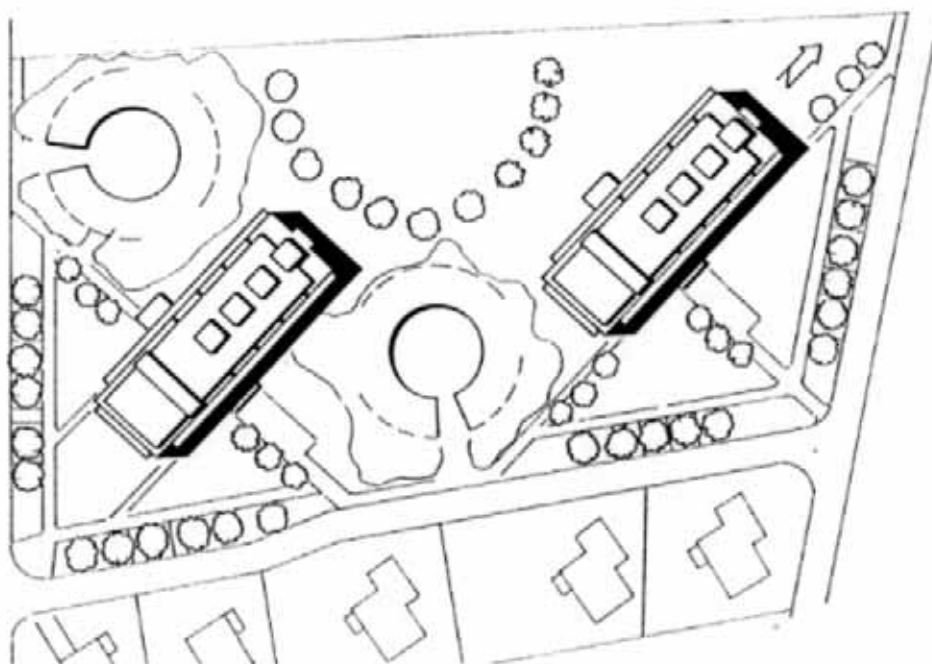


This adaptable apartment building in Wohlen, Aargau, was designed by METRON Architektengruppe and built in 1966. The eight-storied free-standing slab block with 49 apartments is owned by the private firm Tunau Immobilien AG and managed by the firm COSMOS at present. The owner as well as manager have changed several times since the building was constructed. The original intention of the architects was to build apartments which can be adapted to the changing needs

### “新期望”住宅

(瑞士，沃倫) 1966

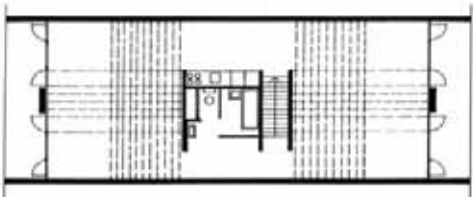
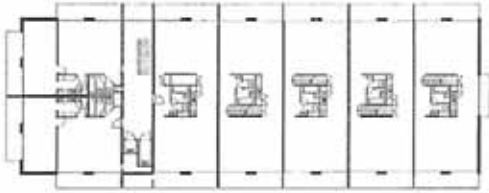
這兩座出租公寓高八層，每棟有49套住房，1966年建成。設計目標之一是適應住戶長遠的需求和居住方式的變化。套型大小、廚房衛生間和入口樓梯是固定的。而居室則由住戶用專門提供的木屑板，按30釐米格線分隔。板材寬有60釐米和90釐米兩種，安裝方便，但隔音較60年代一般標準差。為方便住戶，建築師還專門製作了一套用戶指南。



of one family and to changing lifestyles in the future. The overall size of each flat is fixed, as well as the kitchen, bathrooms and the entrance stair. The rest of the interior space can be divided within a 30 cm grid with light and easily movable partitions made of chip-board in 60cm and 90cm widths. These flexible divisions can be removed or reinstalled, but they did not meet sound insulation standard even in 1960's. The architects prepared an introduction booklet for the tenants about the potential flexibility of the apartments.



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		



## Brahmshof

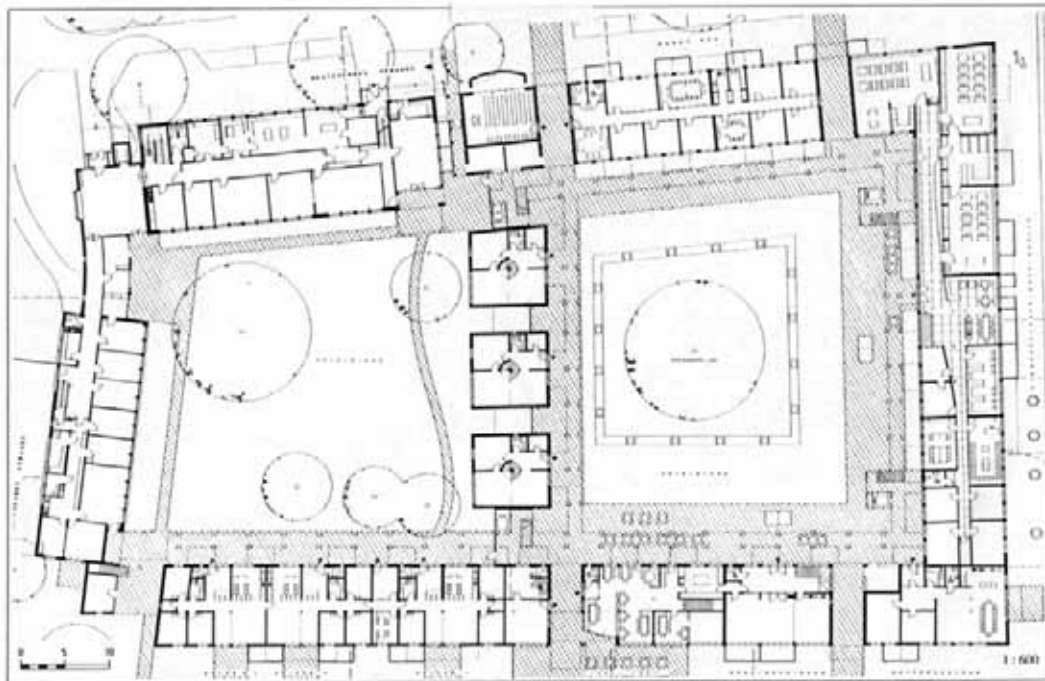
Zurich, Switzerland, 1990  
Kuhn, Fischer, Hungerbühler  
Architekten AG

The Evangelischer Frauenbund Zurich (EFZ, Protestant Women's Association) initiated a project competition. The competition program drawn from these meetings carried the central spirit of the EPZ, to "strengthen our capability and encourage ourselves, to think openly and to act with determination". "housing for differing persons was listed in the program as the primary requirement. The 5 story building around a common courtyard. It was built in 1990.

布朗姆斯大院

(瑞士，蘇黎世) 1990

這座位於市中心的住宅由當地的新基督教婦女聯盟所擁有。在建築設計招標前，聯盟通過組織幾次由多方面人士參加的討論會，制定了設計任務書。任務書體現了聯盟的宗旨，即“激勵進取，開放思想，行動果敢”，要求“住宅應為不同類型的人服務，有不同的功能。”住宅於1990年建成，5層高，前街後院式佈局。適應性體現在三個層面。首先，承重牆預留門洞，套型多樣。門洞填充料用普通砌塊。造價低，但建成後調整不方便。其

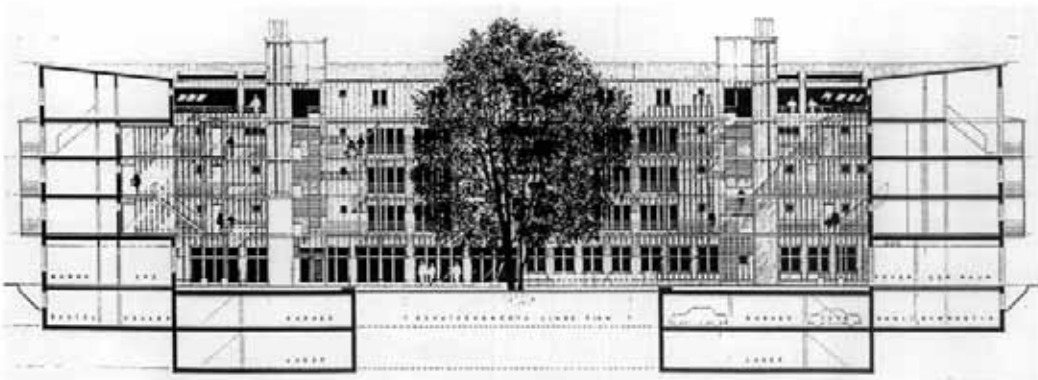
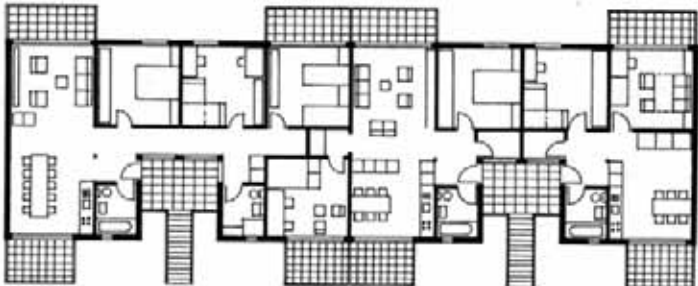
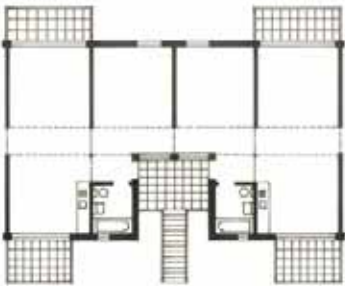




The adaptability of the interior space is possible on three levels. First, the openings in the walls of the central zone of the building make it easy to adjust the flat size. Second, most of the rooms are the same size and proportion which allows adaptation to many different functions. Third, the living room and kitchen can be divided or combined according to the tenants own wishes with the arrangement of movable cabinets. The techniques and materials for the changeable parts are relatively simple. The building offered a high flexibility during the planning phase and construction phase.

次，多數房間大小位置形狀相同，功能中性，方便住戶自我設定房間用途。最後，起居廳和廚房聯為一體，由住戶自己利用提供的拆裝方便的櫥櫃處理兩者間關係。可變構件材料和技術簡單，利於普通用戶使用。

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		



## Housing "Living in Lohbach"

Hötting-West, Austria, 1998  
Baumschlager & Eberle

The Support, or fixed part of the building, includes the outer wall, the inner access (staircase, landing, and corridor) and the utilities (kitchen and bathroom). Basically there are two very simple built structures in the plan. In the middle of building there is a stairwell surrounded by closets and ancillary rooms. On the outer fringe there is a surrounding wall, which serves as structural as well as an enclosure. There are no divisions of rooms between these two struc-

### “羅溪”住宅

(奧地利，因斯布魯克) 1998

住宅的承重結構部包括圍繞在四周的外牆和平面中部圍繞在樓梯間和設備空間（廚房和衛生間）的內牆。幾乎所有房間的隔牆都採用輕質石膏板隔牆套型的分隔，組合和房間的數量都可以自由調整。除設備空間，所有其他空間都是開放的，滿足住戶多樣化的需求。外牆是介於自主和公共之間空間。承重外牆採用“法國式窗”，從樓板到天花豎直形的；週邊接一圈陽臺走廊空間；最週邊是一圈豎直形的遮陽板，外貼銅皮。住戶可根據天氣、氣

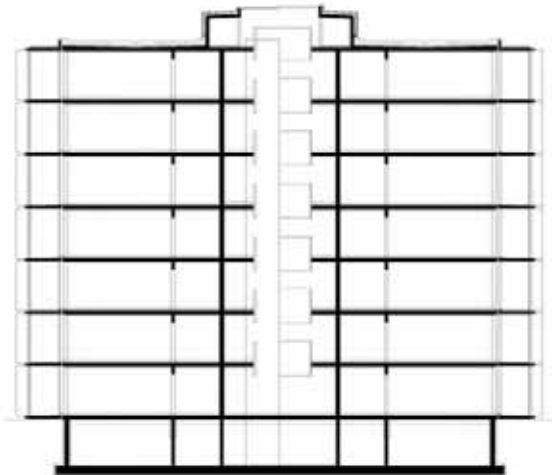
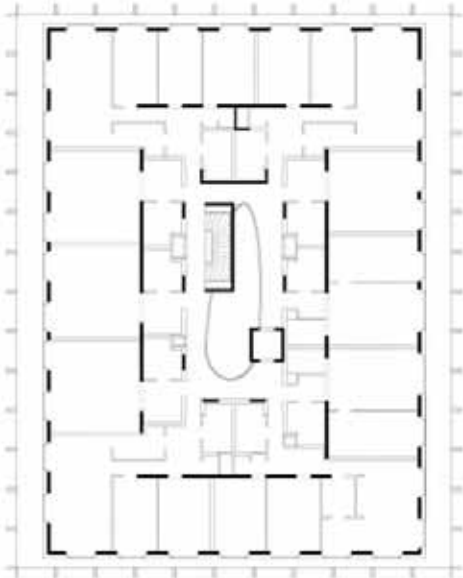


tures. To omit or to add a room, all one has to do is to remove or insert a partition wall. There is a fixed service zone and there is also the possibility of adapting the living area to individual requirements. Very diverse domestic arrangements can be realized. The façade is the crucial space, which defines the relationship between the public exterior and the private interior spaces. All openings to the outside are French windows from floor to ceiling providing access to the terraces/balconies that run around the buildings. Shutters made of copper and parapets of glass, both mounted in front of the terraces/balconies, serve as a protection from sun and weather and provide privacy.

候和自己的需要開啓或關閉。住戶的這種自主行為又體現為動態的立面效果。



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		

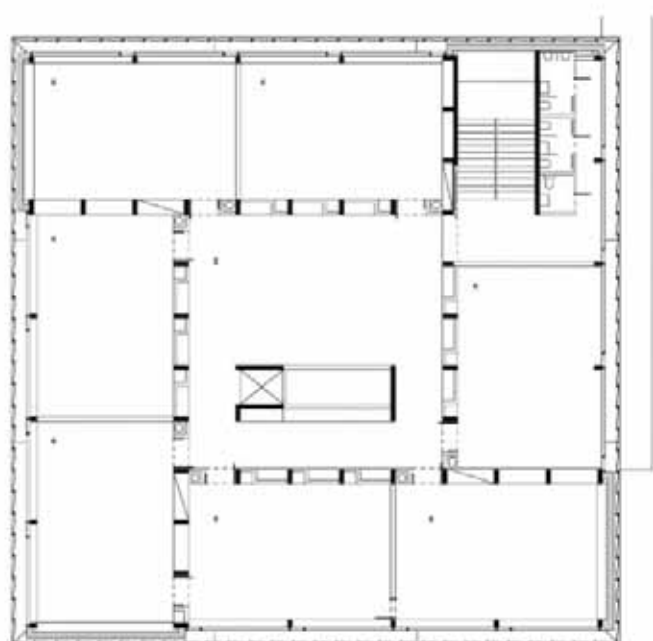




## Baumschlager & Eberle Eco-school

Mäder, Austria, 1998  
*Baumschlager & Eberle*

The design orients itself to the close relationships between form, function, economy and ecology. The on all sides double layer of the facade of the school building consists of a wood and glass construction, which is wrapped by ventilated, scaled glass panels. Depending upon the position of the sun, the various conditions of transparency change the appearance of the building: From dematerialization caused by raking light

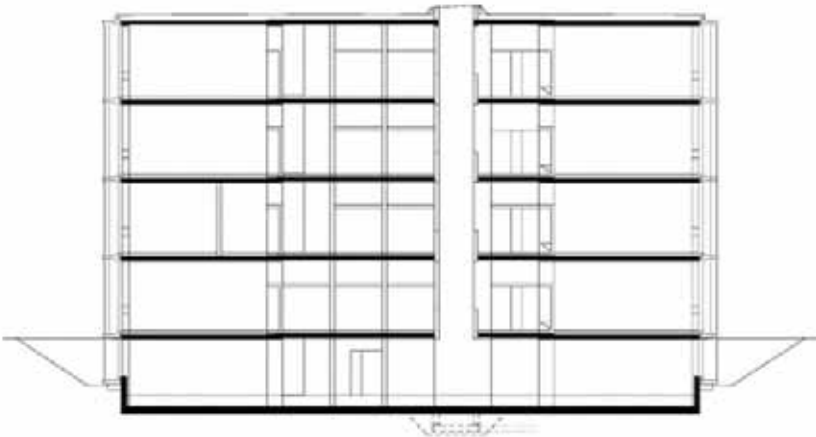
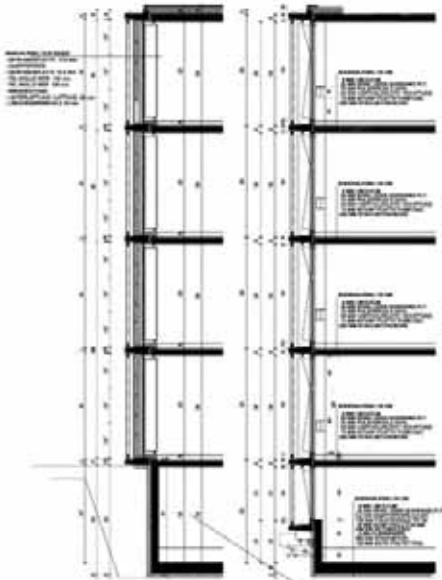


### 麥德爾生態學校 (奧地利，麥德爾) 1998

設計的目的是將功能、經濟性和節能要求組織在一個完整的形體當中。環繞四周的雙層立面由櫟木和玻璃幕牆組成。外層是通透的豎直玻璃板。玻璃的透明和反射作用，隨著陽光的角度而呈現的不同的視覺效果，從完全通透到完全反射周圍的環境。為了節能，平面進深很大，而全玻璃立面加上中間屋頂採光，使室內光明通亮。學生集散空間位於平面中部，四周佈置教室。教室的數目和大小劃分靈活。

to becoming a mirror of the surroundings. Extensive glazing of the facades, in conjunction with a central light well and clerestory windows in the interior walls made of wood, enable natural lighting of the floors, despite the ground floor area of approximately 80 by 80 feet. On each regular floor, seven peripheral classrooms group around a generous, central recess space with a maximum flexibility of space divisions.

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





## Housing Sebastianstrasse

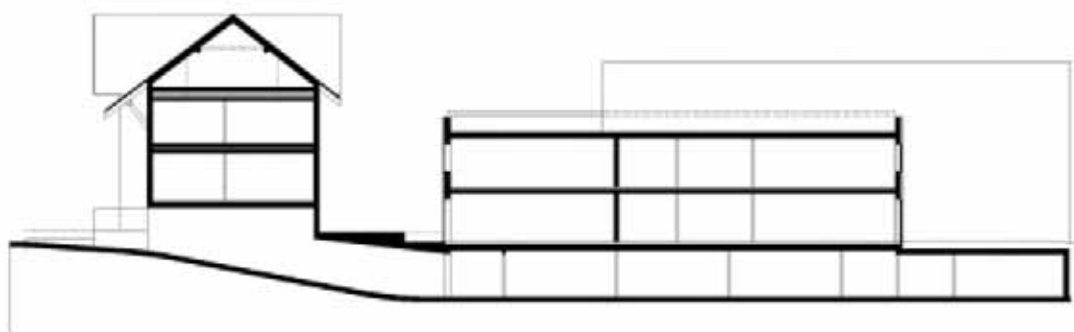
Dornbrin, Austria, 2001  
Baumschlager & Eberle

A white, glass building configuration that presents a different façade according to the weather conditions, the hour of the day and the day of the week. It is often closed, although it is also opened from time to time, according to the user's mood in each individual apartment. In front lies a mass-produced sliding mechanism. Glass panels that feature silk screens create the following effect: A person outside cannot look inside, but a person on the inside can see the goings on outside. This leads to a second effect: it is possible to adjust what can be

### 塞巴斯蒂安街住宅

(奧地利，多恩比恩) 2001

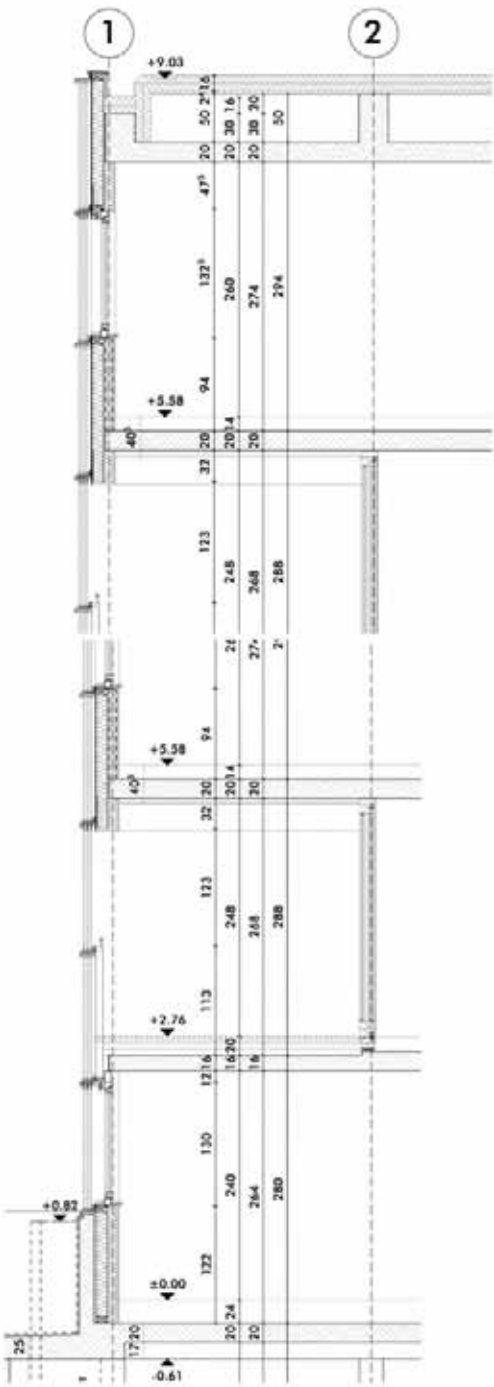
這座房子由白色的活動玻璃板組成外牆，它的外觀，每星期、甚至每天都隨著外部環境而變化。外牆平常是封閉的，但時不時地隨著居住者心情而打開。這種活動外牆依靠精密的構造設計。白絲網樣的玻璃板有不同的視覺效果，如外面看不到裏面，而裏面可以看到外面，既開大了室內視覺的空間，又保障了住戶的私密性。而且視覺上的穿透性隨著玻璃板的疊加層數而變化。採用活動外牆的目的是讓使用者根據個人的需要調整內外關係，如窗戶





seen from the outside; layering the panels over one another results in a visually almost impenetrable glass wall. The theme was: individual living, and that includes allowing everyone to choose how many windows they want to have, where they want them to be and how much distance they require from their environment. Nobody needs curtains or blinds here, since the subjective impression of being in an open space remains, even when the loggia spaces are closed. The concept works without any shortcomings. The residents use these possibilities the way the architects intended them to. And the geometry of the second façade is an exciting addition to the surroundings.

