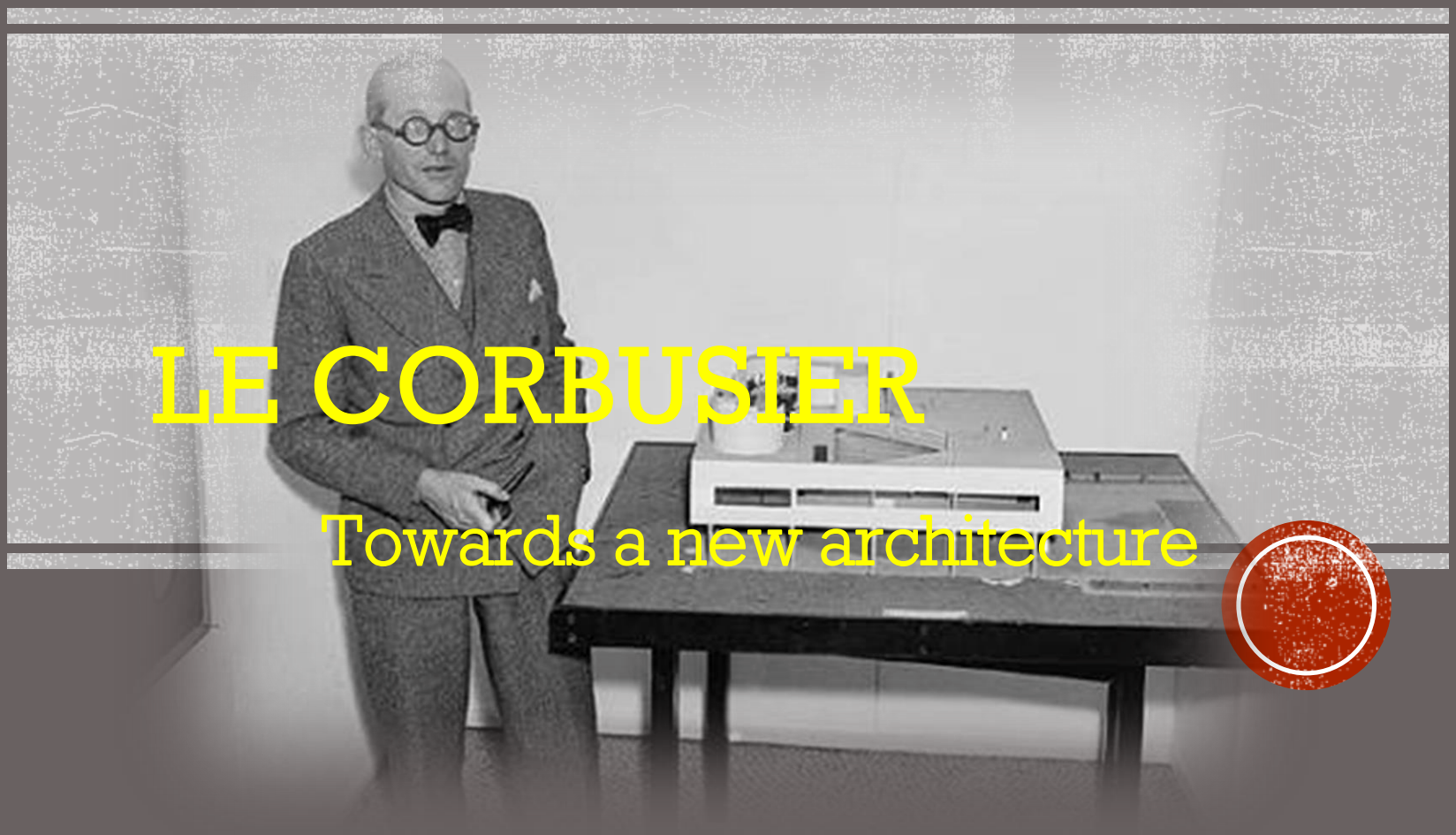


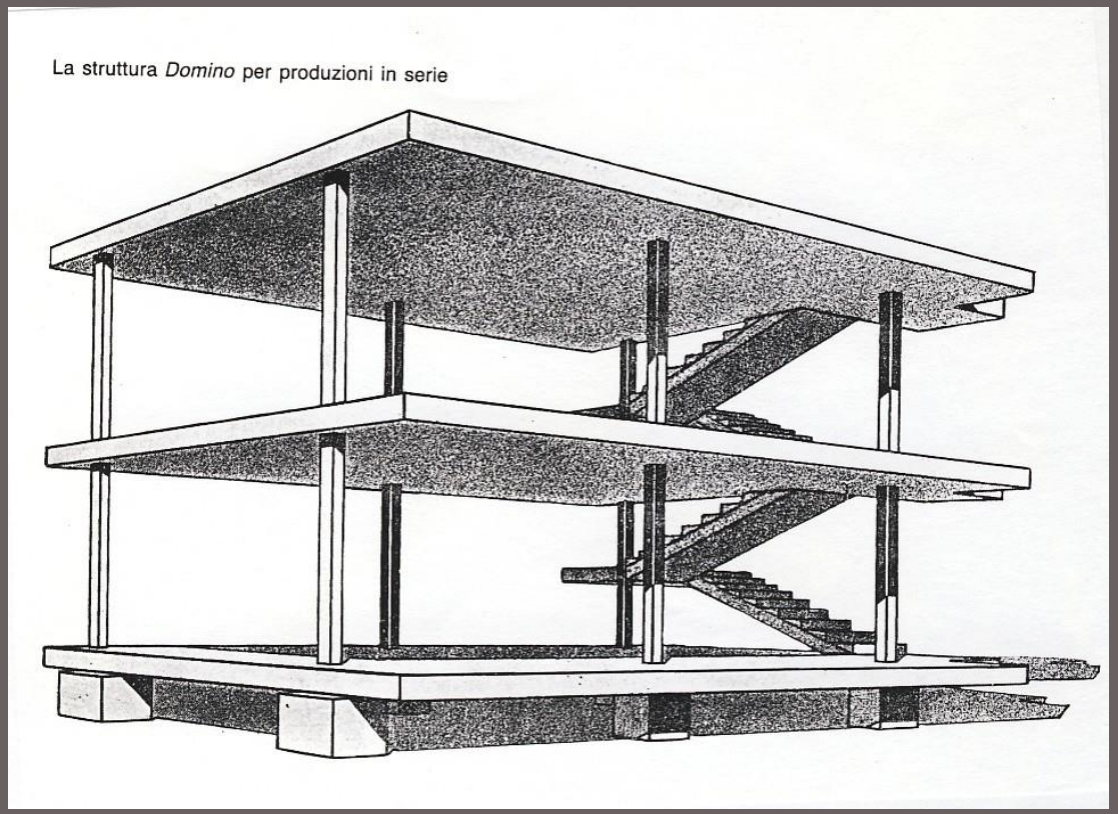
LE CORBUSIER

Towards a new architecture

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE

- 1900 Studies watch engraving at the Art School, under Charles L'Eplattenier.
- 1903 Enters the Advanced Decorative Arts Cours (based at the Art School) directed by Charles L'Eplattenier, who interests him in architecture.
- 1907 In September, trip to Italy two and a half month : Milan, Florence. Visits the Charterhouse of Ema in Galluzzo, Siena, Bologna, Padua, Gargoano, Venice (october - beginning of November). In November leaves for Vienna via Budapest.