的位置・數量和內外的視覺距離，而且外牆的變換也活躍了所處的外部環境。



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





## "Jia's Flat"

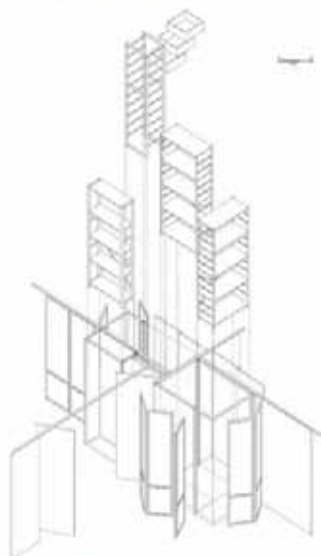
Mid-level, Hong Kong, 2002  
Jia Beisi & C-H Architectural  
Planning design Ltd.

High-Rise, high-density cityscape and a rapidly changing socio-economic environment are major characteristics of Hong Kong. Accommodating the increasingly diversified living requirements implied by these conditions demands a high degree of spatial flexibility. The flat is located on a high floor in a dense urban area. The original non load bearing walls were demolished. The sleeping rooms were recreated, in both function and effect, by pull-

### 中半山“賈居”

(中國，香港) 2002

香港的居住環境是以高層高密度和快速的經濟社會變遷為大背景的。為了適應生活多樣化需求，高度的空間靈活性必不可少。這所高層公寓位於高密度市區。原有的非承重牆被拆除，代之以三面推拉牆和用四扇獨立隔板組成的活動牆。用一組位於平面中央的貯藏櫃將這些活動牆組織在一起。活動牆的開合，形成不同空間聯繫和分隔狀態，適應日常生活的需要。三面推拉牆寬度不同，但都直通到頂，強化了功能的模糊性和空間的不確定性。設



ing three sliding doors, and “Huf-cor” operation partitions out from “floating island” cabinet standing in the middle of flat. Opening or closing different doors creates different spatial combinations, and can accommodate various activities over time. The three sliding doors, varied in size extend from floor to ceiling to dissolve the functional ambiguity enhanced the indeterminate quality of the space. The design concept also aimed to minimize material consumption, minimize daily energy consumption through enhanced natural lighting and natural ventilation by minimizing interior wall property. Assemble structure optimized a possibility of reusing and recycling the material.

計概念要求通過增加自然通風和採光及減少牆體材料來達到節能的目的，活動牆和貯藏櫃都採用預製組裝構件，具週圈利用的可能性。



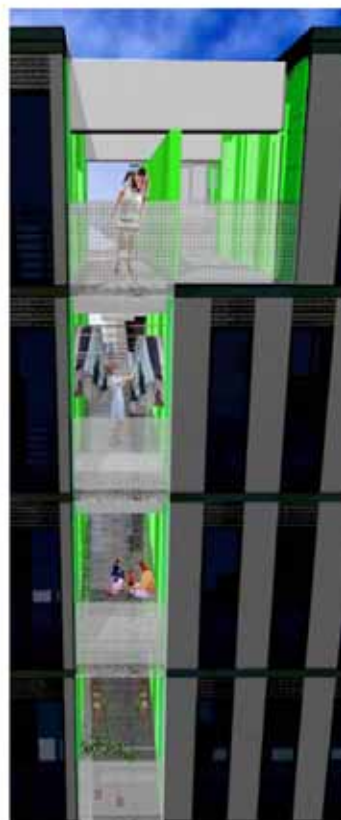
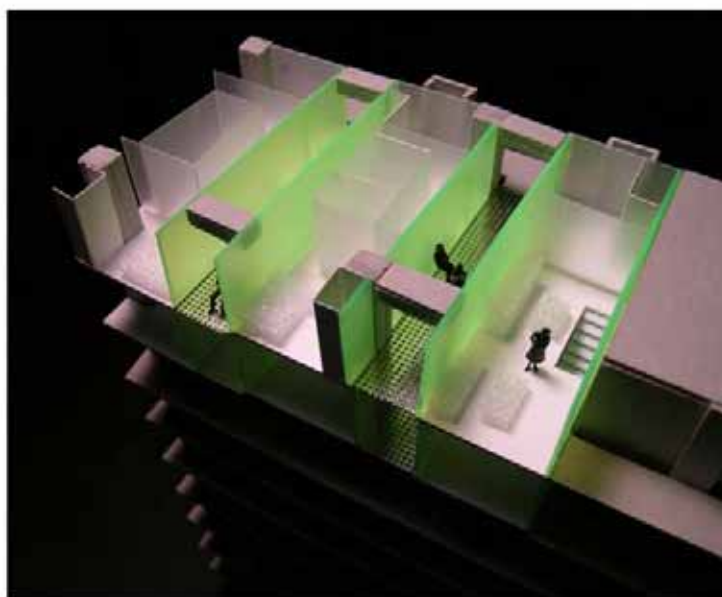
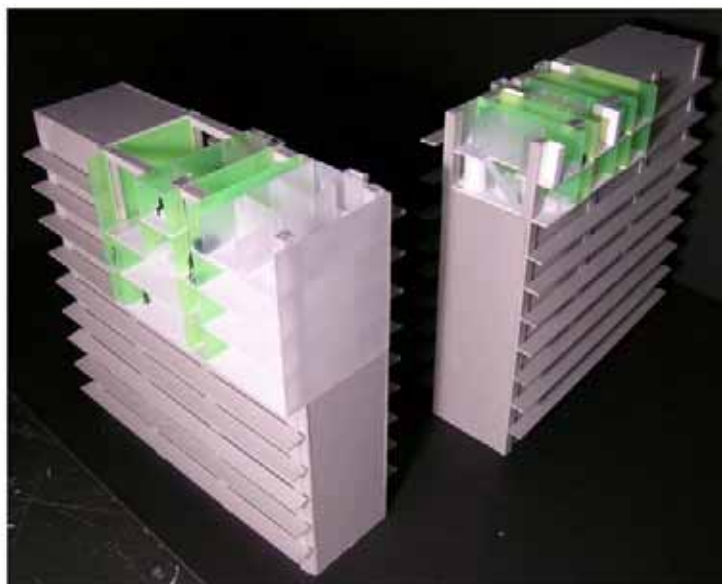
CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





## Gifu Kitagata Housing

Japan, 2006  
Edge (HK) Ltd.



Amidst the present trend of introverted lifestyles, the word communal is frequently cited but seldom realized. A better model of living would be a small village, where the villagers embrace a unique mutual identity based substantially on RECIPROCALITY. In Gifu, the megastructure allows for certain interaction in its dedicated public spaces; It provides chances and choices for 10 families to group together and among them share their own CIRCULATION ROUTE, STORAGE SPACE, and

岐埠實驗住宅

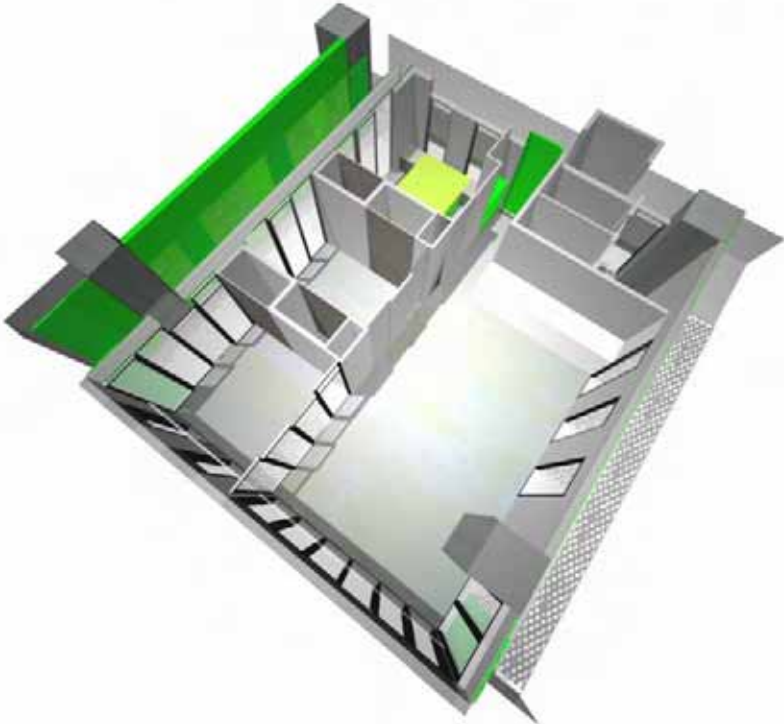
(日本, 岐阜) 2006

隨著生活方式日趨私密, 社區交往的理想很難真正實現。村莊式的居住模式基於村民長久的互動關係, 逐步形成共性。這座位於岐阜的住宅結構具有形成互動關係的條件。不僅交通, 貯藏甚至洗衣都為鄰里共用, 增加住戶間交往的機會。而結構的靈活性讓小單元能聯合成大住宅。平面上, 間隔排列的凹空間垂直於走廊, 形成有趣的空間形態, 它既可用於增加室內面積, 又可改善通風和採光。設計試圖以互動來強化集體個性, 同時滿足不同居

LAUNDRY AREA; the flexibility can extend to sub-letting and combining units for big families. Regarding the layout, the alternating U-shape units create interesting spaces intersecting the village route allowing for a myriad of possibilities; the increased surface area of the unit also promotes CROSS VENTILATION and NATURAL LIGHTING of the dwelling units to a great extent. As a result, the design as a whole addresses reciprocity to enhance the identity of the locale, and pays particular attention to ensure the interests of individual units.

民的特殊需要。

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		



BLOCK A-1 8/F



BLOCK A-3 9/F



BLOCK A-3 10/F





## Suitcase House

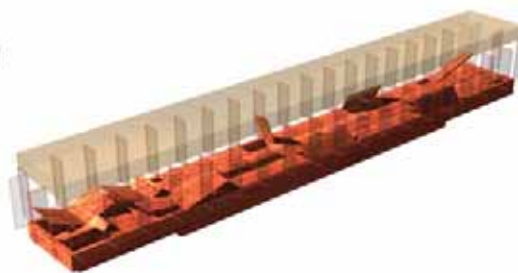
Beijing, China, 2001  
Edge (HK) Ltd.

Suitcase House is originated from the experimental development The Commune By the Great Wall in Beijing. It attempts to rethink the nature of intimacy, privacy, spontaneity and flexibility. It is a simple demonstration of the desire for ultimate adaptability, in pursuit of a proscenium for infinite scenarios, a plane of sensual (p)leisure. Adapting a non-hierarchical layout with the help of mobile elements provided by the envelope, it transforms itself readily according to the nature of the activities, number of inhabitants, and personal preferences for de-



## 長城“手提箱”住宅 (中國，北京) 2001

“手提箱”式旅舍以徹底的靈活性，給居住親密性、私密性、和暫時性以一個新定義。它表達了對舞臺式場景變幻的追求，塑造了感性活潑的平臺。統一分佈的靈活構件讓空間的形態，隨人的行為，居住人數和個人喜好而變化。根據需要，一個大空間可瞬間分成許多個小房間。“箱體”的底層由一系列特定用途的空間組成，由氣壓式構件開合。設備空間縮到最小。設想一對夫婦，白天打開所有推拉門，獨享一個44米乘5米的大空間。晚上，

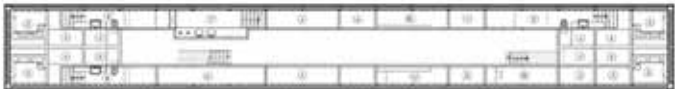
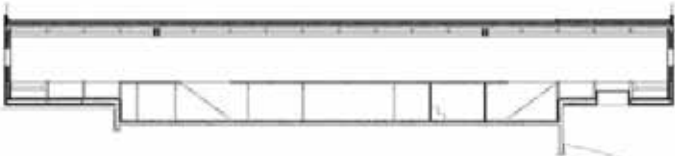




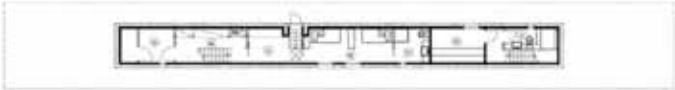
degrees of enclosure and privacy. A metamorphic volume, it slides effortlessly from an open space to a sequence of rooms, depending on the inhabitants' specific requirements. The bottom stratum acts as a container for dedicated spaces. Compartments are concealed by a landscape of pneumatically assisted floor panels. At any time only the essential elements will have a spatial presence. Imagine in the daytime, a couple can open up all the sliding partitions and enjoy a totally indoor open space with a dimension of 44x5m. In the evening, when more guests arrive, the entire space turns into a lounge for party. Rooms can be formulated when the night falls. A maximum of 7 guests rooms may accommodate up to 14 guests if they stay overnight.

客人盈門，這個空間變成多功能活動室；隨夜幕降臨，一個個獨立的房間慢慢出現，房間多達七間，可住十四位客人，如果他們遲歸忘返...

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		



middle level



lower level

1. living
2. dining
3. kitchen
4. entrance
5. hallway
6. study
7. bedroom
8. bathroom
9. terrace
10. garden
11. deck
12. pool
13. parking
14. garage
15. storage
16. laundry
17. utility

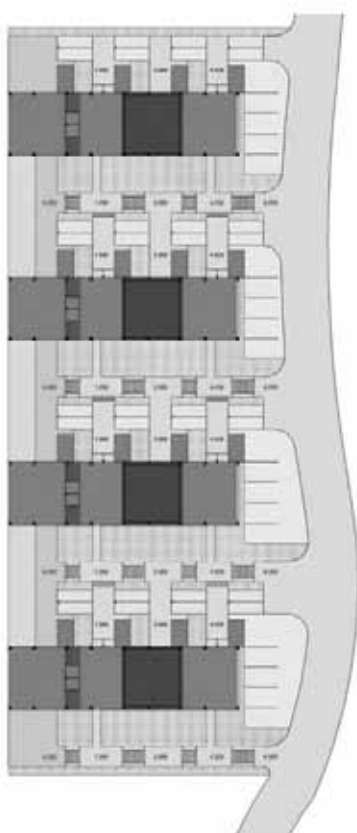
## Staff Residence of Dongguan Institute of Science & Technology

Guangdong Province, China  
2003-2004  
Zhang Lei

Zhang Lei is well known in China for his well portioned outlook, and sensitively designed layout plan. However, in this apartment house design, he moved even further by allowing the users to 'design' the layout and the partially also the façade, while maintain the high quality of visual impact. The structural and service cores in each unit are minimal to allow

### 東莞理工學院教師公寓 (中國，東莞) 2003/2004

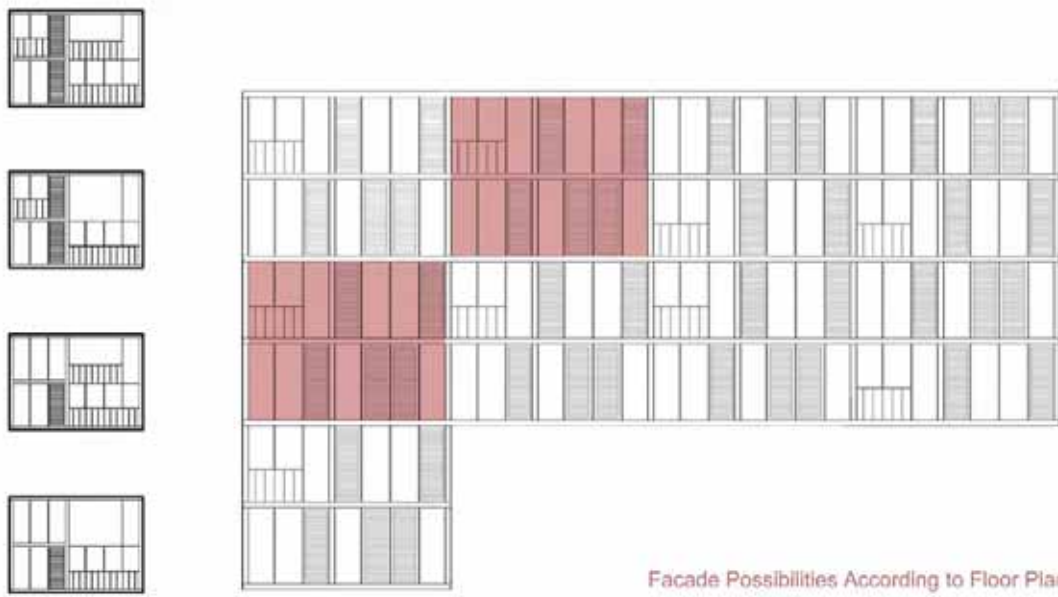
此設計的特點是，在保證完整的外觀形象的同時，為住戶提供了平面佈局，包括部分室外空間佈局的自主權。結構和管線服務所占的空間小，為居室的靈活劃分留有寬闊的空間。套型內的結構柱也是非承重牆的依託。陽臺等室外空間的位置和大小也可隨住戶的意願而改變。套型的靈活劃分和陽臺位置的變化，有節制地體現在外立面上，改變了一般居住建築的單調形象。



free division of living and sleeping area. The column in center is positioned in such a way that the users can easily setup a light weight partition in various positions. There are several transferable outdoor spaces, i.g. balcony in various size and locations, upon the user's preference, are located between the private indoor space and the outer skin of the building, which present a united value for the community, as well as a sensitive diversity presenting the individuality of the users.