- 1908 Vienna: meets Josef Hoffmann, Koloman Moser and Gustav Klimt.
- 1910 works for Peter Behrens's architectural practice in Berlin. Meets Walter Gropius and Mies Van der Rohe.
- 1911 In May, leaves Dresden for his journey to the East : Prague, Vienna, Budapest, Belgrade, Bucarest, Tarnovo, Gabrovo, Kasanlik, Istanbul, Mount Athos (21 days), Athens and southern Italy.

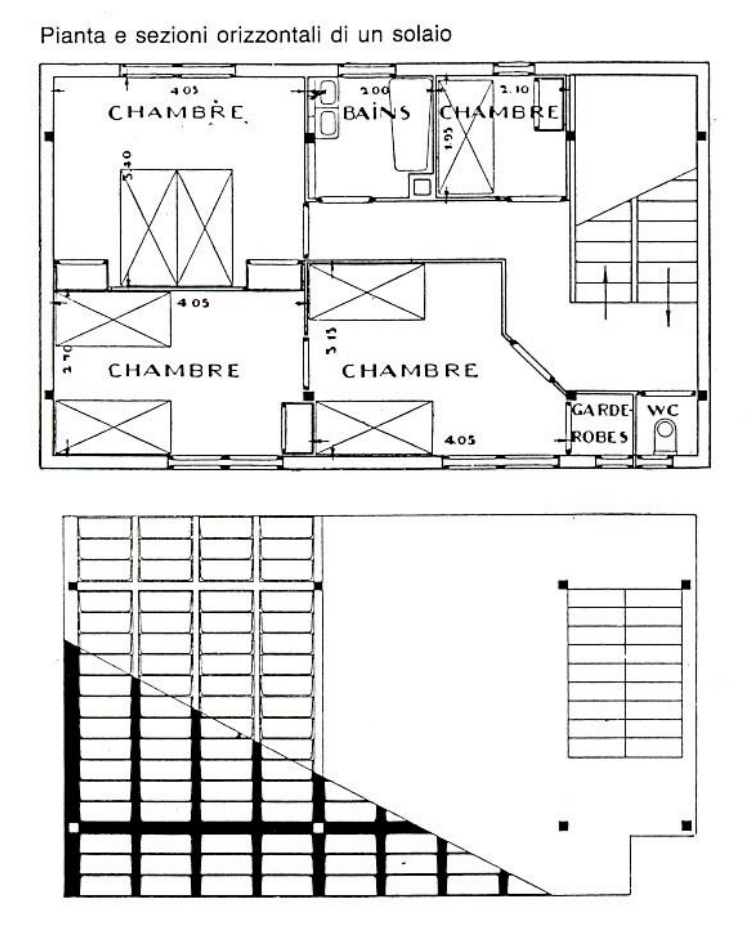
LE CORBUSIER TOWARDS A NEW ARCHITECTURE



The original construction system for Dom-ino consisted of horizontal slabs, an integral stairway and slender pilotis, which together reduce modern building to its bare minimum " a concrete structural frame".