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





## Sculpture Show Room of Nanjing University

Nanjing, China 2001  
Zhang Lei



It is not unusual to find the operable partitions in museum or art gallery for the purpose to adapt changes of exhibits. This project, as a transformation of use in a lobby of an existing building, means to be a temporary event rather than a permanent installation. The low cost, and light weight construction of partitions represent a temporality. Each operable partition is thick enough to serve as sculpture stands, with

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### 南京大學雕塑館 (中國，南京) 2001

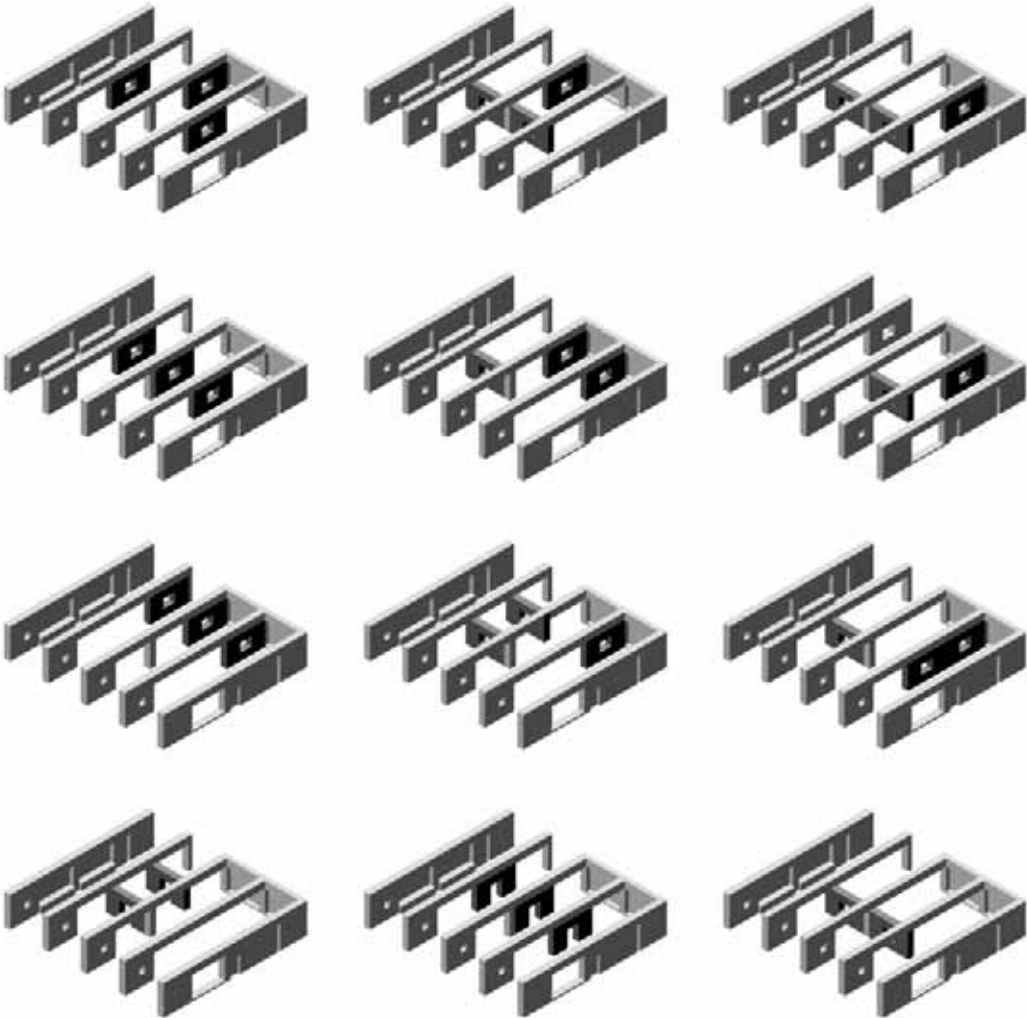
靈活隔牆在博物館或畫廊並不少見：布展需要靈活性。這個項目是在一個現有門廳樣的空間做一個雕塑展區，它強調暫時性。輕質、低造價的活動展櫃將空間的靈活性推向極致。這種展櫃具有多種功能，分隔空間，連接空間，或者如商店櫥窗，展示藝術品。



a large opening in the middle. It has a multiple purposes: dividing space, connecting space and performing a showcase all at same time.



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





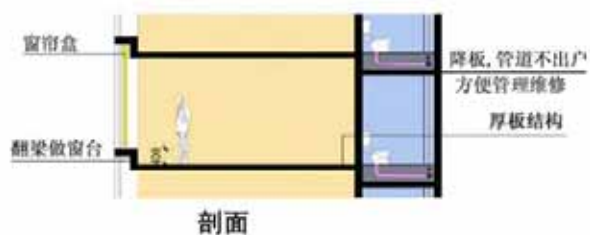
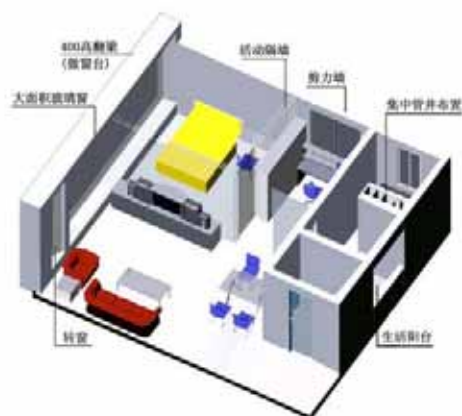
## Chang Faming Hua Yuan Cheng Estate

Shenzhen, China 2004  
Yue Ziqing, Shan Hao, Ying Xiaochuan



There is a growing demand on small apartments in housing market of Shengzhen. The two tower buildings were specifically targeted on small home buyers, providing small one-room apartments and two-room apartments. However the architects intended to make a more varieties within constraints imposed by the developer. In each of the four wings on the floor plan there were a one-room apartment and a two-room

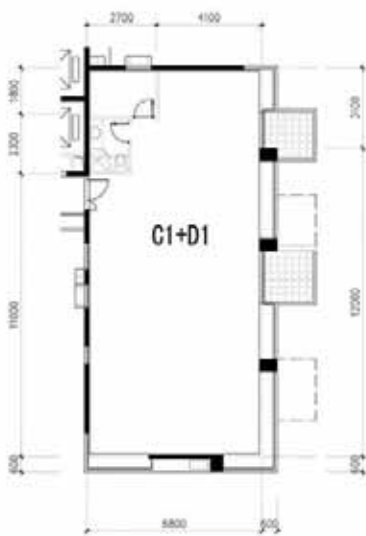
**蛇口花園城（中國，深圳）2004**  
近幾年來，房地產熱點由高收入階層大戶型住宅向中低收入階層中小戶型住宅轉變。為了適應市場需要，我們將一房和二房戶型集中在2棟18層塔樓內。呈風車型佈置，每個翼由二個小戶型組成，業主可以買一套或多套，獨立或者拼接使用，可自住、辦公、出租，也便於投資或靈活出售。由於採用了剪力牆厚板結構，室內隔牆可任意佈置，同時可增大室內空間感覺。二種戶型本身平面方整並可以靈活變化，拼接後又有更大的適應性。





apartment. The two apartments can be combined to make a larger apartment. They can be sold as separate two apartments or as one bigger apartment, to accommodate a variety of residents or changing of needs, from home office, family with two couples, to leasing on apartment and occupying the other under single ownership, etc. Thanks to the sheer-wall structure and thick floors to make a large, open and beam-free space, a variety of interior layout were achieved.

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		





## "Support" Housing

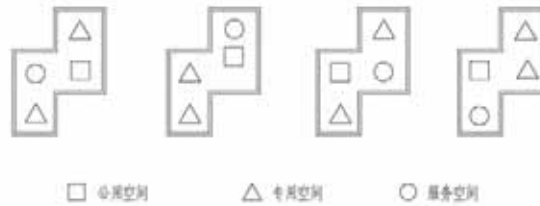
Wuxi, China, 1988  
Bao Jiasheng

The design of the project targeted on three phases of construction: the construction of the structure, the production and detachable infill elements, and the interior layout by the residents using the infill elements. The three phases of construction were carried out by three bodies. The structure was built by a construction company. The infill elements were made by a special producer aimed at general market. The interior fittings were installed either by the residents themselves, or neighborhood ser-

無錫支撐體住宅

(中國，無錫) 1988

住宅的建設分三階段進行。第一步是設計建造支撐體；第二步是設計生產可分體；第三步是把住戶選定的可分體按照住戶的意願佈置安裝於他所選定的支撐體中，最後構成一個適用的完整的住宅。三個階段分別由三個不同的建築生產組織生產；支撐體由現行的建築公司來承包，可分體則由專門化的工廠進行商品化生產，最後的安裝工作則由住戶自己或由他委託的社會勞動服務組織來完成，支撐體內的每一套單元必須有許多不同的佈置方式。

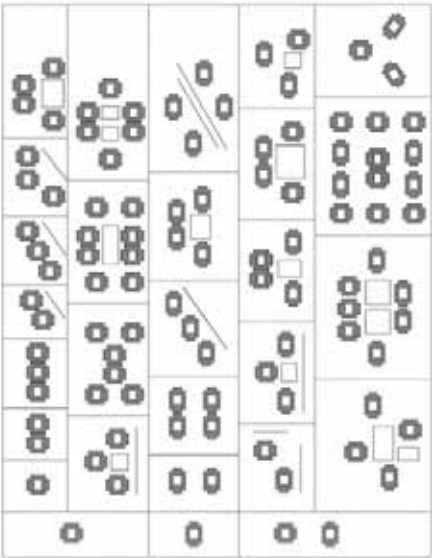
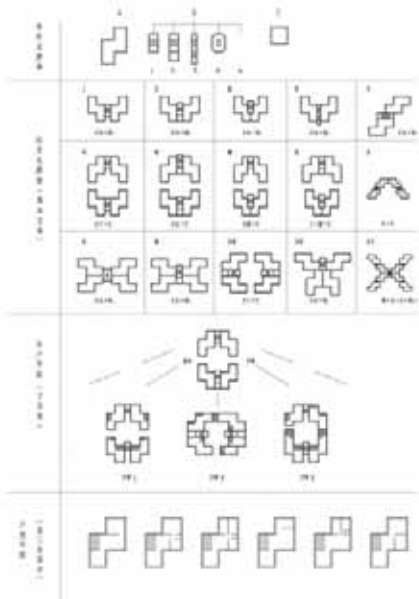
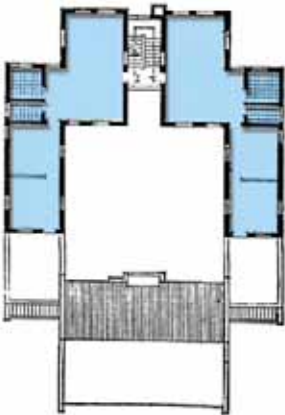


vice agents. The structure design encouraged a variety of apartment layouts, including those for non residential purposes. The planning the buildings created a variety of courtyard like space for the communal gathering. Most of the upper floor apartments were served with outdoor terraces, which invited creative adaptation of the users.



支撐體或部分支撐體必須能適合於非居住的功能，以便安排住宅區內其他的公共設施用房。單體採用以院落為中心的組團式平面佈局，提供了室外公共交流的場所。整個住宅團組就是由九幢臺階型單體構成。

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		







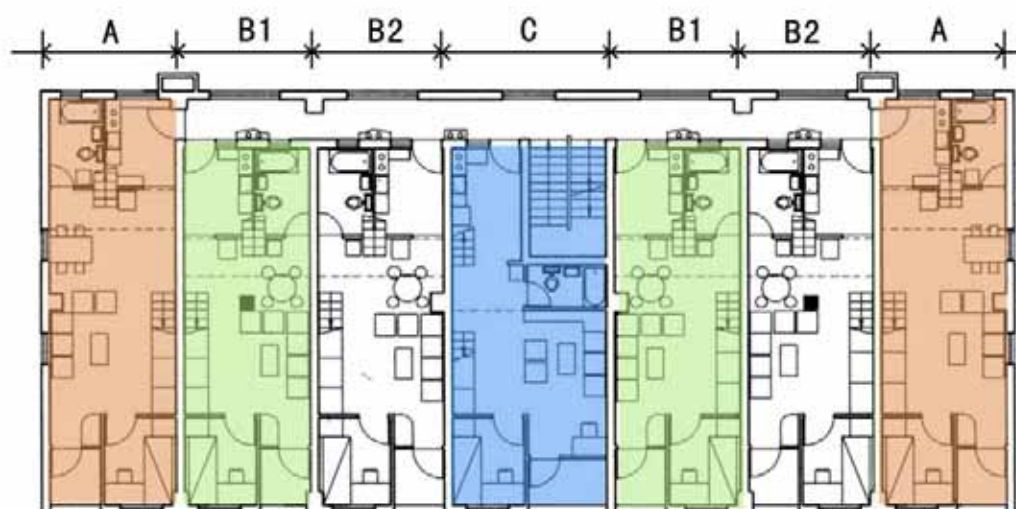
# Spatial efficiency: remodeling of industrial buildings into accommodation

Nanjing, China 1994  
*Bao Jiaoheng*

A local news company 'Nanjing Daily' acquired a small piece of land with three four story industrial buildings. The company intended to provide low cost accommodations for their young staffs. After comparing several alternatives, it finally opted the proposal of the architect to preserve the structures and remodel them into 27 duplex apartments by fully using the floor heights varied from 3.8 m

## 高效空間：工業建築的居住改造 (中國、南京) 1994

《南京日報》社有一塊位於居住區的土地，建有多層廠房。報社計畫建一批青年公寓。在比較幾種方案之後，建築師建議保留廠房，充分利用其3.8米和4米的層高，改造成小型躍層式公寓。建造分兩期進行，第一期資金由報社承擔，在現有建築內分割出27套“毛坯房”，室內只簡單地區分睡眠、起居、和設備三個功能區域。設備區設管線系統。第二期，套型內裝修和資金由住戶承擔。建成一年後所做的調查顯示，這種有住戶參與的建造方式



to 4.0 m. To lower down the cost, the construction was divided in to two phases. In the first phases, the agency bearded the cost of constructing 27 empty compartments which generally divided into three zones: sleeping, living and service. In service zone, drainage and piping systems were provided. In the second phase, each compartment was designed and constructed by the assigned residents with their own expenditure. A survey conducted in the following year proved that the initial ideas of architect, a variety of homes with the efficient and individualized layouts would be appreciated by the residents who participate in design and construction, were successful.

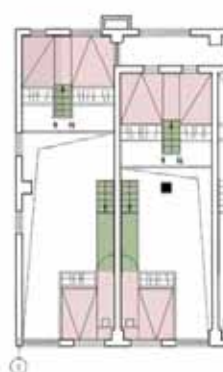


CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		

不僅套多樣，空間利用率較高，而且滿足住戶個性需求，得到住戶的認同。



1 A-B1單元下層平面



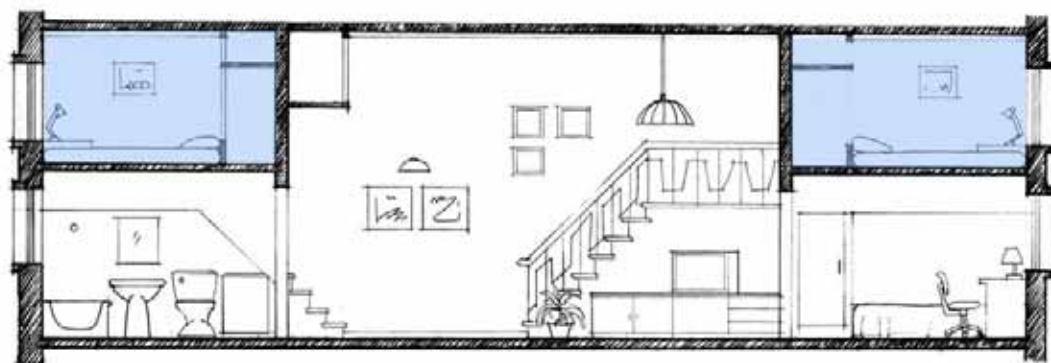
2 A-B1單元上層平面



1 B2-C單元下層平面



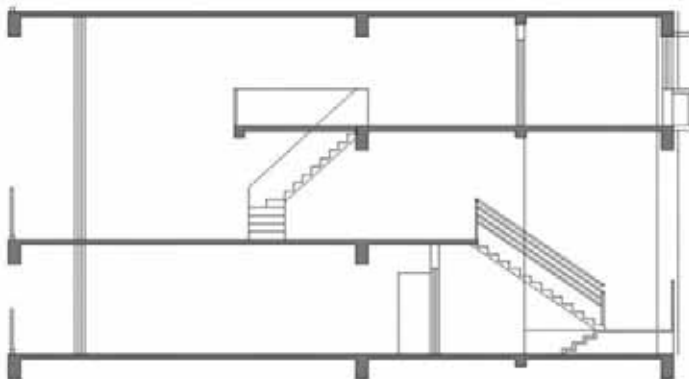
2 B2-C單元上層平面



## House-Golden Age, private housing complex

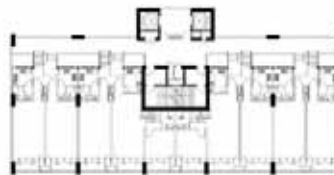
Chongqing, China 2006  
Li Haile, Tang Ning

This massive housing complex built with 8 m × 8 m concrete framework structure consists of duplex apartments, multiple sky streets and sky gardens, which serves as neighborhood gathering spaces. Each sky street connecting the apartments on every three levels is 3.6m wide, with inner half of the width used as garden and buffer zone of kitchens on the street level. The apartments are varied not only in size, but also in type, because of flexibility implied in the building structure. The



### 金城帝豪商業住宅 (中國，重慶) 2006

住宅採用了“標準單元”的設計原則，每一個“標準單元”都有若干種備選方案供住戶選擇。交通組織採用了外走廊模式，每一層走廊服務三層樓房，第一層為平層住宅，第二三層為躍層式住宅（在備選“標準單元”中，也可將這三層作為一套住宅銷售，成為躍三層的房型）。由於結構體系採用8米×8米柱網的框架體系，所有房間的開間都為4米，這樣的尺寸既可做臥室也可做客廳，同時每一格房間同走道都有相同的聯繫，因此可以變化出多種房型組合。為了改善普通高層



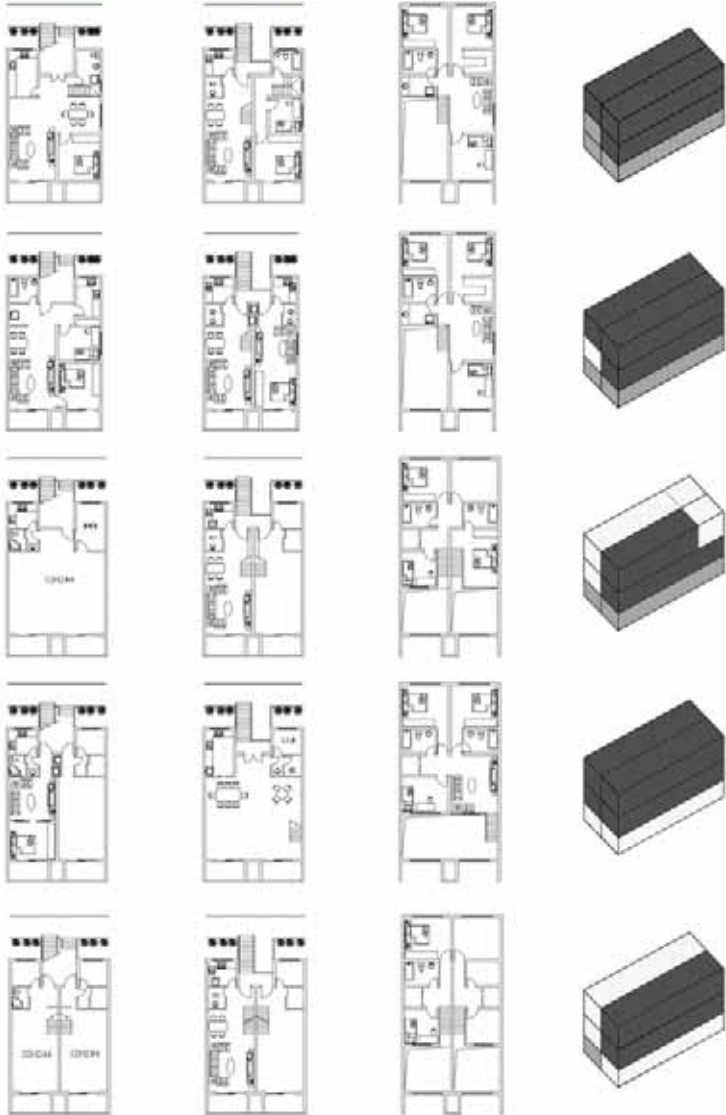


potential uses can have a choice from single story apartments, duplex apartments, and if needed, three story working apartments. In each type, a certain variety in layout and partition are also provided to accommodate diversity of accommodation. The partition walls were constructed with light-weight and hollow concrete blocks (700kg/qubic meter) in 200mm thickness.



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		

建築中缺乏交往空間的狀況，我們將外走廊設計為3.6米寬兩層樓高的空中街道，其中外側的1.8米用於交通疏散，內側的1.8米作為小區綠化管理，在改善“街道”綠化條件的同時，還成為第一層住宅廚房前的隔離帶，保證其私密性。在每層走道的轉角處還設置了放大的節點“空間花園”。這樣的“空中街道”不但具有交通功能，由於其良好的採光通風條件以及寬敞舒適的尺度，還能為住戶提供宜人的交往空間。金城帝豪這個樓盤用的隔牆材料為容重700kg/m³的蒸壓空心磚，厚度200mm，8個孔。



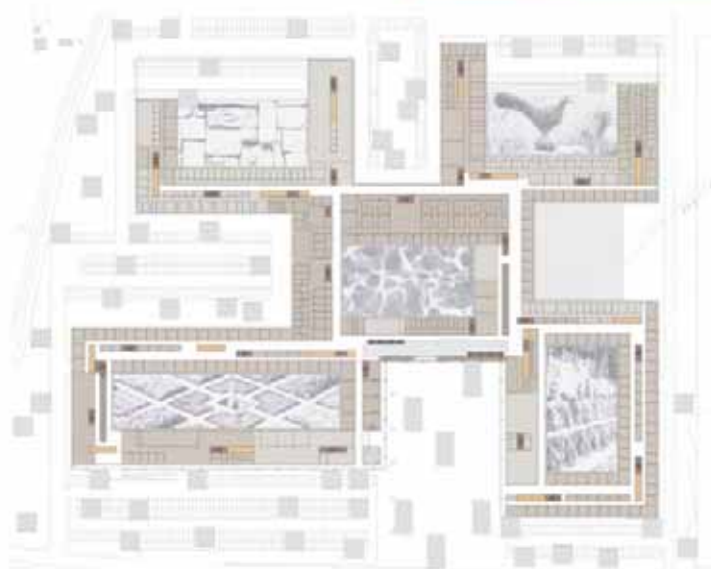
## 1000 Bed Hospital

Kortrijk, Belgium 2000-2018  
Baumschlager & Eberle

The planning contract was based on an age-old, traditional typology: a courtyard structure. The main objective was to create moments of architectural identification. The courtyard allows for vastly differing atmospheres, which effectively counter the danger of anonymity. In organisational terms, the most important elements are short distances in a low-slung, flat-level hospital design. This is guaranteed by the central alignment of its main functions (operation rooms, intensive

千張床位醫院

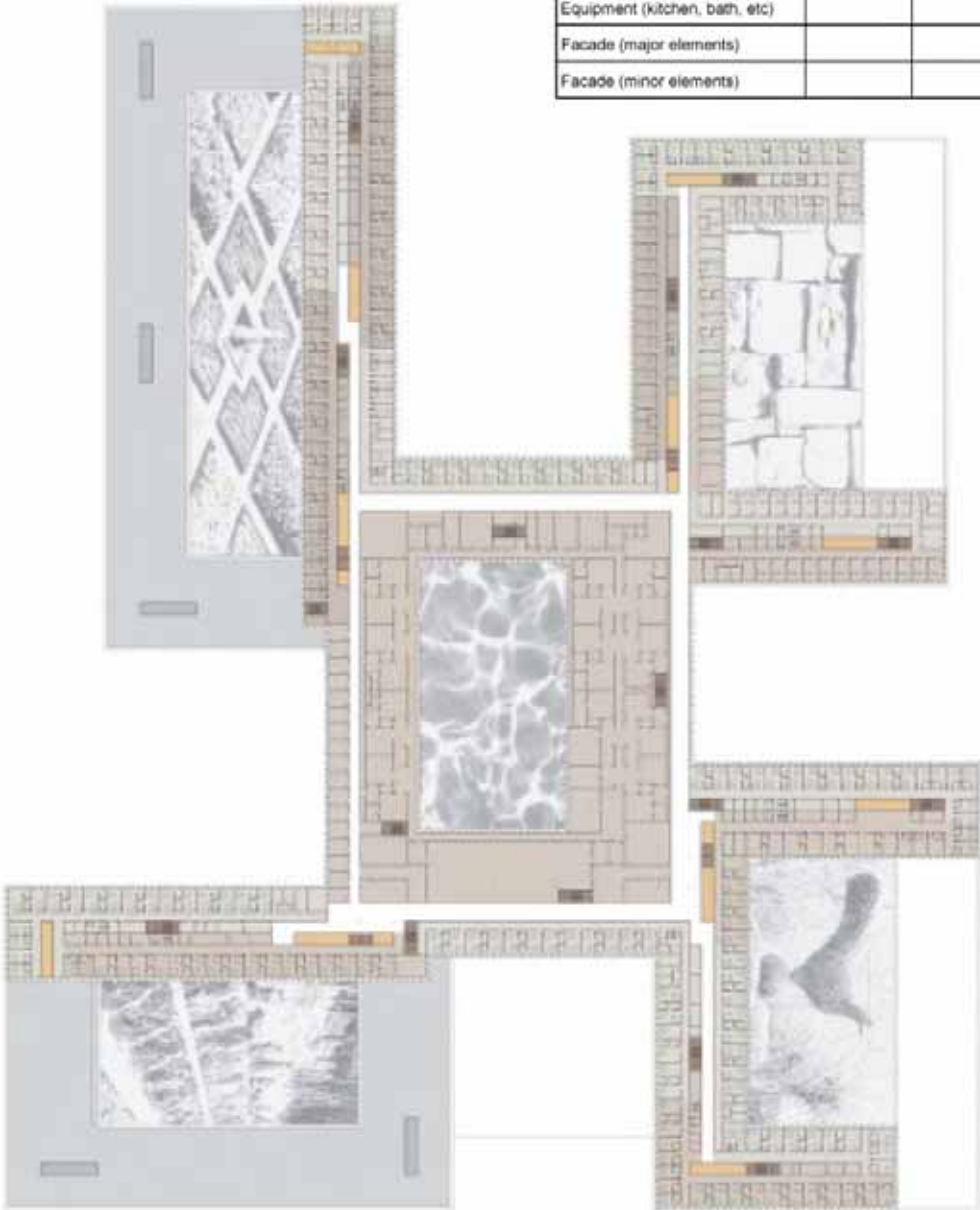
(比利時·克爾特真) 2000-2018  
整體佈局採用傳統的街區庭院模式，目的是為豐富建築個性：不同的庭院有不同的氣氛，打破一般醫療建築單調的形象。功能組織方面，盡可能以水平低層為主，將主要功能，如急救室等，置於平面中部，縮短流線距離。醫院的分期建設取決於醫療設備、財政、管理和人力配備等條件協調運作。而且未來基因技術和以生化醫療為基礎的治療方式將對建築產生新的要求。為了適應這些不確定因素，建築應具備靈活性。其結構佈局設計甚至考慮到非醫療功能的使用，未來如有必要，建築可方便地改造為旅館。



care wards etc.) and the direct access to the emergency area, for example. Developments in the hospital sector are the result of fluid processes in terms of technical medical equipment, financing, politically and with regard to human resources. It also isn't clear which consequences the advances in genetic technology or in chemical/medication-based treatment will have in the future. Architecture has to react flexibly to these conditions – all buildings are thus usable for entirely different purposes, as hotels or office buildings, even as service company structures.

辦公，甚至服務產業中心。

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		







## Experimental Housing NEXT21

Osaka, Japan, 1993  
Osakagas NEXT21 Construction  
Committee

NEXT21 was planned by Osaka Gas to study the ideal type of urban multi-unit housing complex for the 21st century. In designing it, various attempts were made, in terms of both building and facility, to anticipate future changes and needs.

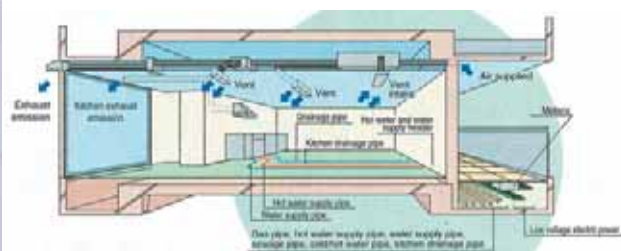
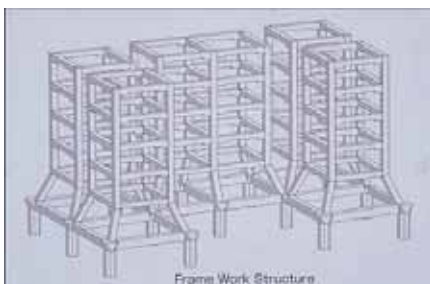
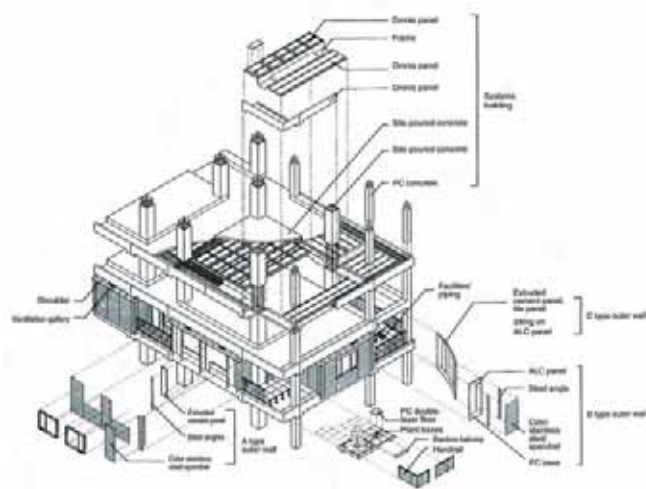
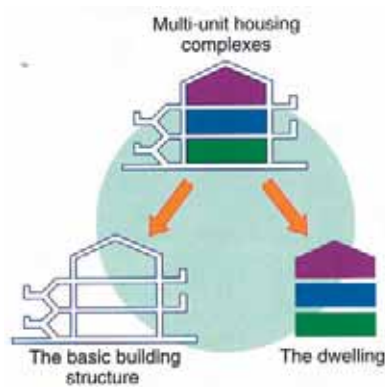
It is employed an advanced construction system such as the basic building structure and dwelling separate construction method, the

実験集合住宅 NEXT21

大阪 / 日本 1993  
大阪ガス NEXT21 建設委員会

NEXT 21は、21世紀の都市型集合住宅のあり方を考えることを目的とし、大阪ガス株式会社により建設された実験集合住宅です。建設にあたっては、建築・設備の両面から様々な未来に向けての試みがなされました。

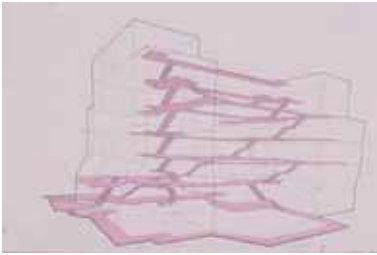
躯体・住戸分離方式、システムビルディング、フレキシブル配管システムなどの先進的な建築システムが用いられました。そして、1012 m<sup>2</sup>の植栽によって、縦方向に積み重なっ



"systems building" method, the flexible piping system. And it's created vertically layered green areas using a total of 1,012 m<sup>2</sup> for planting. And a highly efficient co-generation system for power generation was adopted using a fuel cell that is low in NOx and noise.

In the NEXT21 dwellings, people have been actually living, on an experimental basis, and remodeling projects were made several times to determine the effects of these construction systems, and also to identify the problems involved in remodeling multi-unit housing complexes.

た緑地空間が形成されました。また、発電システムには、低NOx、低騒音、高効率の燃料電池を用いたコ・ジェネシステムが採用されています。さらにNEXT21の住戸では、人が実際に住まう居住実験を実施しています。そしてこれらの建築システムの有効性を検証し、集合住宅におけるリフォームの問題点を抽出・整理することを目的として、数回のリフォーム実験が行われました。



3-dimensional street

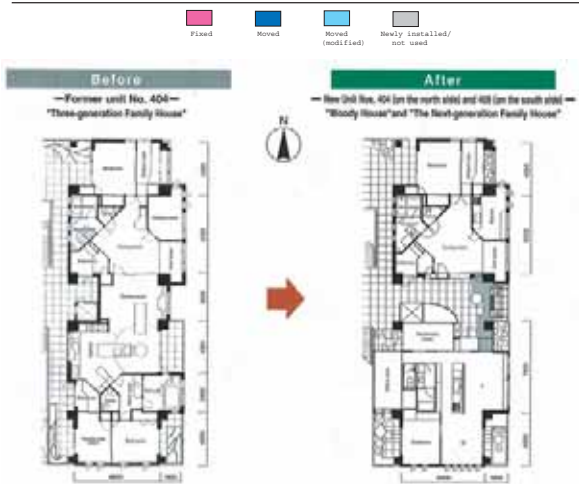
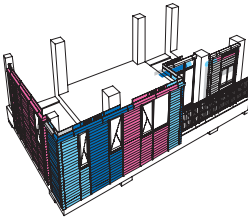
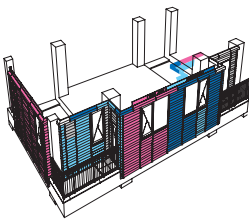
CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc)		
Facade (major elements)		
Facade (minor elements)		



Pre-modification



Post-modification

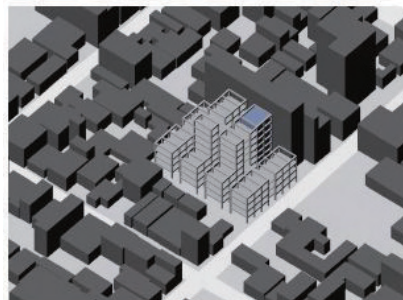






《Town Form》 and Skeleton Planning

■ Divide the Big Volume into some parts



Type A  
1.1 stories  
floor area ratio 4.00%



Type B  
6 stories  
floor area ratio 2.60%

#### Type C

Divide the Big Volume into some parts  
6 + 6 + 6 + 6 stories  
floor area ratio 2.60%



#### Type D

Consider East-West Form  
4 + 7 + 7 + 4 stories  
floor area ratio 2.60%



#### Type E

Consider North-South Form  
4 + 8 + 8 + 4 stories  
floor area ratio 2.60%



## Urbanex Sanjo

Kyoto, Japan, 2002  
Urbanex Co., Ltd.

Urbanex Sanjo was situated in the central part of the city of Kyoto, where conflicts over the construction of multi-unit housing seemingly never end. In this project, residents of the local community participated in the design of its skeleton. This was the first instance where the Two-step Housing System was used intentionally as a means for community management.

Initially, local residents focused

## アーバネックス三條

京都 / 日本 2002  
株式会社アーバネックス

2002年8月末、地域の住民がスケルトン計画に参画した賃貸集合住宅「アーバネックス三條」が、集合住宅建設をめぐる紛争の絶えない京都の都心部に完成した。建物の形態の検討では、「まちのかたち」に合致したスケルトンのあり方が、CG、模型等を使って議論された。当初は高さを低くすることに議論が集中したが、大きなかたまりを細かく分けること、隙間を空けることなどの重要性が徐々に話題となり、最終的には、まち

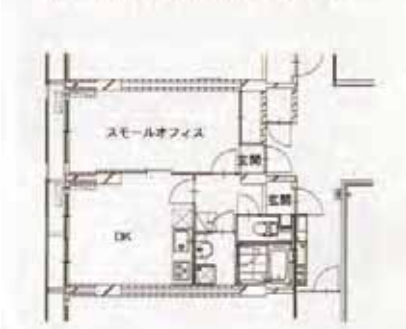


their discussions on the height of the building. Gradually, however, other points such as the importance of breaking down the massive volume of the building into smaller units and setting up void spaces in it began to be talked about. In the end, they supported a form that put emphasis on inheriting the order of space dominant in their community. They selected a skeleton plan that looked like small, stacked-up housing units with a scale similar to that of machiya (traditional urban dwellings) with three-dimensional tsubo-niwa (spot gardens) among them.

の空間秩序の継承に重点を置いた形態が支持されるようになった。また、議論は、隣接する敷地だけでなく、周辺への配慮にも及んだ。その結果、事業採算のとれる容積の範囲内で、西側の前面道路側だけでなく、低層の町並みが続く北側や東側の高さも抑える形態が選択された。こうした建設的な議論ができたのは、分譲物件の計画が賃貸物件に変更となったため、事業採算が見込める容積率が指定一杯の400%ではなく、260%程度となり、幸運にも「検討の余地」が生まれたことによる。この「余地」を最大限活用することによって、地元住民と事業主が合意点を見出すことができた。



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc)		
Facade (major elements)		
Facade (minor elements)		





## Flex Court Yoshida

Osaka, Japan, 1999  
Osaka Prefectural Housing  
Corporation

Flex Court Yoshida is skeleton rented housing system completed in 1999. The physical system is composed of three subsystems of skeleton, cladding and infill.

This skeleton uses stepped-slabbing construction method in which slabs are arranged in the chessboard pattern. The part where slabs are sunk secures flexibility for installing water facilities.

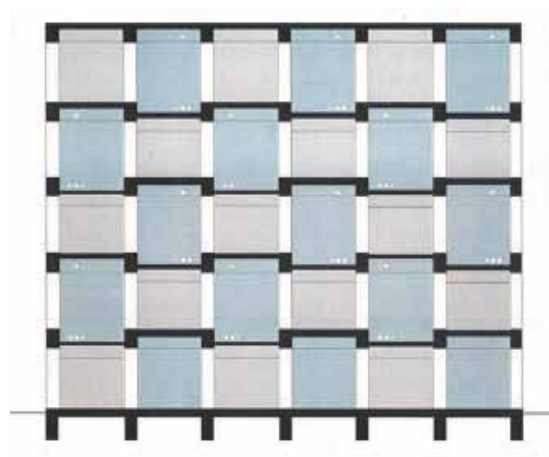


## ふれっくすコート吉田

大阪 / 日本 1999  
大阪府住宅供給公社

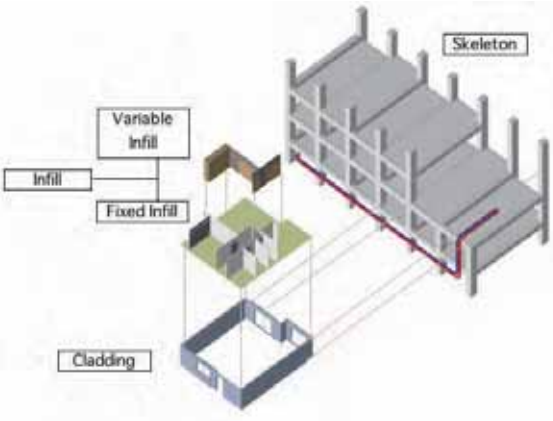
ふれっくすコート吉田は、1999年に建設された賃貸集合住宅である。建築システムは、スケルトンとクラディングとインフィルから構成される。スケルトンには、段差スラブが採用されており、階高の高い部分には、水廻りに関する設備を設置することができる。

インフィルは、固定インフィルと可変インフィルから構成される。固定インフィルとは、内装壁、住戸内の設備の横引き配管、押入、天井、床のことである。可変インフィルとは、可動

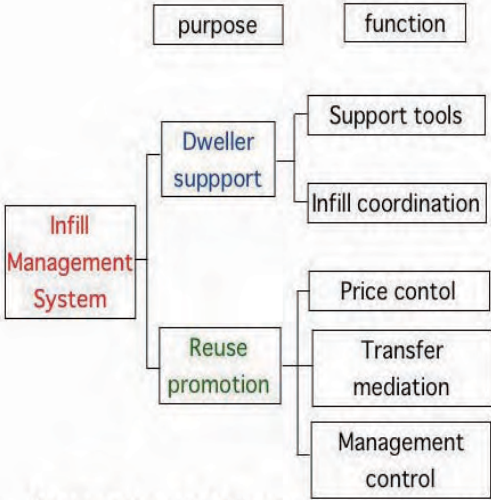


Infill consists of "fixed infill" and "variable infill". Fixed infill consists of finished walls (walls on the inside of exterior walls), water piping, fixed storage units like closets, ceilings and floors. Variable infill consists of movable storage furniture, variable partitions and fittings. Movable storage furniture is owned by the Osaka Prefectural Housing Supply Corporation who manages the skeleton and is leased to the dweller. Variable partitions and fittings are purchased by the dweller from Osaka Housing Services for use and installation as the dweller pleases(Infill Management System).

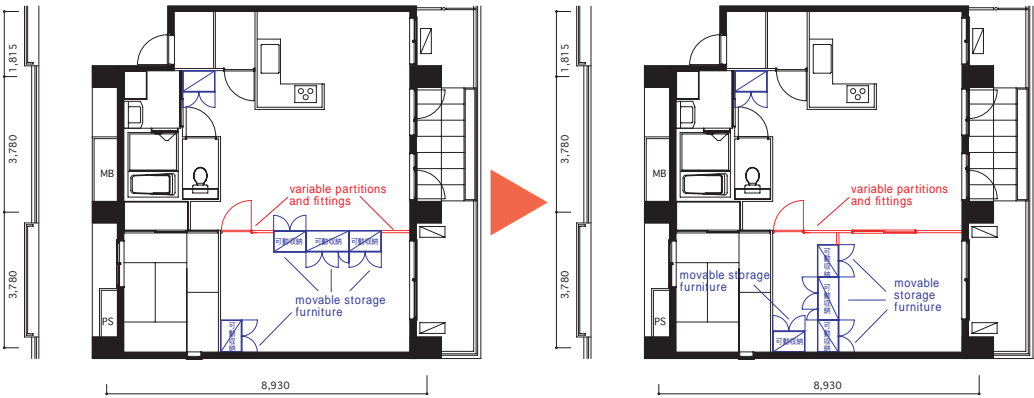
収納家具、可変間仕切り、可変建具のことであり、インフィル・マネジメントという観点から、経年後のインフィルの設置や移動、再使用を実現しうるソフトシステムも開発された。可動収納家具は、スケルトン所有者である大阪府住宅供給公社の所有であり、居住者に賃貸される。可変間仕切り、可変建具は、居住者が、可変インフィルの運営管理を行う（株）大阪住宅公社サービスから購入し、居住者の自己所有となる。また、可変間仕切り、可変建具は、退去時に不要となる場合、（株）大阪住宅公社サービスを介して、退去者から居住者に斡旋する制度もある。



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc)		
Facade (major elements)		
Facade (minor elements)		



Composition of Infill management system





## Arabianranta Project

Arabianranta, Helsinki, 2005  
ArkOpen Ltd (Architects Esko Kahri, Petri Viita, Juhani Vaisänen & PlusHome Ltd )

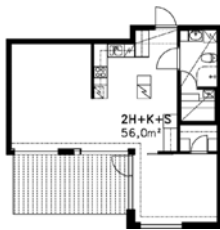
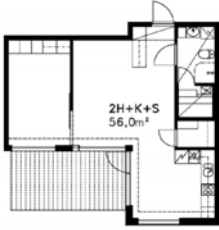
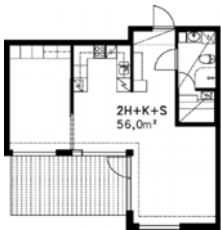
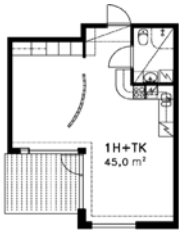
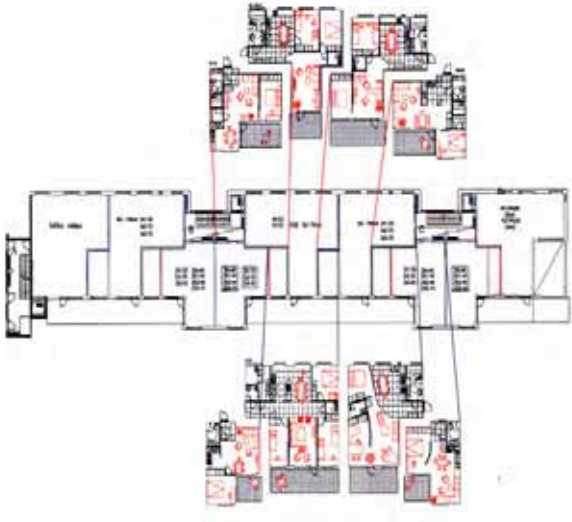
The project is based on a technology competition in 2001. Helsinki was searching for new urban solutions in accordance with the Open Building principles. The SATO Corporation, one of the largest housing companies in Finland, applied the PlusHome-concept. The load-bearing walls are the outer, longitudinal walls, enabling varying unit layouts on different floors. On the zones of sanitary spaces a two-layer slab is used



enabling free distribution of drain and piping from the top. Residents could choose between a wide selection of floor plans, both different sizes and variations within the same size, presented in the pre-marketing stage via the internet. This stage was open till about 6 months after the construction started. Residents had another 3 months to select finishes, fixtures and accessories with fixed prices, could see the total price directly after making their choices, and could revise decisions before finally accepting the order.