The Maison Dom-ino was designed by Le Corbusier in 1914 as a housing prototype that would address a Europe-wide housing shortage in the years leading up to the Great War. The system itself never saw widespread production by either the architect or his European contemporaries in the form it was initially conceived.

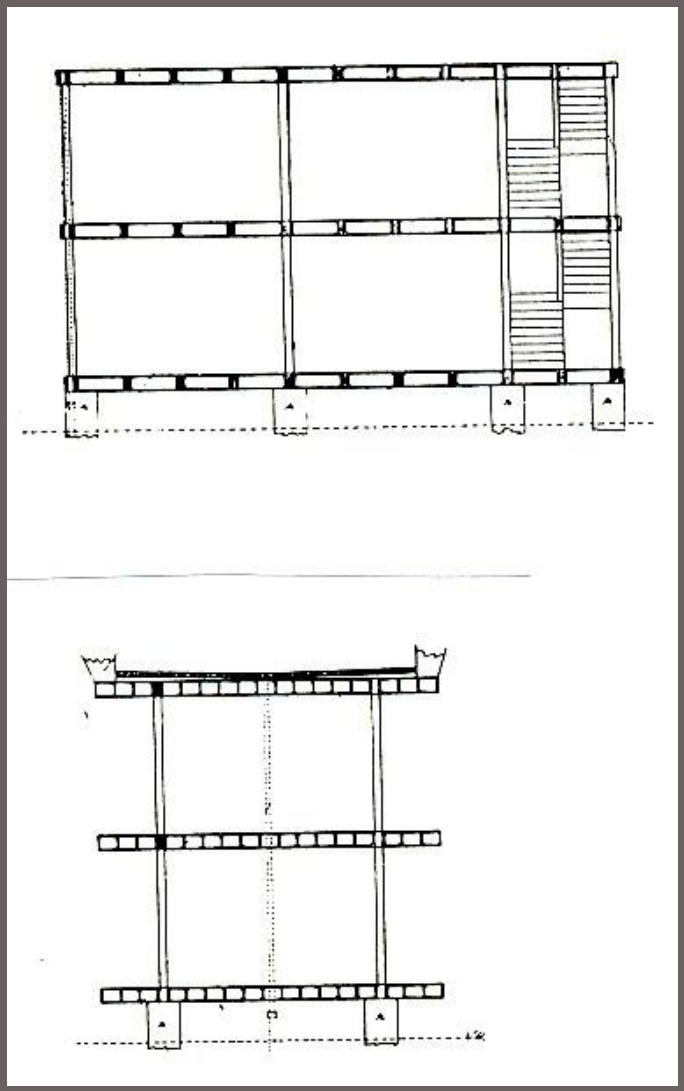
LE CORBUSIER TOWARDS A NEW ARCHITECTURE



Le Corbusier was just 27 when he conceived of the Dom-ino – so called because the houses could be joined end to end like dominos, and hyphenated to combine "domus" and "innovation".

By November 1914, one fifth of the Belgian population was homeless. Le Corbusier's solution was almost painfully simple: a standardised, two-storey house made up of concrete slabs supported on columns and a staircase. That was it – no walls, no rooms, just a skeleton.

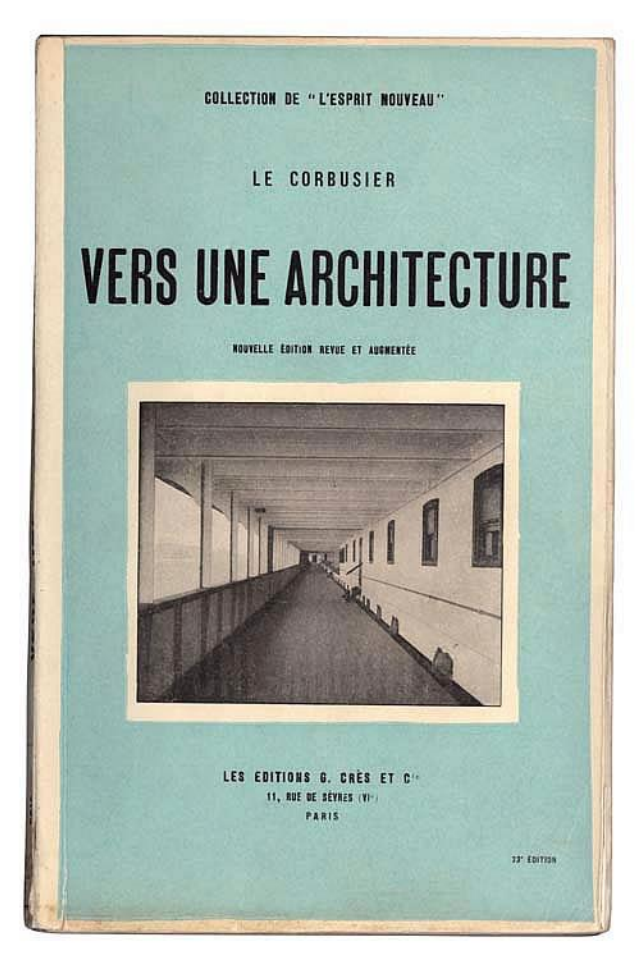
LE CORBUSIER TOWARDS A NEW ARCHITECTURE



The unbuilt imagery and generalised design principles embodied in Maison Dom-ino became the most recognisable " the most fundamental" project of twentieth-century architecture.