--Stephen Kendall

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		





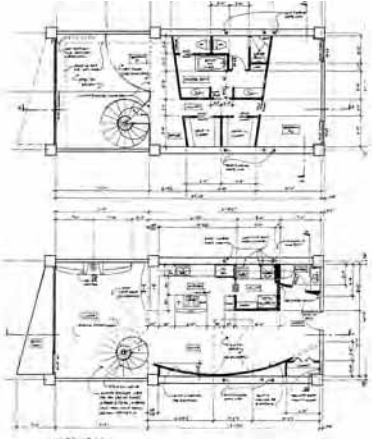
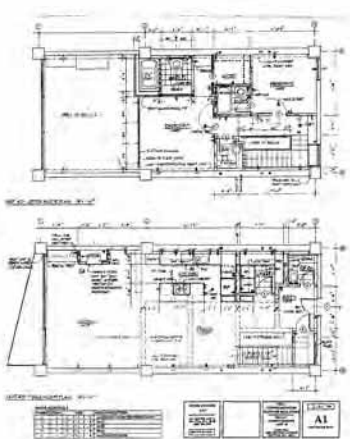
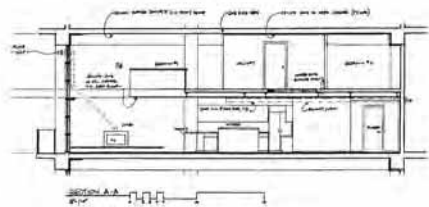
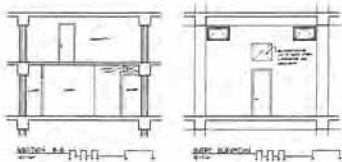


company employs the most advanced CAD software and CAM production processes.

--Stephen Kendall



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		





Baubuette

Rothenburg, Switzerland,  
2002-2004  
Anliker AG

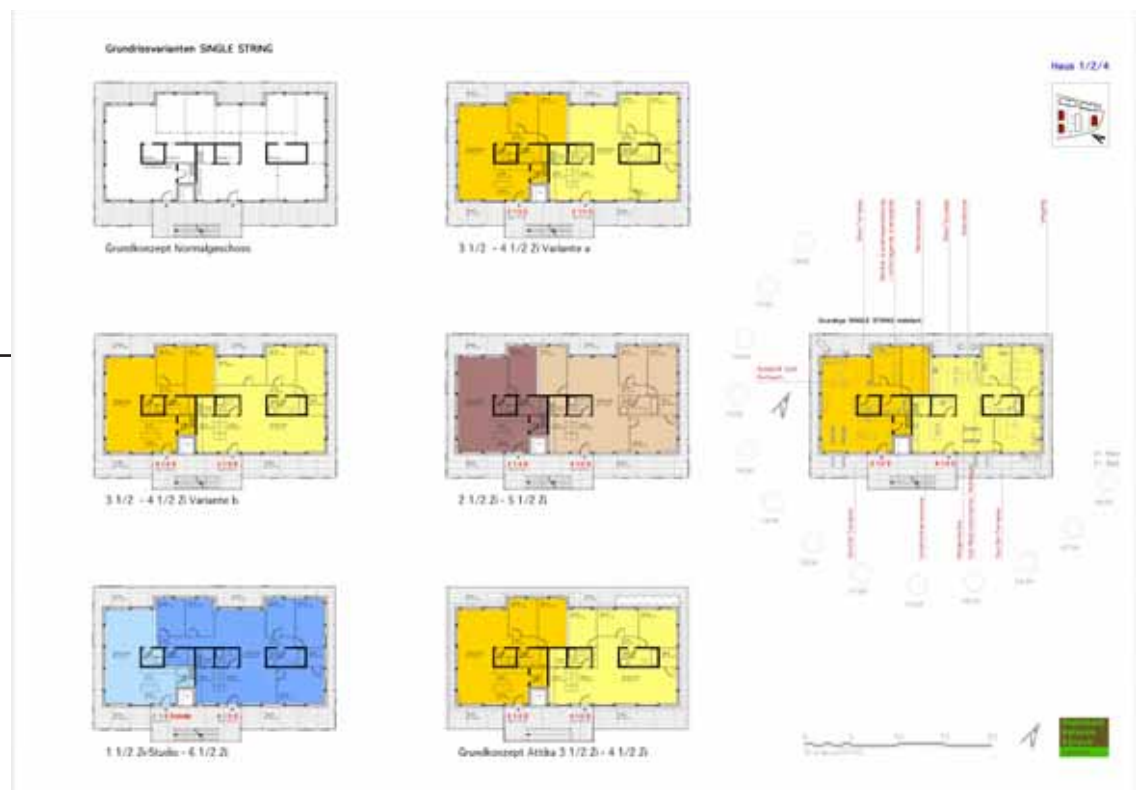


Sch  
Gel





CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc.)		
Facade (major elements)		
Facade (minor elements)		







Bensonwood Homes

New Hampshire, USA,  
Since 2000

Bensonwood's Open-Built® system has been applied to its timber frame building process since 2000. The benefits are efficiency during construction; easy adaptability during the home's life; providing complete house packages of pre-engineered volume frames based on Open-Built principles; reduced costs for the timber frame and enclosure; and improved speed of delivery around the country by participation with the local associate network. The

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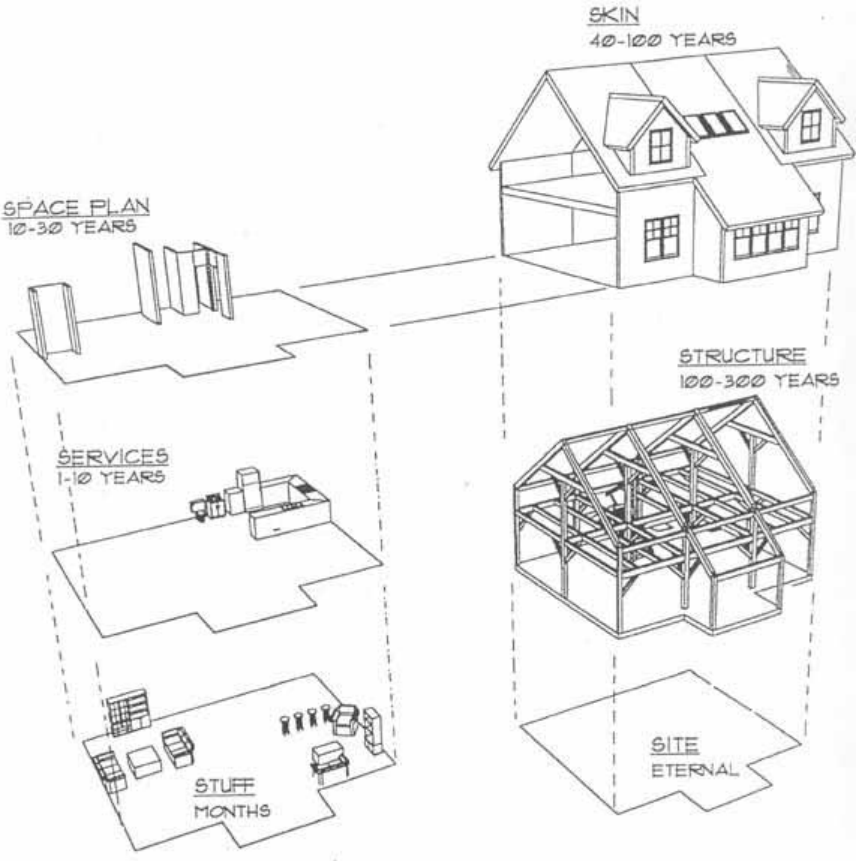


company employs the most advanced CAD software and CAM production processes.

--Stephen Kendall



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		



## Catamaran Houses

Moscow, Russia, 2005  
Reserve; Chief Architect Vladimir Plotkin

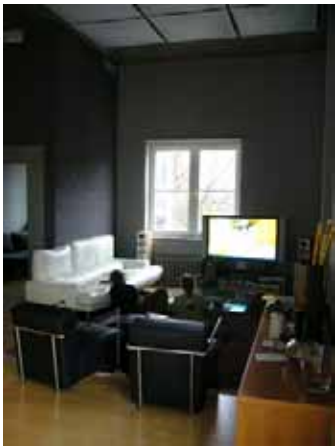
This complex consists of two parallel wings linked by transverse elevator/stair blocks forming a succession of atria. The regular structure is echoed in the rhythmic organization of the street-facing and courtyard facades. Underneath is a parking garage for 114 cars. The houses on the "back" of the complex are two-story units with private entries, gardens and parking garages. The building design received municipal approval with all units designed. Then, the

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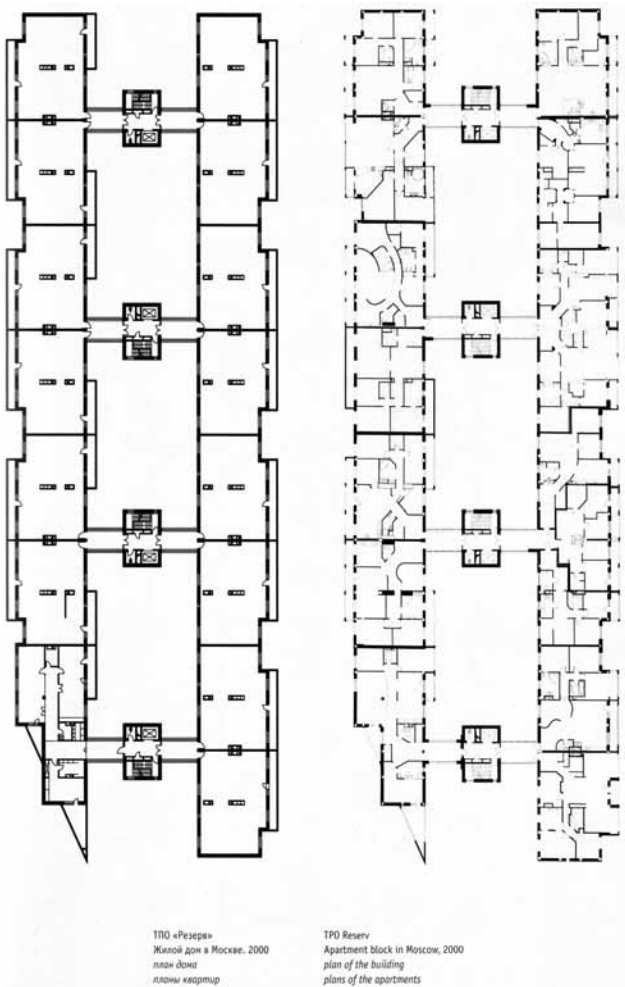




unit layouts were deleted and the contractor built the empty building. Units were sold, designed and fitted out independently.  
--Stephen Kendall



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		



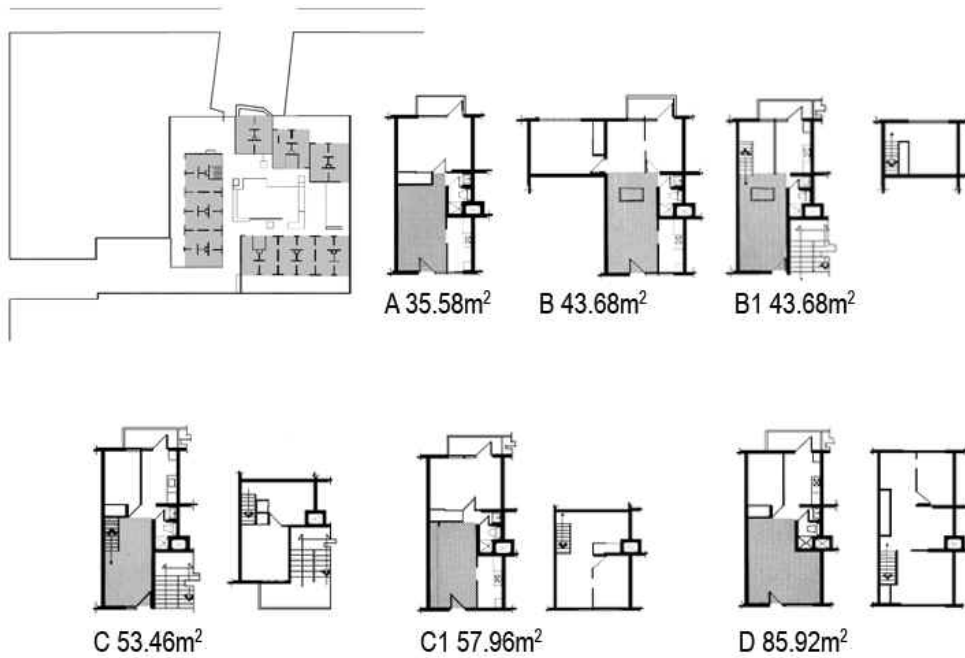


## Cohuatlan Housing Project

Mexico D.F., Mexico, 1975-1977

COPEVI, Design director:  
Jorge Andrade

In the mid-1970's, a part of downtown Mexico City was occupied by a type of low-income dwellings called "Vencindades." The small size of dwellings (mostly one multipurpose room not larger than 25m<sup>2</sup>) and the quality of the building structures and services was resulting in a process of abandonment by many families who were moving to suburban parts of the city. This project was an experimental effort whose goal

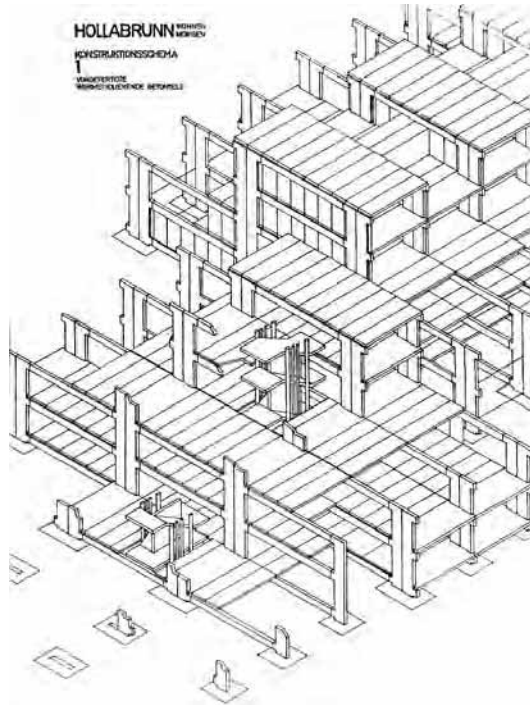


was to find an alternative to allow families to remain in their neighborhoods. Two main concepts formed the basis for this project: 1) A housing cooperative social organization and 2) the support/infill method of participatory design processes. The support was designed following a detailed analysis of use patterns and spatial images of the typical Vedindad dwelling unit. SAR design methods allowed the design team to develop six dwelling unit sizes and different layouts for each. This enabled the individual needs and resources of each family to guide the design of each dwelling. After 30 years, Cohuatlan remains alive and in permanent change.

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		







## Dwelling of Tomorrow

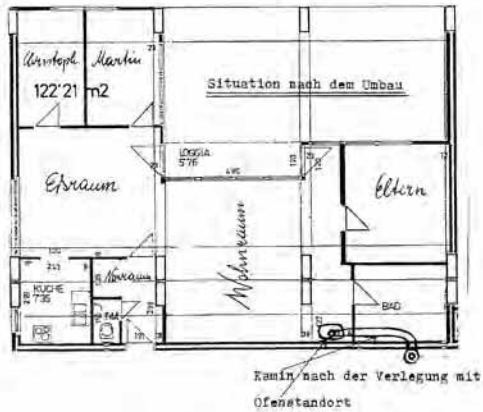
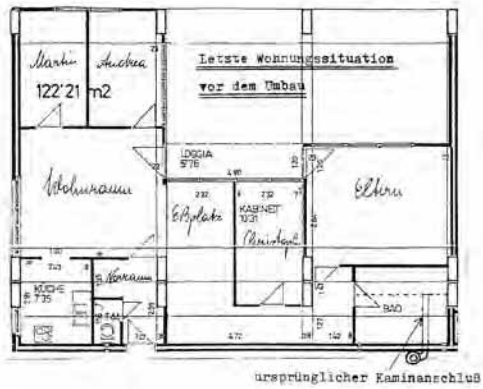
Hollabrunn, Austria, 1976  
Dirisamer, Kuzmich, Uhl, Voss  
and Weber

This 'Dwelling of Tomorrow' competition received first prize by the Austrian Ministry of Housing and Technology in 1971. Open Building methods were used to support the planning, design, construction and project delivery. The participants in the project included politicians, financiers, and professionals, as well as the users themselves, who participated in all phases. Floor plans and facades are different for each dwelling unit, and during the past 30

years, some units have enlarged or changed their floor plans and facades.