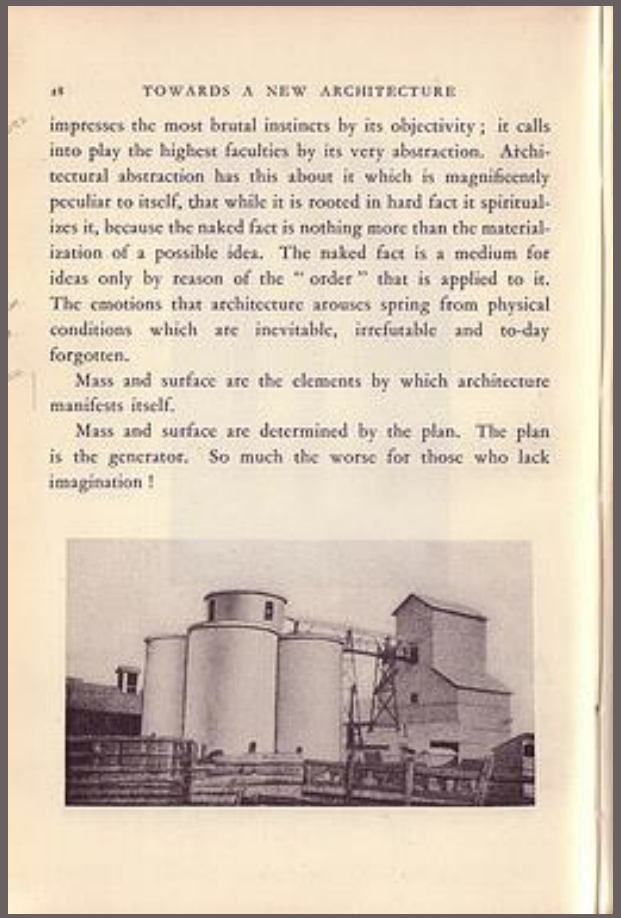
As a project Dom-ino distils modern architecture to a set of guiding, abstract and idealised principles. This is a key reason why the afterlife of Dom-ino can still be seen and felt today, a hundred years later on.

LE CORBUSIER: TOWARDS A NEW ARCHITECTURE



Vers une architecture was foriginally published in Paris in 1923.
The text first saw the light of day as a series of articles that appeared in the magazine *L'Esprit Nouveau*, which was edited, at least initially, by Le Corbusier (born Charles-Édouard Jeanneret in 1887, he debuted his pseudonym in the magazine's pages), the purist painter Amédée Ozenfant, and the Dadaist poet Paul Dermée.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE



48 TOWARDS A NEW ARCHITECTURE

impresses the most brutal instincts by its objectivity; it calls into play the highest faculties by its very abstraction. Architectural abstraction has this about it which is magnificently peculiar to itself, that while it is rooted in hard fact it spiritualizes it, because the naked fact is nothing more than the materialization of a possible idea. The naked fact is a medium for ideas only by reason of the "order" that is applied to it. The emotions that architecture arouses spring from physical conditions which are inevitable, irrefutable and to-day forgotten.

Mass and surface are the elements by which architecture manifests itself.

Mass and surface are determined by the plan. The plan is the generator. So much the worse for those who lack imagination!

The discourse of *Vers une architecture* not only alternates thematically between engineering and architecture throughout, but is also syncopated according to a precise rhythm: the first of its seven sections is dualistic, juxtaposing the aesthetic of the engineer with architecture; the second, like the fourth and fifth, is divided into three parts; and the third and the sixth sections feature single interposing themes (namely, "Regulating Lines" and "Mass Production Houses"). The whole is concluded by a dualistic coda implying that violent revolution may be avoided through the provision of a rational, purified, style-less architecture for society as a whole.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE

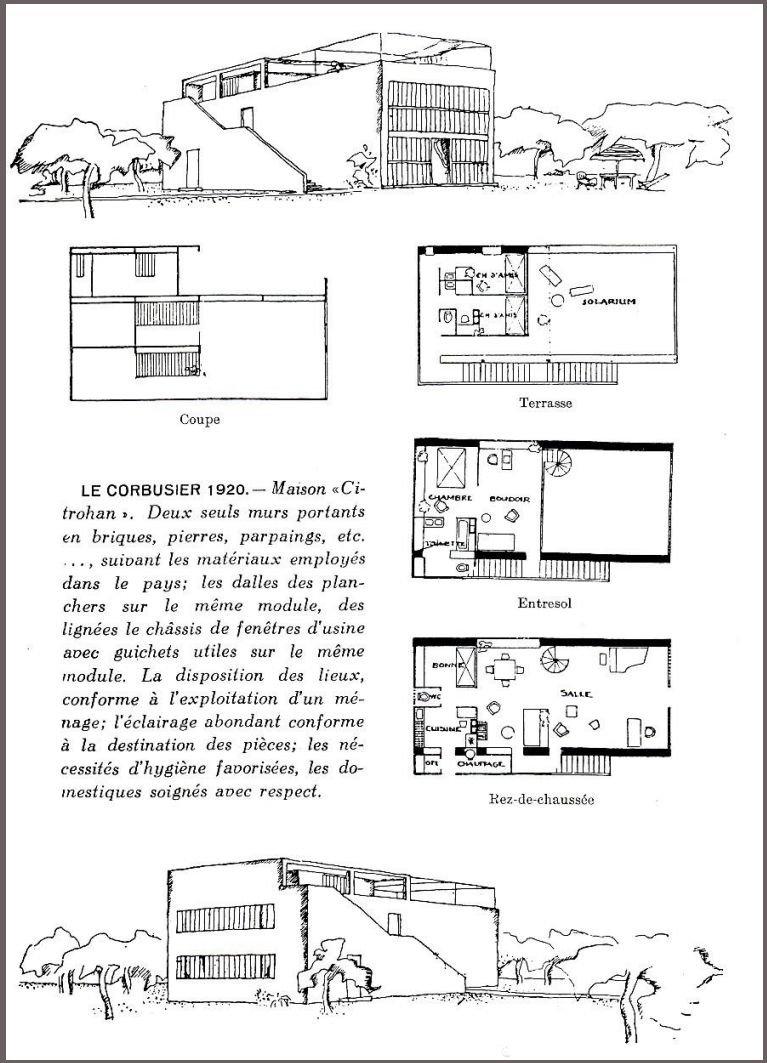
Le Corbusier was influenced specifically by the *Deutche Werkbund Jahrbuchen* (yearbooks), above all by the volumes dedicated to "Art in Industry & Trade" (1913) and "Transport" (1914), the first of which featured North American grain silos within Walter Gropius' essay on modern industrial building; the second accorded cultural value to various elegantly engineered means of modern locomotion— automobiles, aircraft, transatlantic -.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE

Le Corbusier perceived industrialism and technology as improving society, which is what he was attempting to do with the design of his houses. The Maison Citrohan, especially, was intended to improve the living conditions of people's everyday lives. Not only was the house designed to be efficient for people's day-to-day tasks, but it was also designed to be built with materials that could be mass produced and that were easily accessible, such as concrete.

These factory-made, mass produced items resembled parts in an assembly line, revealing Le Corbusier's plan for the Citrohan house to mimic not only the car's efficiency but also its method of production.

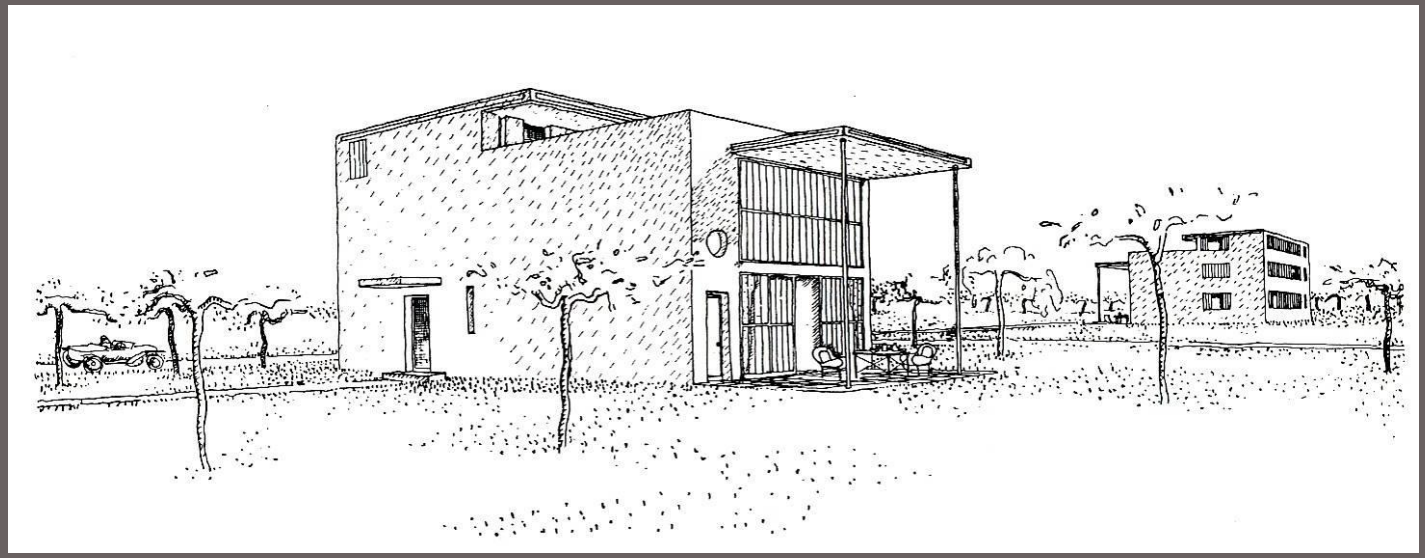
LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



LE CORBUSIER 1920. — *Maison «Citrohan». Deux seuls murs portants en briques, pierres, parpaings, etc. ..., suivant les matériaux employés dans le pays; les dalles des planchers sur le même module, des lignées le châssis de fenêtres d'usine avec guichets utiles sur le même module. La disposition des lieux, conforme à l'exploitation d'un ménage; l'éclairage abondant conforme à la destination des pièces; les nécessités d'hygiène favorisées, les domestiques soignés avec respect.*

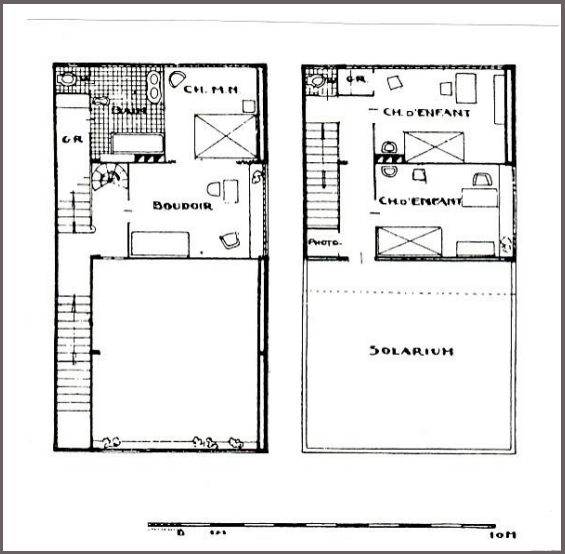
Le Corbusier exhibited a model of his Maison Citrohan in 1920. As he did with many of his Purist works, Le Corbusier designed the Citrohan house to be both aesthetically pleasing and functional. His design was greatly influenced by the effects of World War I. Le Corbusier designed the Citrohan home with the intention of creating a space that was not only efficient but also affordable. By making the house orderly and available to the masses, Le Corbusier envisioned creating a space that was uplifting and offered a solution to the chaos resulting from the war. His plans for the Maison Citrohan reflect his attempt to improve the standard of living after World War I.

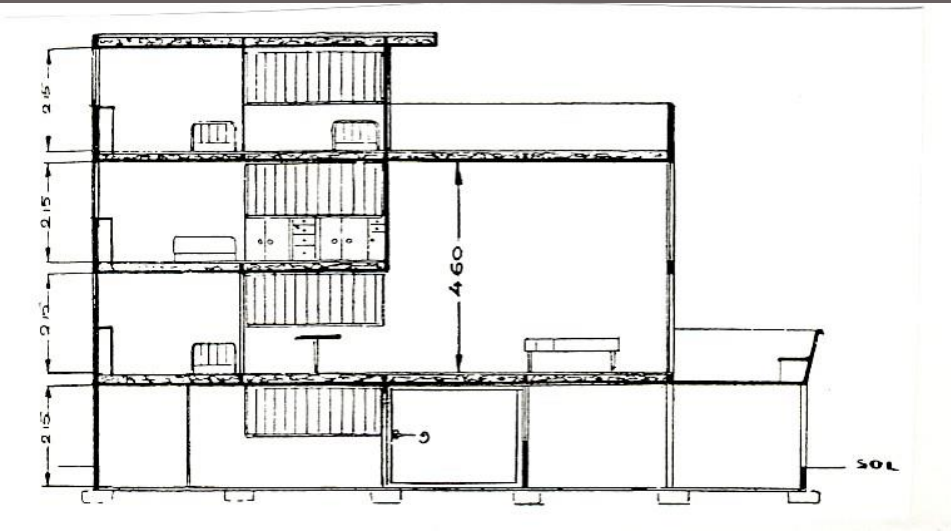
LE CORBUSIER:TOWARDS A NEW ARCHITECTURE



Le Corbusier envisioned the Citrohan house as being efficient like a car. He named it the Maison Citrohan as an intended compliment to the Citroën automobile manufacturing company and because he believed it to be as efficient as the new machines which are transforming twentieth century life.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE





The house is two stories tall with the kitchen and dining room on the first floor and the bedrooms on the second floor. The bedrooms are separate from the parts of the household associated with work to provide an area for relaxation and escape. The living room is a double-story, meaning there is an open balcony on the upper level looking down into the living room on the lower level. The balcony adds another dimension within the home, creating additional space. Like many of his designs, the Maison Citrohan has a spiral staircase and a roof garden.

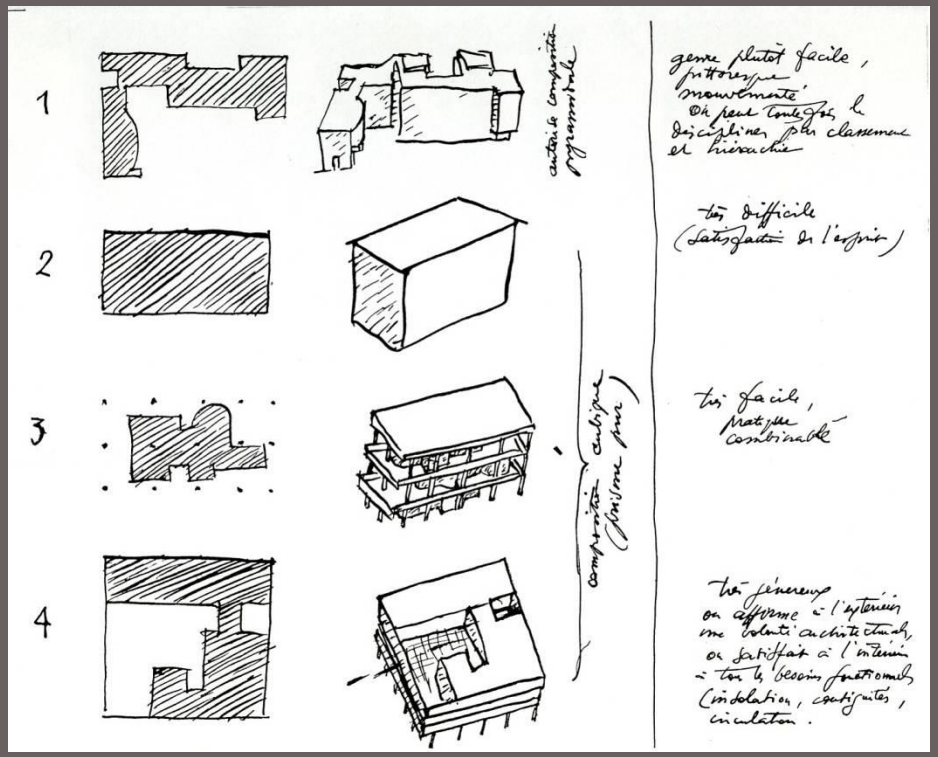
LE CORBUSIER : TOWARDS A NEW ARCHITECTURE