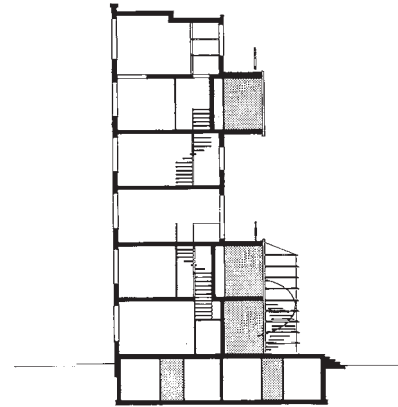
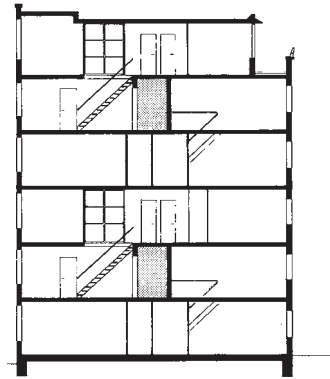
--Stephen Kendall

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc )		
Facade (major elements)		
Facade (minor elements)		





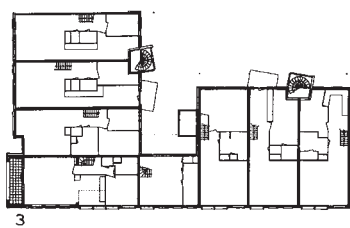
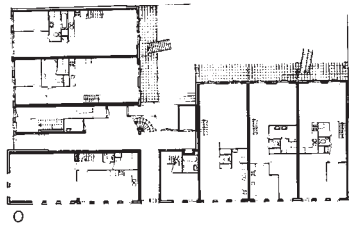
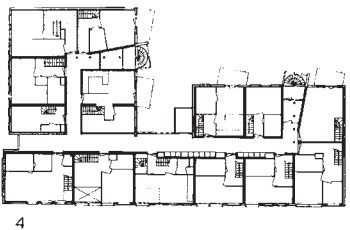
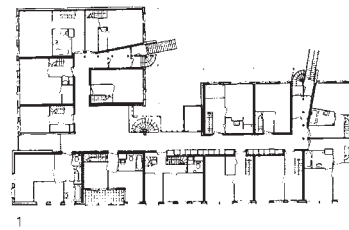
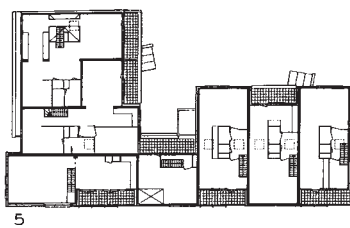
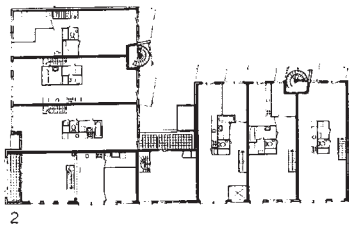
GespletenHendrik  
Amsterdam, the Netherlands,  
1996  
De Jager & Lette Architecten,  
Van Seumeren, Van der Werf







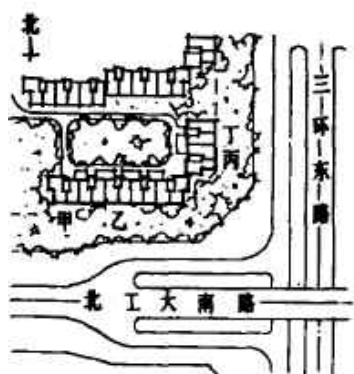
CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		



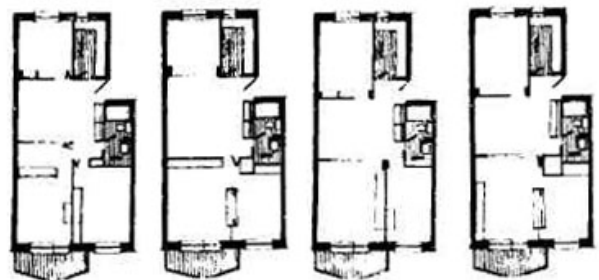
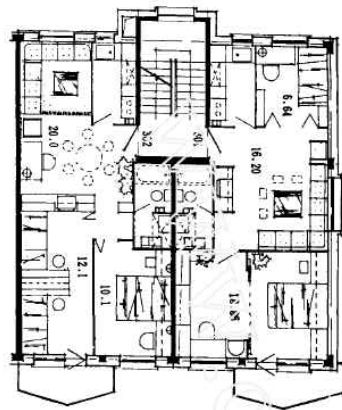
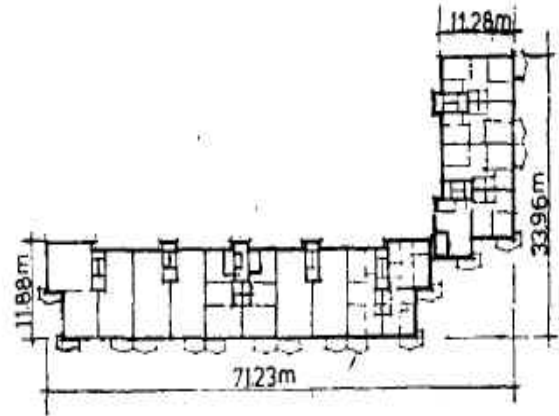
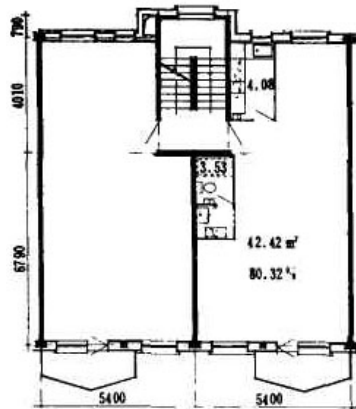
## Huawei No.23 Project

Beijing, China, 1991  
Zhou Feng, Zhang Nianceng,  
Zhou Peizhu

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CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		



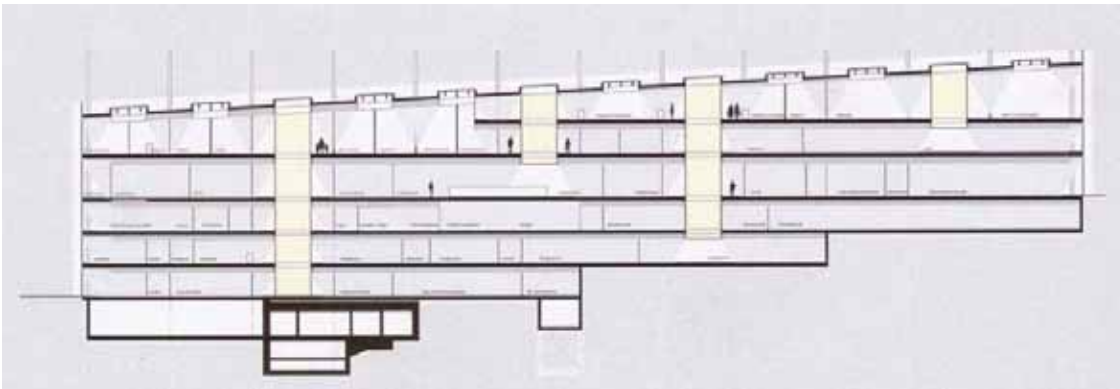




## The INO Hospital

Bern, Switzerland, 2000-2004 (Stage 1 Primary System); 2005-2007 (Stage 1 Secondary and Tertiary Systems); 2008-20011 (Stage 2 Primary, Secondary and Tertiary Systems)  
Kamm Architekten AG, Itten + Brechbuehl AG, HWP Planungsgesellschaft mbH

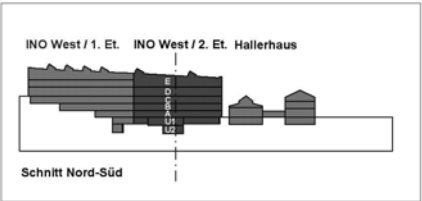
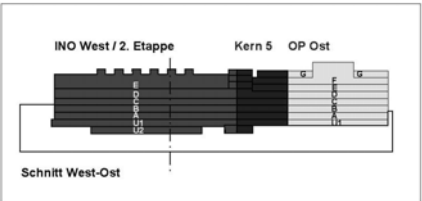
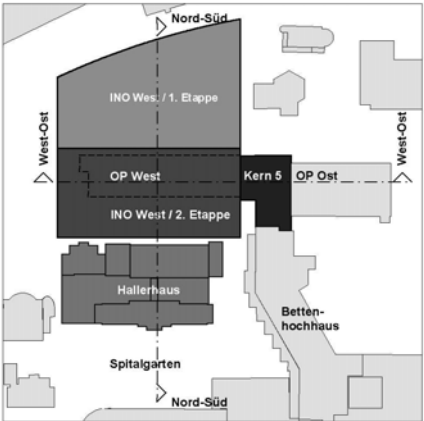
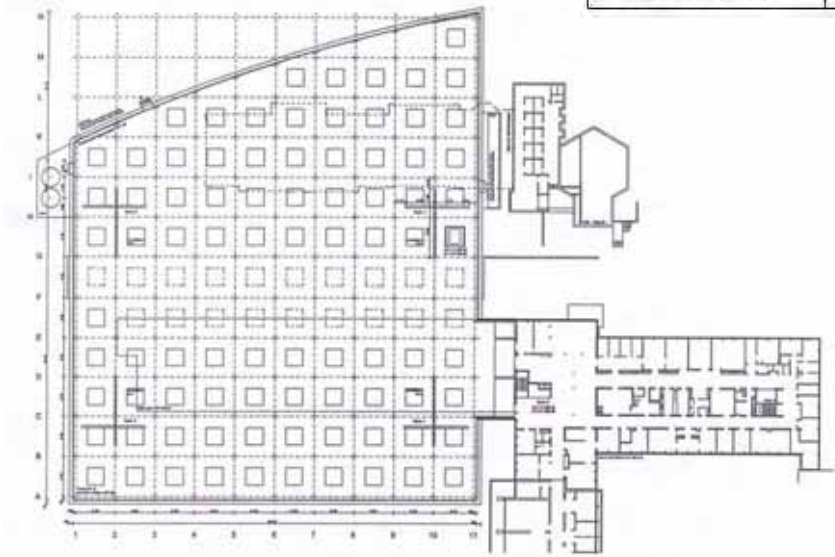
The 500,000 square foot project is managed by the Canton Bern Building Department. The building provides space for intensive care, emergency and surgery center as well as pharmacy and ancillary spaces. The owner and

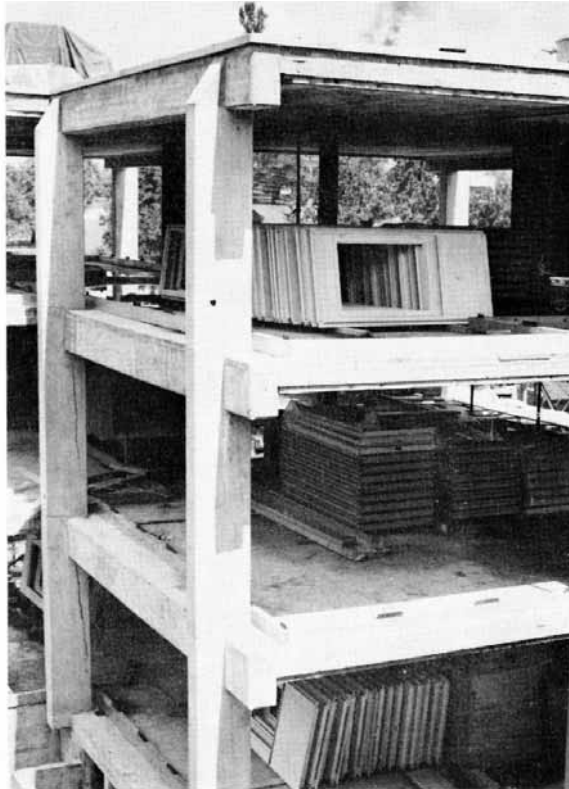


the management team recognized that complex buildings such as this only become “whole” over time. Recognizing these dynamics led to a decision to adopt an entirely new process for designing the facility. A competition was held to select a design and construction firm for each of three distinct “levels”. The primary level is intended to last 100 years and is expected to provide capacity for a changing mix of functions. The secondary level is intended to be useful for 20+ years, and the tertiary level for 5-10 years. The concept has already proven to be effective before the entire project is “finished”.

--Stephen Kendall

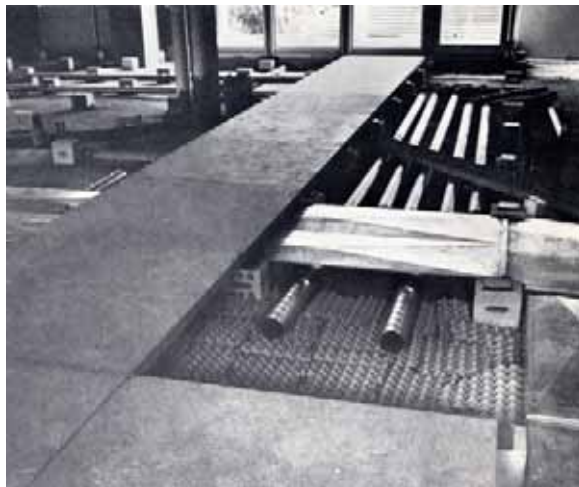
CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		



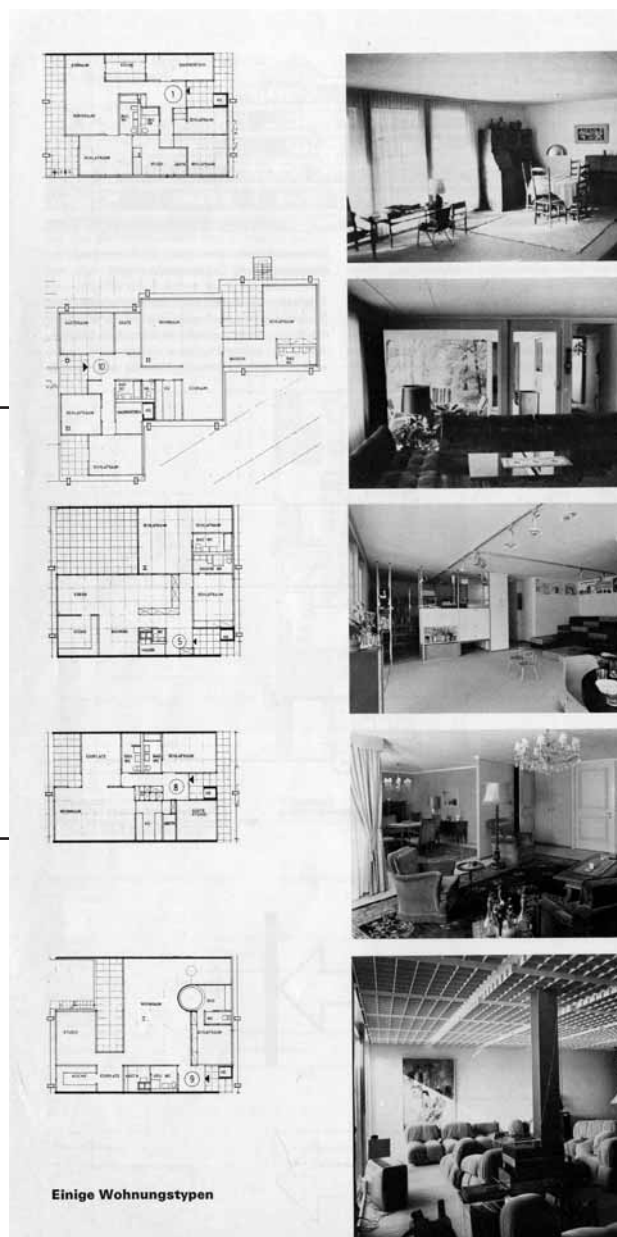


Kamm

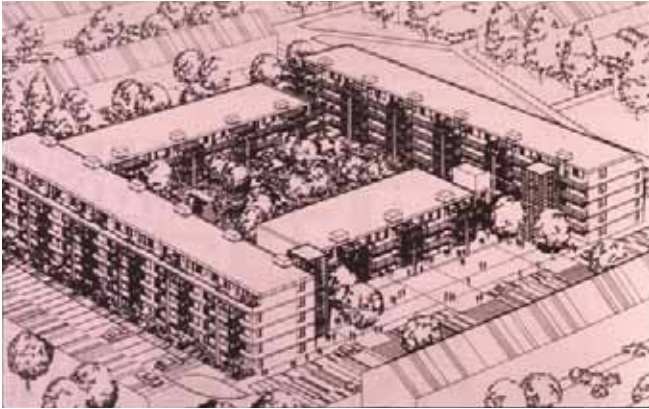
Zug, Switzerland, 1970-1972  
(alterations continue)







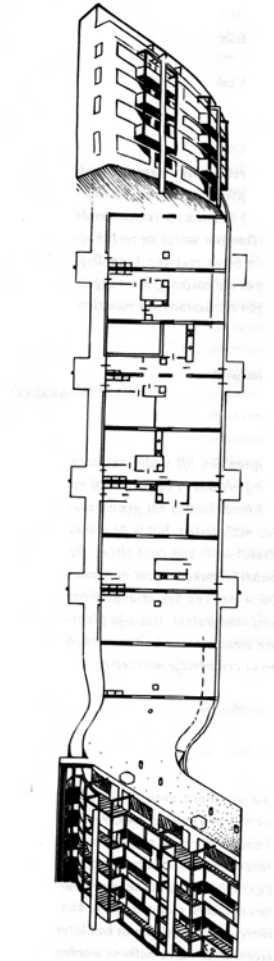
CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		



## Keyenburg

Rotterdam, the Netherlands,  
1984(Complete renovation  
in 2006 with upgrades to the  
base building and complete  
refurbishment of the infill)  
Frans van der Werf, Werk-  
groep KOKON

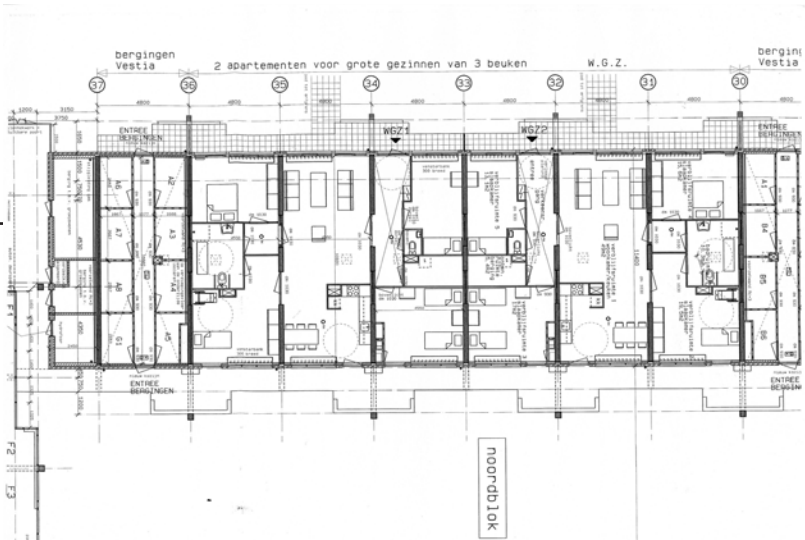
The project was designed for a  
mix of ages and incomes, with  
ground floor commercial space  
on the street. It was recently reno-  
vated. The initial infill used the  
4DEE system of Nijhuis. Aided  
by a full-scale mock-up, tenants  
laid out their own unit plans in  
sketches. The architect digitized  
the sketches and rendered them



in a computer program. CAD output immediately informed tenants how their choices would raise or lower the monthly rent, based on a standard price. The computer program then produced more detailed technical drawings and material quantity surveys based on the final approved design.

--Stephen Kendall

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		

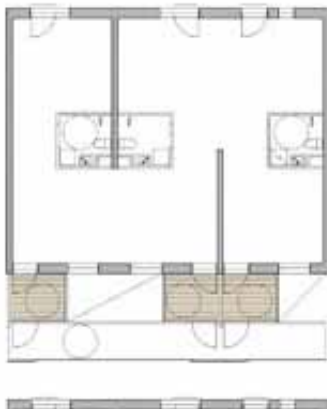




## Klippinki Housing

Espoo, Finland, 2006-2007  
Arkkitehtitoimisto Ulpu Tiuri Oy

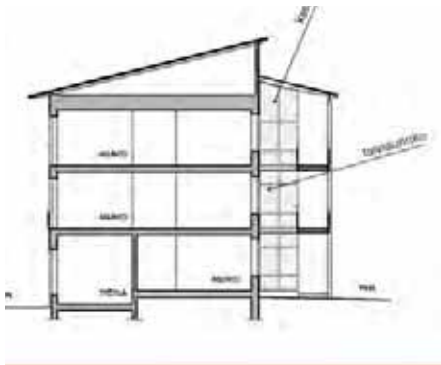
Klippinki is a project for independent living for young adults, chosen in a competition. The site is in Espoo and comprises two three-storey buildings facing the new village square. Access to most flats is from semi-private open corridors bordering the sunny common yard. Each flat has living spaces on both sides of the building. The building is designed for one-person households now, but also enables the enlargement of the units, thus avoiding a future

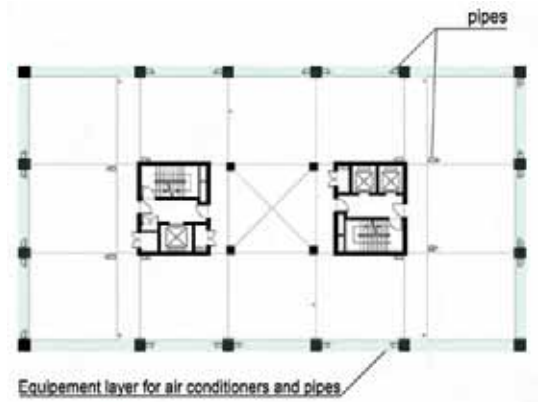


mismatch with demand. The concept includes a variety of dwelling unit fit-outs for the same basic unit, and offers young people with disabilities the possibility to live among their own age group.