The two-family structure known as Houses 14 and 15, designed by Le Corbusier and Pierre Jeanneret in 1927, is one of the earliest built manifestations of the *Five Points of a New Architecture*. Located on the outskirts of Stuttgart the attached dwellings were part of the Weissenhof-Siedlung (Weissenhof Estate), an experimental housing development and exposition of Modern architecture.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE

A true "machine for living," Le Corbusier envisioned architecture that was designed with the same precision and logic of automobiles and airplanes. Houses 14 and 15 demonstrate this principle to the extreme, producing what many considered to be efficiency and pragmatism to the point of impracticality.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE



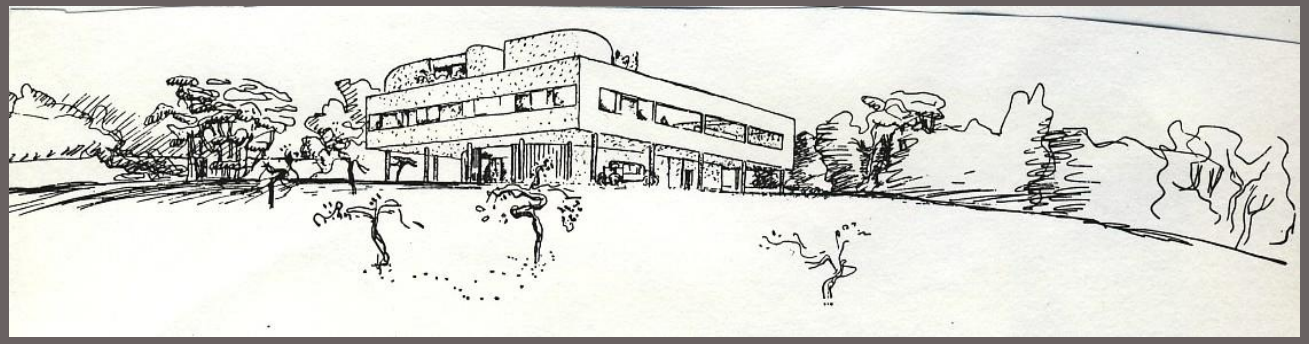
Type 1: La Roche - Jeanneret (1923) *...each element grows organically beside its neighbor. The impulse emanates from the interior and pushes against the exterior, producing various projections. This principle leads to a 'pyramid like' design, which can become contorted if not restrained.*

Type 2: Garches (1927) *...the organic parts are contained by a rigid, clean-cut envelope. This poses the challenging problem that no doubt appeals to the mind: our intellectual energies work against self-imposed limitations.*

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE

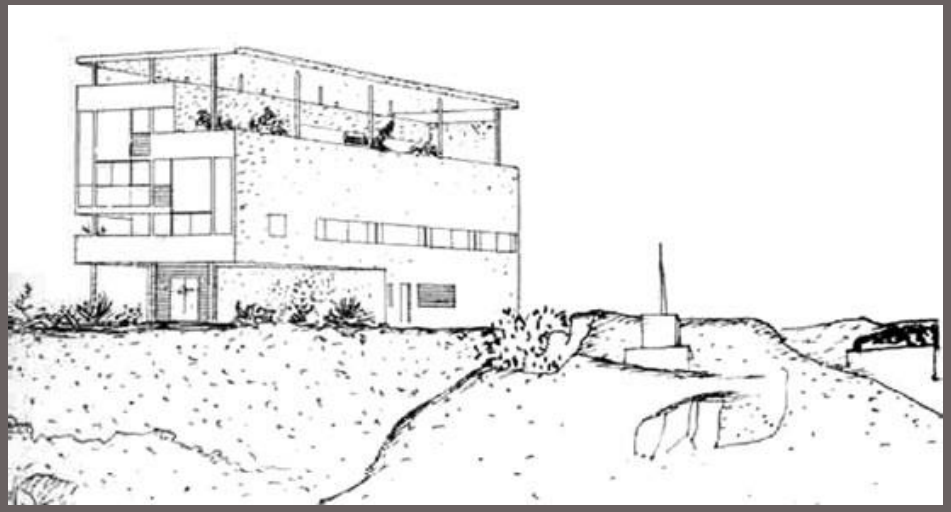
First type , House Roche-Jeanneret, 1924-25

Second type, villa Stein Garches, 1927-28.