--Stephen Kendall

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		

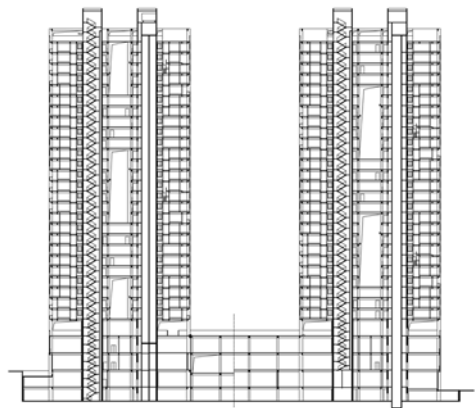




## Maya Project

Chongqing, China , 2006  
Li Haile

The Maya Project demonstrates the Open Building theory in the real estate market. It has four detached levels: base building, flat, room level (flat interior), and furnishing. While architect and the developer control the base building and dwellers control the latter two levels, the flat level is mainly guided by instant market information in the pre-sale. Customers who are future dwellers can show their "participation" by choosing a preferred flat type. As the architect received feedback from

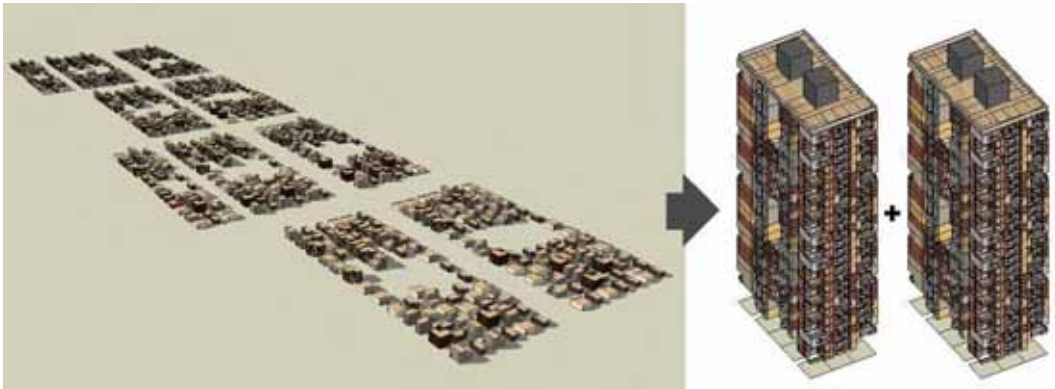
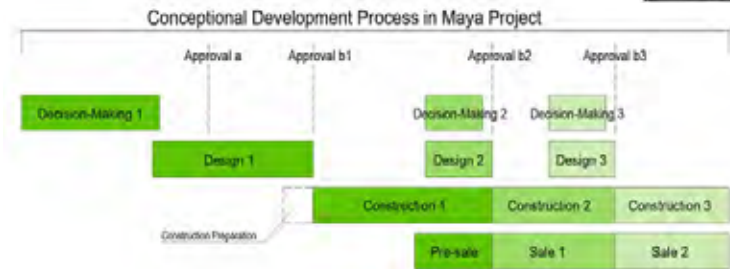




the pre-sale, he then adjusted the flat's organization twice in the upper floors which had not been sold, in order to obtain a more marketable flat proportion. In this way, vertical variety on the Maya's façade reflected a real process of synchronized design and sale. It recalls the vivid sense of vernacular villages. Dwellers can easily find their flats from faraway. In addition, the communal sky courtyards filled with plants also added to its friendly atmosphere.

--Ren Zhijie

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		

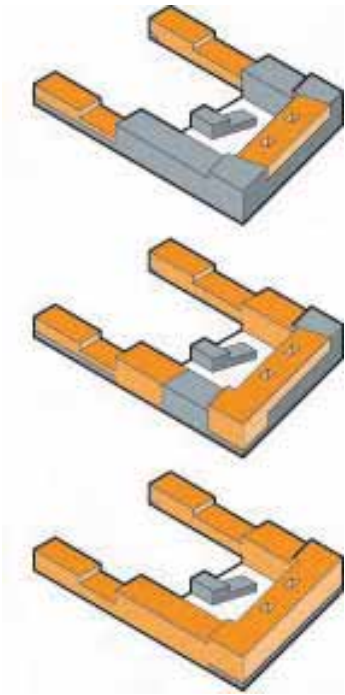
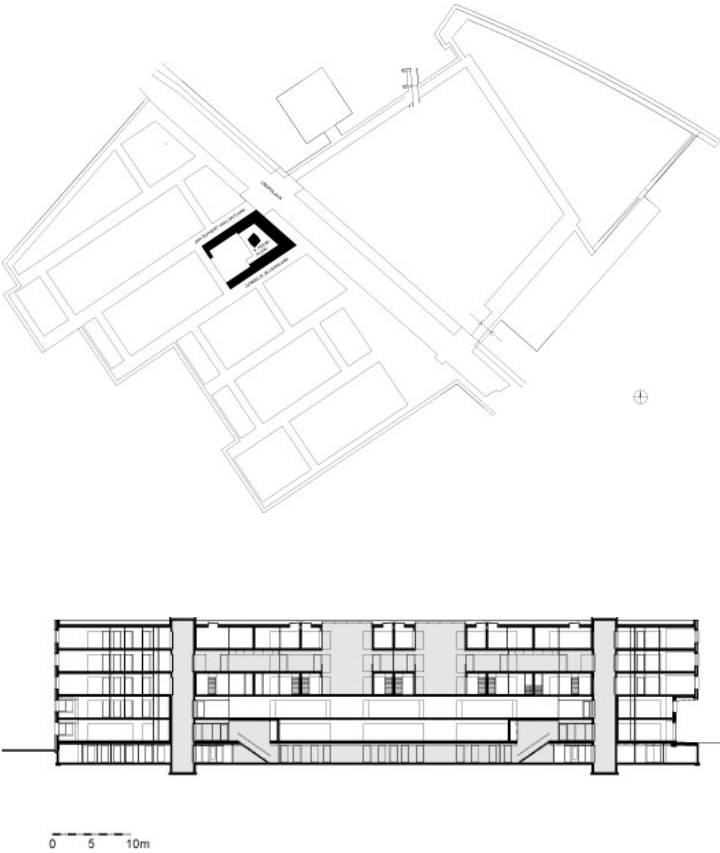




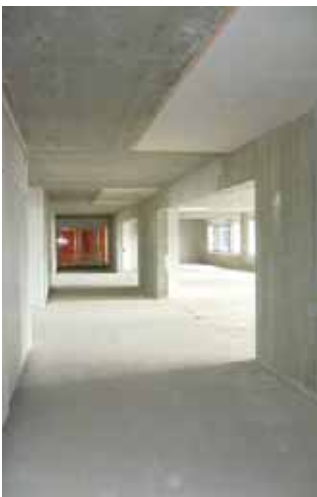
## Multifunk Building

Amsterdam, the Netherlands,  
2006  
ANA architecten

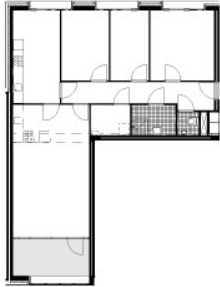
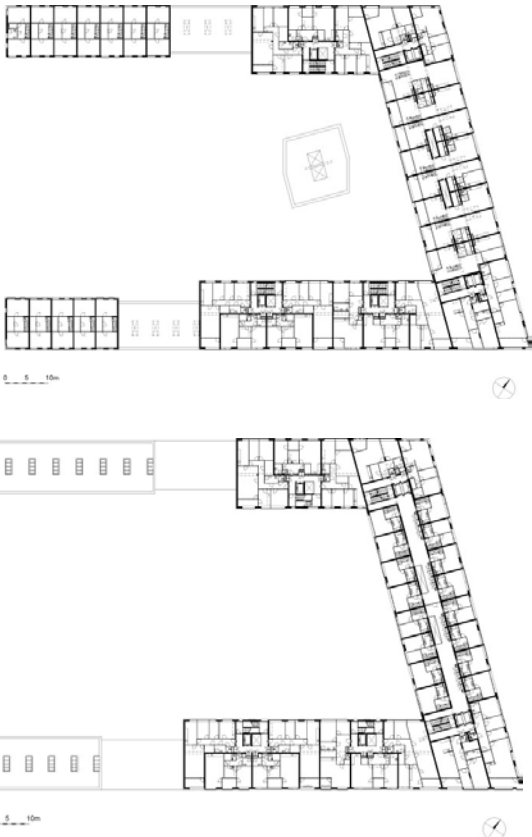
Multifunk® is situated on 'Steigereiland', the entrance to the new urban district of IJburg in Amsterdam-East. IJburg is being developed as a residential and working area. Multifunk® takes full advantage of this: it is a building that is suitable for various activities and can easily be adapted to incorporate other functions in the future. Its fixed shell structure can be filled in a variety of ways. The building can easily be reorganized in terms of the accommo-



dation itself, the access system,  
 or even on a unit to unit basis.



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc )		
Facade (major elements)		
Facade (minor elements)		





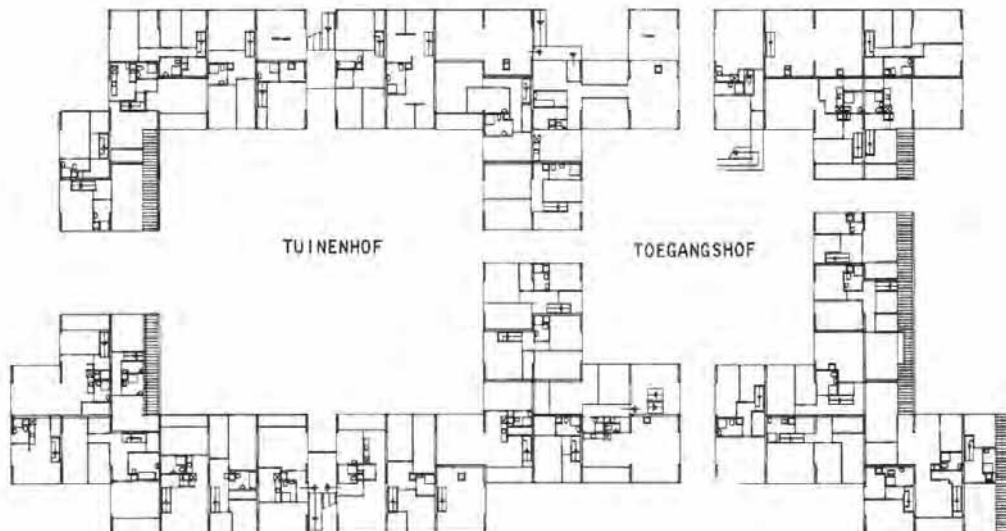


## Papendrecht

Molenvliet, the Netherlands, 1977

Frans van der Werf, Werkgroep KOKON

This project won a competition on the combined merits of its urban design, architecture and participatory decision-making process. The project's dwellings surround courtyards in two-to-four-story blocks. Most units are entered via one courtyard, with back yards or roof terraces opening onto another courtyard. A prefabricated facade framework – an updated version of the typical Dutch canal house facade comprised of



wooden frames – was installed as part of the Support. The dwelling infill includes interior walls, doors, finishes; bathroom and kitchen cabinets and fixtures; electrical and mechanical equipment for each unit; and windows and doors inserted into the Support facade framework

--Stephen Kendall

CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		

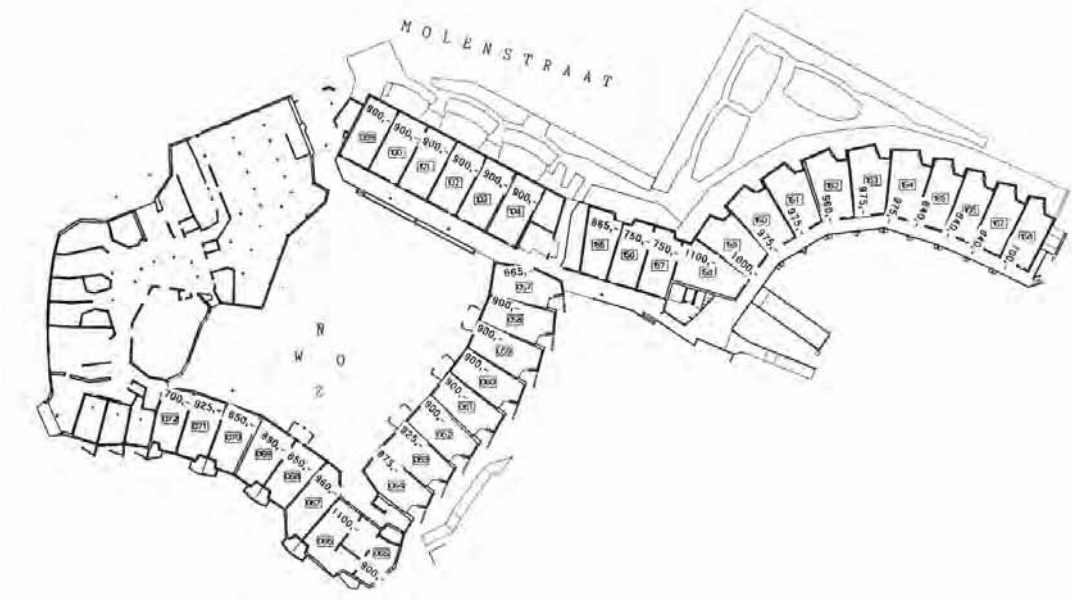




## The Pelgromhof

Zevenaar, the Netherlands,  
1998  
Frans van der Werf

This project combines principles of Open Building, ecological/sustainable design and organic architecture. The project was selected as a National Model of Sustainable and Energy-efficient Construction by the Ministry of Housing. This project embodies: Open construction (occupants lay out their own dwellings using a full-scale model); Life-time guaranteed dwelling (living space for households in different later stages of life); Social cohesion



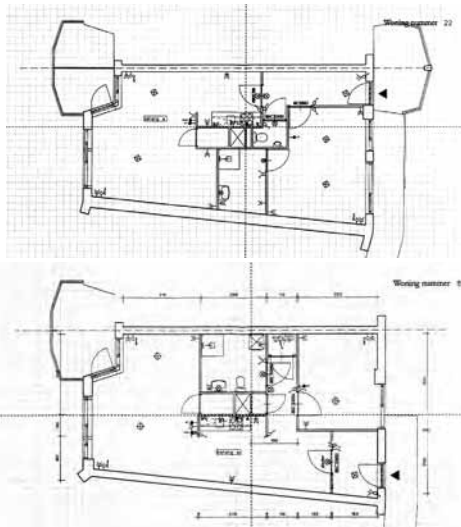
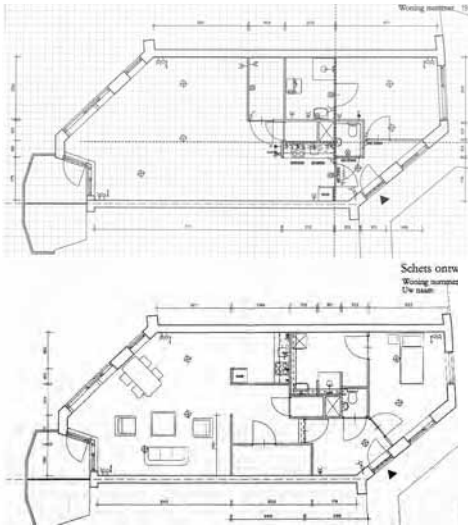


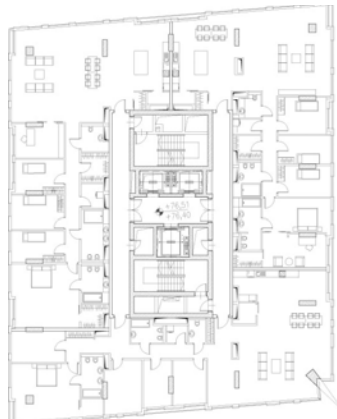
(social integration of older people who will require assistance); Organic architecture (shapes, colors and landscaping bring residents in communion with nature); Digital superhighway (telemetering to aid safety, communications and energy management); and sustainable construction (bio-ecological materials; new high-efficiency floor heating; reduced use of concrete; heating with solar energy; application of individual and collective heat pumps for energy savings).

--Stephen Kendall



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc.)		
Facade (major elements)		
Facade (minor elements)		





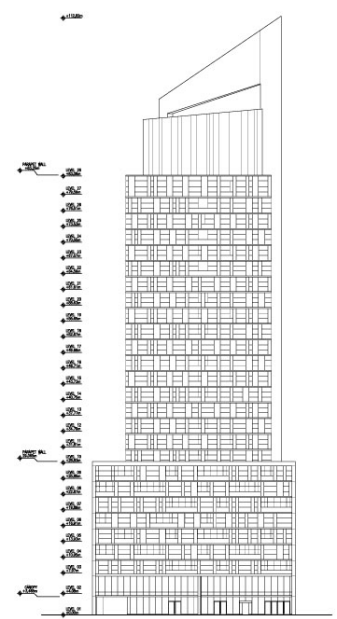
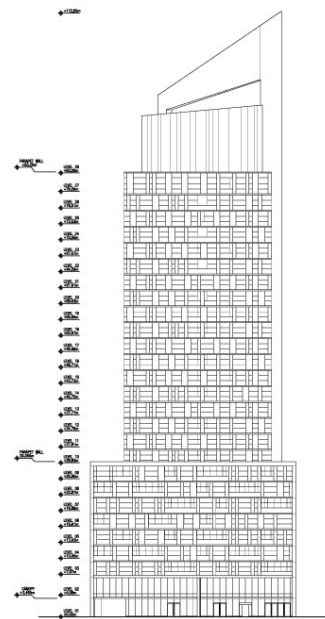
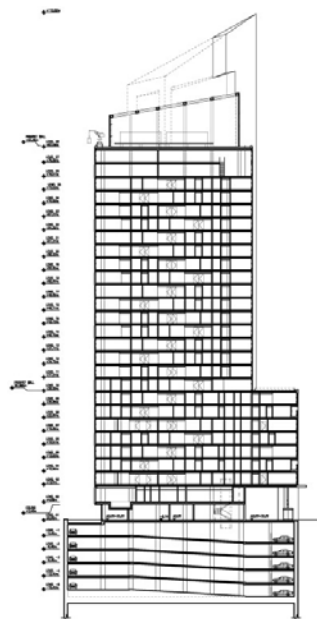
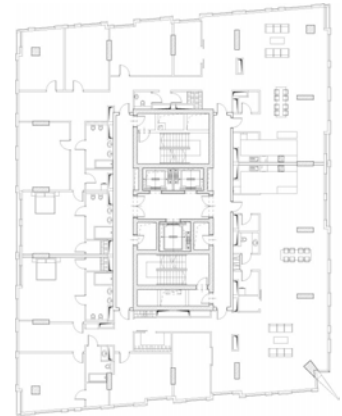
Poland Open Building  
Warsaw, Poland,

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CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		



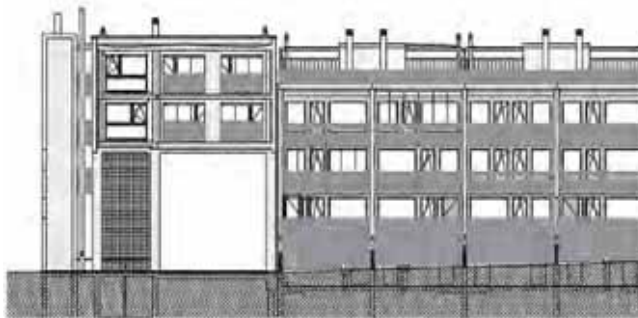
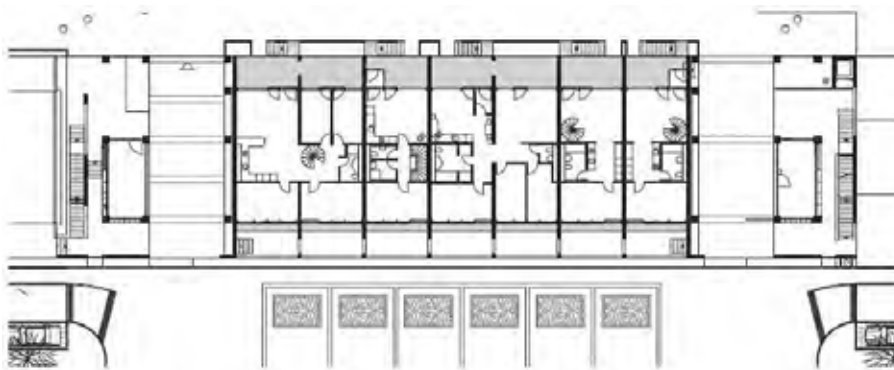




## Siedlung Nussbaum

Berne, Switzerland,  
Althaus Architekten Bern AG,  
Design Director: Jürg Althaus

This project is a gift of affordable housing from Bern to its young people. A competition was held for the overall scheme of 350 houses, supported by city financial subsidies. The competition stipulated the density, the infrastructure concept and volumetric composition, and the bay spacing of the construction. This part, called "Nussbaum", was designed using intensive discussions with the future owners. The result is 50 differently organized and detailed



units, a demonstration of variability within a clear architectural order.

--Stephen Kendall



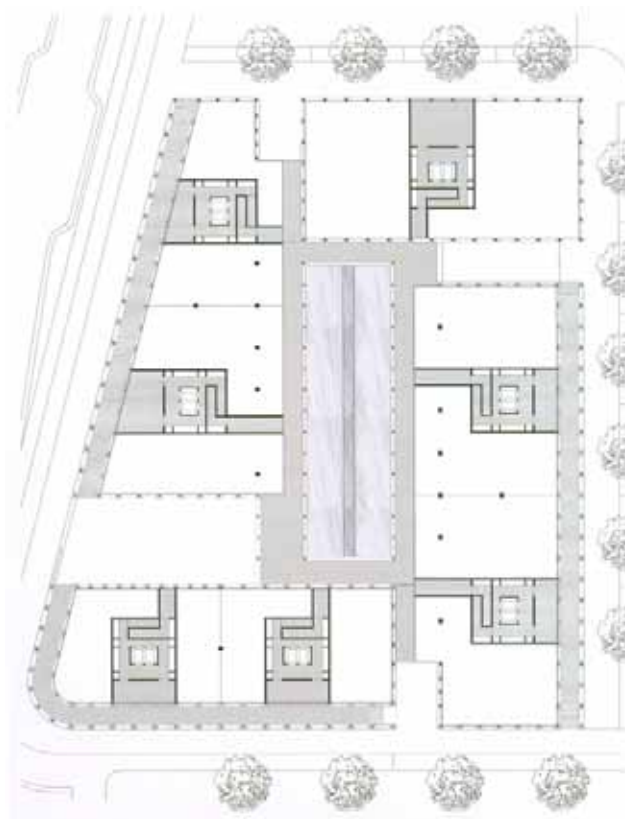
CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		





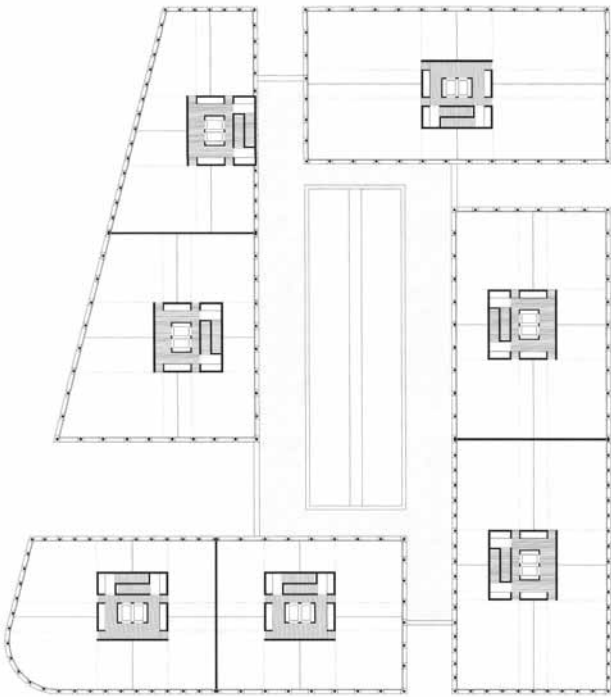
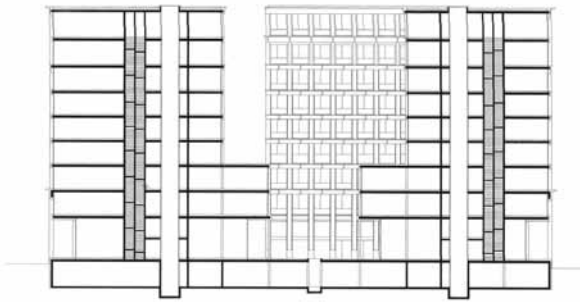
Solids IJburg

Amsterdam, the Netherlands,  
2008  
Baumschlager-Eberle





CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		





## Trento Dwellings

Haarlem, the Netherlands, 2003

Zeeman Architecten/ Van den Berg Alphen aan den Rijn:  
Maarten van der Breggen, Jantine Otten-Kardol, Jos Boom

The city of Leimuiden wanted to build houses for their own young citizens. The aim was to build small houses they could afford to buy, but with the possibility to adapt to their wishes in the future. The architect proposed houses that could "grow". To start with, the houses have a width of 7,2m to create the possibility for a bedroom and bathroom or workspace

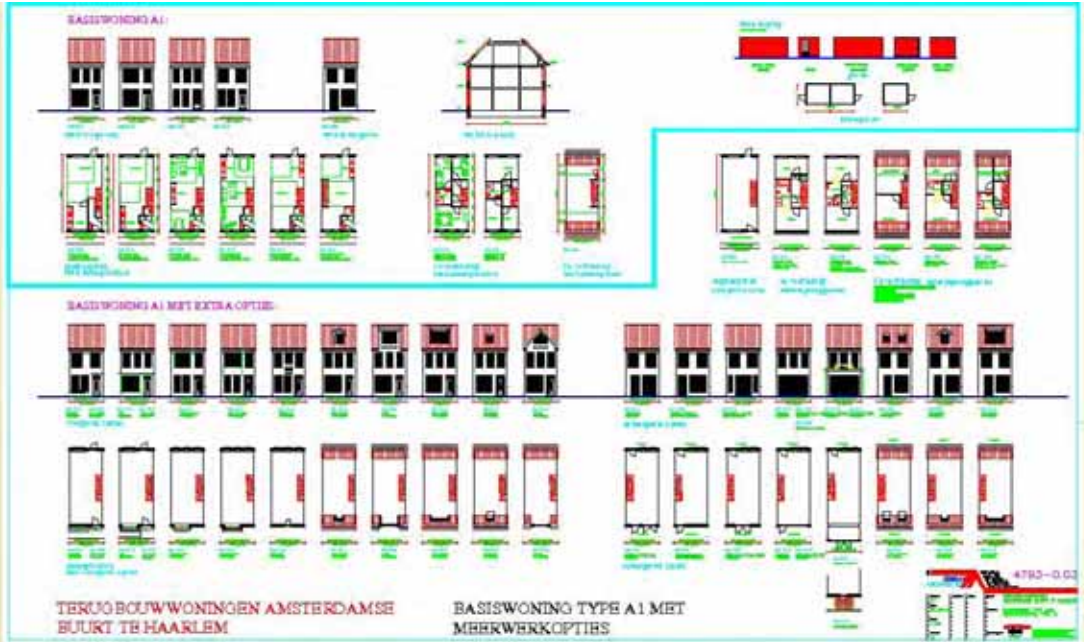


on the ground floor next to the living room. The second floor is small in the beginning but can easily be made bigger following the architects' design. The installations are already adapted to the largest house, to be able to enlarge the house as easy as possible, the idea being that if you wish to, you can live here your whole life.

--Stephen Kendall



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		







University Bern von Roll

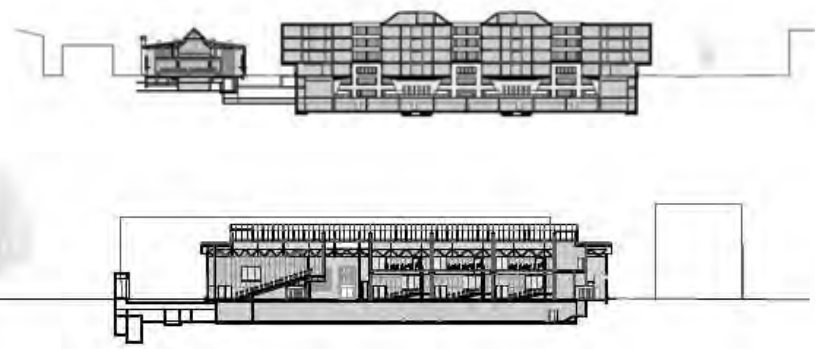
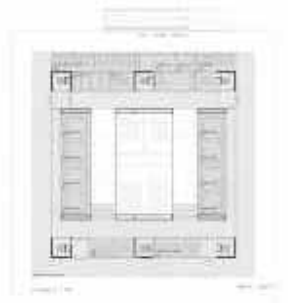
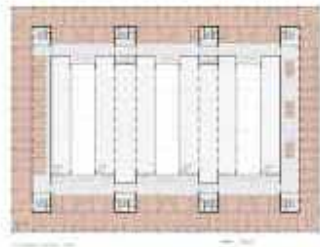
Bern, Switzerland, Construction period 2008-2013

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CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc)		
Facade (major elements)		
Facade (minor elements)		

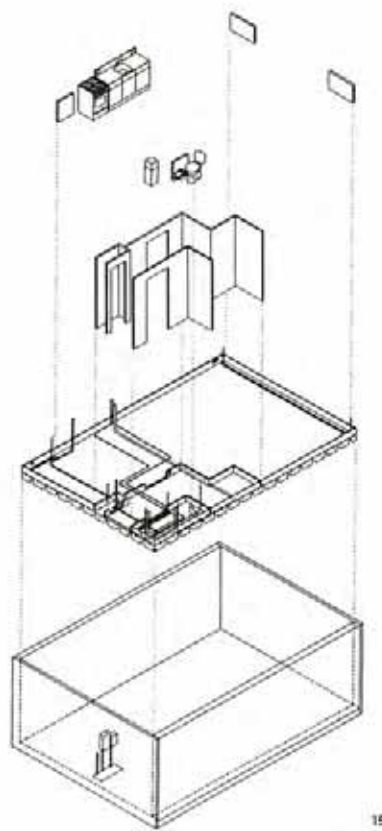
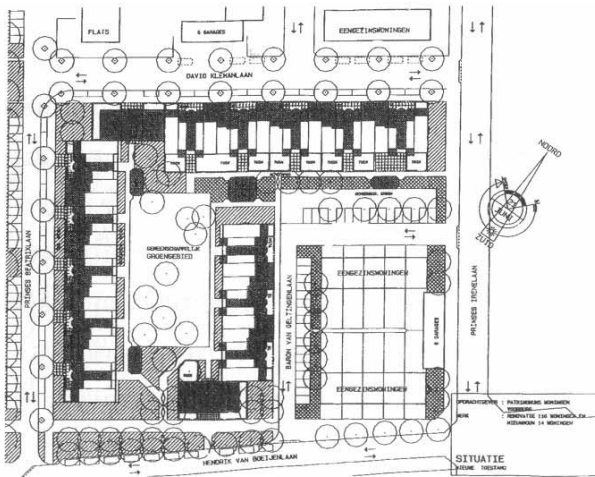




## Voorburg Renovation Project

Voorburg, the Netherlands, 1990  
 Original Architect: Lucas & Neimeyer, Renovation Architect: RPHS Architects

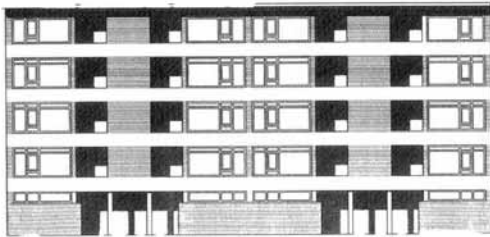
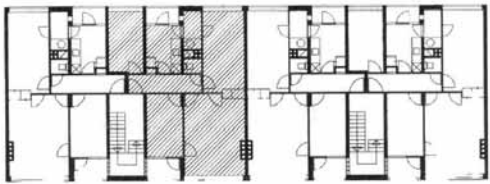
In 1988, Patrimoniums Woningen – a large private housing owner – decided to rationalize management of the property and began upgrading it on a one-dwelling unit-at-a-time basis, parallel to an overall site and building upgrading process. Matura Infill Systems, a specialized interior fit-out company, was initially contracted to provide dwelling unit infill. Dur-





ing the two weeks required to gut each vacated unit, the new tenant met with the architect. A floor plan and equipment and finish specifications were selected from among several options. The architect's drawings were then transmitted to Matura. One month after being vacated, the unit was again ready for occupancy, with an entirely new interior reflecting the new tenant's preferences. When an occupant moves out, the housing corporation helps to sell the infill to the new dweller, or buys and stores or reinstalls it.

--Stephen Kendall



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc.)		
Facade (major elements)		
Facade (minor elements)		



Xacalli

Mexico City, Mexico  
Jorge Andrade



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen,bath,etc.)		
Facade (major elements)		
Facade (minor elements)		







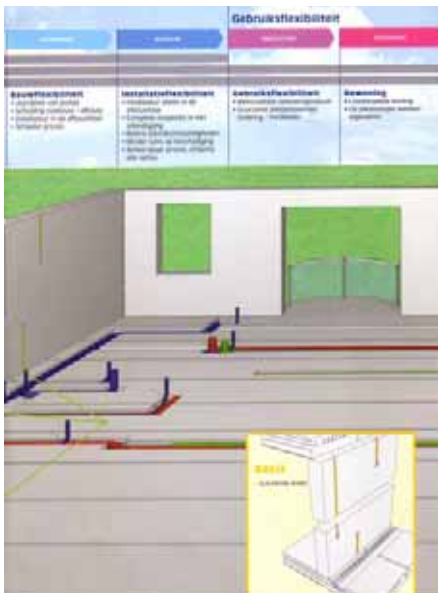
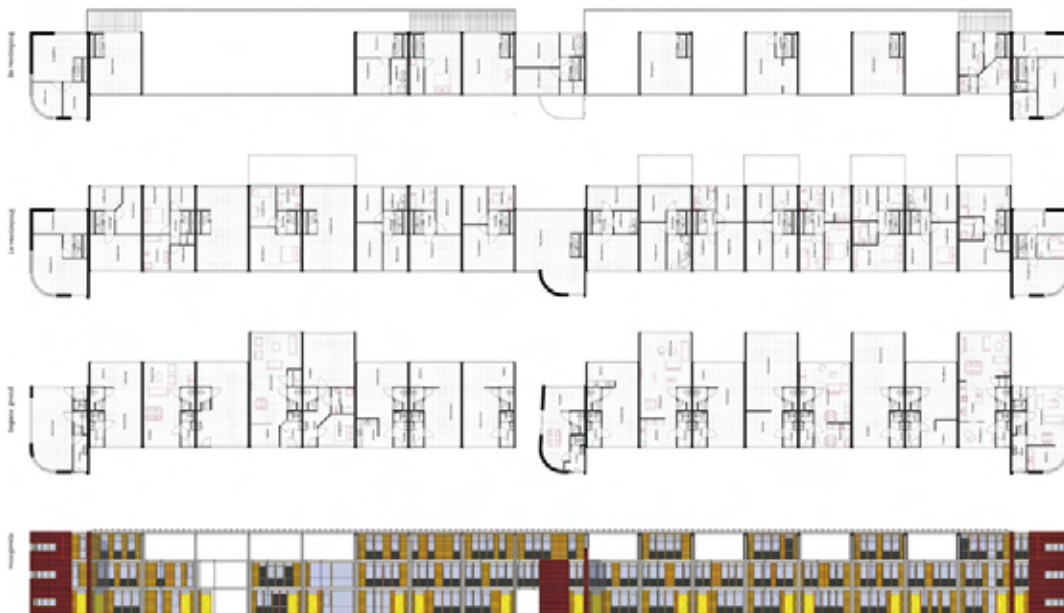
## Zaltbommel

Zaltbommel, the Netherlands,  
2002  
Willems van den Brink

These two rows of 19 houses opposite each other have a residential park in between. Through their different exterior finishes, the four terrace houses at the ends of the blocks and the two gatehouses in the centre ensure a flowing transition to the surrounding buildings and the park-like surrounds. The houses have a basic layout on two or three floors; while the specific floor plans, façades and extensions can be designed by the residents, using the flexible

38 Wenswoningen te Zaltbommel, IFD demonstratieproject

Willems van den Brink Architecten



Wenswonen® (Desirable Living) concept from HIVG. Based on the sense of social responsibility, this project is an attempt to find solutions to the issues that emerge in a changing society.  
--Stephen Kendall



CHOICE	YES	NO
Dwelling size		
Complete floor plan		
Floor plan except bathroom		
Equipment (kitchen, bath, etc.)		
Facade (major elements)		
Facade (minor elements)		





## Interview with Prof. Dietmar Eberle of B&E Baumschläge & Eberle GmbH, Austria

(The following essay was produced from two interviews conducted by Dr. Jia Beisi in Hong Kong October 25 2003, and in Bregenz September 17-19 2004)

1. What drew you first to the idea that architecture had to be "open ended" and able to accommodate change?

How long can we plan for, if we just think about people live there? We can plan for 15 years. But what is the life time of the building? 100 years. If you think about sustainable building, then it is even longer. Obviously, we can't build for 150 years while thinking of 15 years. I have to think about long distance in time. I have to think how to make it possible. When the needs change, in social, economic, culture and technology, you have to make building possible to change, but not in a difficult way.

We have designed many types of buildings, including big buildings, such as housing, office, school, hospital, and airport. We have experienced many changes of programs in a very short of time. That is the universal problem: new organization of social circumstances, new technology, and different value. But the strategy of flexibility can help.

For me it is important to create a good building which should be economical, efficient with a strong identity on the public level for the particular place. And at same time, it has to be flexible inside to accommodate individual needs and their identities.

2. Did you find yourself at some point at odds with your colleagues or clients or others who had the power to accept or reject your work? If so, how did you overcome this and continue to do what you believed in?

The way to achieve your objectives starts from the beginning of the projects. You have to know people well and try to integrate them at the early design stage. If you simply bring design to the clients, engineer or craftsman at later stage, they will always say "No". You don't need to tell them "you are stupid, let me do it". It is a very problematic in human approach. You should speak to crafts men first, then the engineer, then back to the clients. You should not do anything beyond their capability, if you need their help, because it does not make sense. The true design work is collaboration and building up a team, the rest is only work. They will bring all their knowledge.

When you have no people to participate at early stage, your design meant to be very difficult, because you only have yourself.

For me, the layout of apartments or questions like how many bathrooms are needed is totally a private matter. Except providing a maximum flexibility for the users with basic service, we have no interests to make interventions into this private domain. However, there is a very clear limit of user participation. For me, the relation between public and private should not be determined in a personal level. For instance, inside façade there is the owner to exercise his responsibility. Outside the façade there is the public and community, and therefore it is the responsibility of the architect to convey the public interests. The kind of limits does not mean these issues, can not be discussed publicly. But it can not be decided on individual level.

4. In the course of doing "open ended" architecture, did you find that new methods or skills were needed in your office's collective tool kit? If so, what were some of them?

Understand the building in terms of life cycle is the key. I understand that any building has five different systems and have completely different lifetimes.

1. All the public, infrastructure outside, much longer than the building, more than 200 years. We have to be very careful about it.

2. The structure load bearing structure, in combination with staircases and or the security problems. They don't have to change for about 100 years, unless you did something wrong.

3. External wall, service cores, and the mains. You don't change external wall for about 50-60 years, because it is too expensive, technically complicated, politically sensitive.

4. Function and layout of the building changes every 20 years.

5. Surface, ceiling, lighting, etc, change every 10 years.

To make change possible and easy, you need to organize the building in such a way that these systems are separated according to each life span. This gives you a lot of flexibility. This is the way we do.

We do a lot of research work on what is the goal of the project. Who are the people will be involved? What is the economic background, the transportation, and the quality of the ma-



Prof. Dietmar Eberle



Saeco Administration  
1995-1998



material supplied? Design came at very end. We developed strategy about how to collect information. We don't make design sketches, but we have idea of gathering information systematically. Then we make first proposal. It is a very healthy proposal, because it is based on information. Without information, it is like trials-and-errors. As architects, I don't think we can try errors. We should be serious strategies how to develop project.

For us it is important to work on different levels at same time. We try to make clear at beginning in each of the levels, which direction should go. Then we start to make decisions, which are simple and direct, with volumes, and structure, and many material work with, so design is easy.

5. What philosophical arguments have been mounted against the idea of an "open ended" architecture?

Firstly, buildings consume so much resource and energy, and they can make more contribution to sustainable future. Secondly, housing in the end, is a feeling at home, not necessary the materially, but with identity. In German it is called Heimat, or a place in your mind. Housing is not only an architecture problem, it is about participation by a lot of people.

6. What is next on the horizon for open building?

I like flexibility, but I understand it in a more complex way. Today we have to think about sustainability, energy, resources and management. We want to be a part of new development of technology. In each field there is many progress, I am interested in develop-

ing certain technology, and certain principles further on. We want to develop it further on. However the principle is still the same: you need understand building as separated systems based on the lifespan, their costs and benefits based on the local conditions and culture of the place.

However, flexibility is not about one kind of technology. I think a technical solution for all the systems is not the answer. First the reason is the cost. Some experimental buildings are too expensive to be popular. The second is that they create a very specific atmosphere, very technical atmosphere, which nobody like it. We must understand that don't build for technology, we built for people. The third point again is that one has to analyze the life time of house: the five different systems and five different life spans. We need first to analyze these systems, and make it possible to change one system without affecting the other. This is the most important area to study. The utmost goal is to make building more economical and more efficient.



Achslengut Residential  
2nd Phase 1998-2002



V78 in Bludenz 1998



Lindenweg Housing 1995

埃伯勒訪談摘要（根據2003年10月於香港，和2004年9月於布雷根茨的兩次採訪記錄）

可持續發展概念要求一座建築可使用100至150年，而一般的建築計畫只能做到15年，這就要求建築本身有持久適應性。適應性不僅依靠現代技術，因為技術本身也在不斷地更新，而是在概念和結構上將建築個部分，按更新年期分成五個相互獨立的層面：環境基礎設施、承重結構、立面及主要設備管線，和室內佈局。我們強調住戶要有自主權，但這種自主權應限制在自我空間以內。建築師在公共空間、外牆和結構佈局方面為公眾提供高質量的，地方性的，有持久魅力的建築設計。要做到這一點，我們的經驗是積極合作。在構思的初期就要和包括業主在內的，與專案有關的多方人士交流，謀求建立一個合作群體。另一方面我們系統地收集和消化相關資料，包括地方法規，現有施工技術條件等。而方案的構思就是在和人的交流和資訊的組織中完成的。建築不是從草圖開始，慢慢畫出來的。總之，我們非常注重建築本身的質量，注重材料、技術和地方性的結合，同時為使用者和可持續發展的未來提供積極的互動的條件。

#### Reference:

2005 "A theory of Architectural Practice: Open Building Interpreted by Baumschlager & Eberle". SB05 Tokyo Proceedings (CDRom), Action for Sustainability: The 2005 World Sustainable Building Conference in Tokyo, September 27-29, 2005. Published by SB05 Tokyo National Conference Board.

<sup>1</sup> The category of information collection are: People involved in the project; project as related to the urban and natural context; Technical and legal issues on structure, gravity, durability, and safety; Façade system; Function and layout (5-20 years); Anticipated users of the project; and Possible material and construction (BS Jia, 2005, )