Fourth type, villa Savoye Poissy, 1928-29

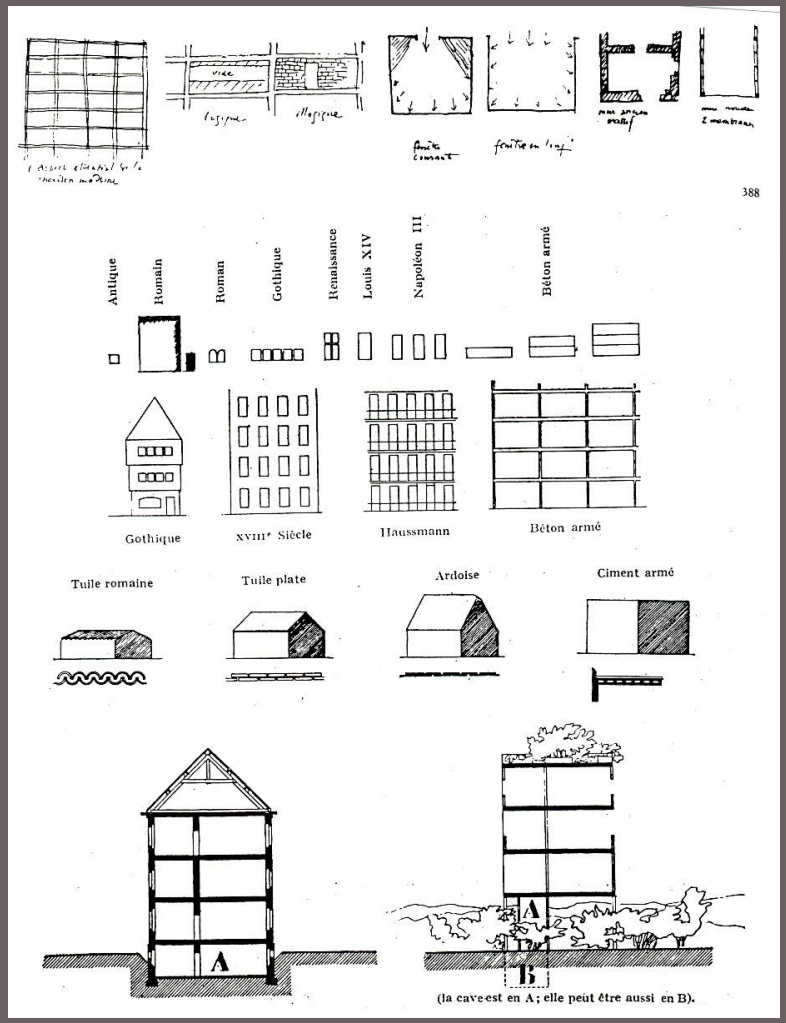
LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



Type 3: *Carthage (1929) ...has an exposed frame, is a simple envelope, as clear and transparent as a grille. It allows us to fit in rooms of varying shapes and sizes as needed, with a different layout on each floor. It is an ingenious type, particularly appropriate to certain climates. It is a plan that is flexible and full of possibilities.*

Type 4: Savoye (1928) *...has the simple external form of the second type, but its interior has the advantages and qualities of the first and third. A clear and very generous type, this, too, has many possibilities.*

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



Le Corbusier/Pierre Jeanneret

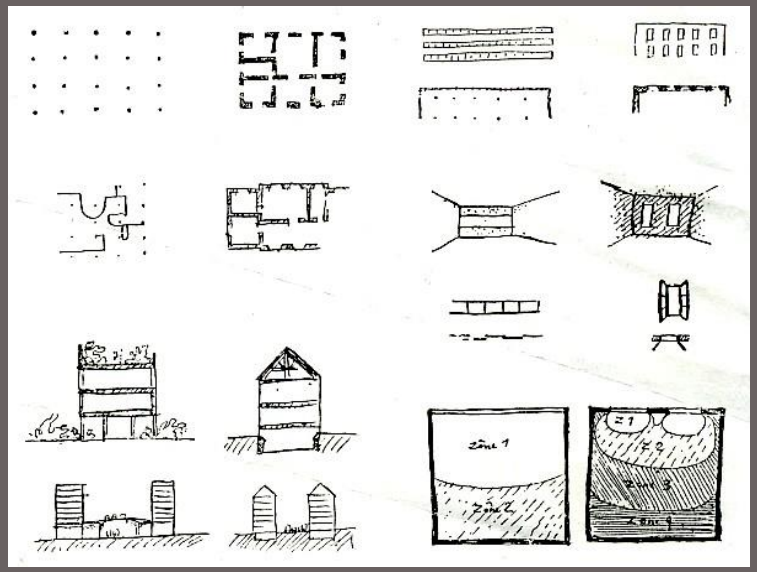
"Five Points Towards A New Architecture," 1926

"The theoretical considerations set out below are based on many years of practical experience on building sites.

Theory demands concise formulation.

The following points in no way relate to aesthetic fantasies or a striving for fashionable effects, but concern architectural facts that imply an entirely new kind of building, from the dwelling house to palatial edifices."

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



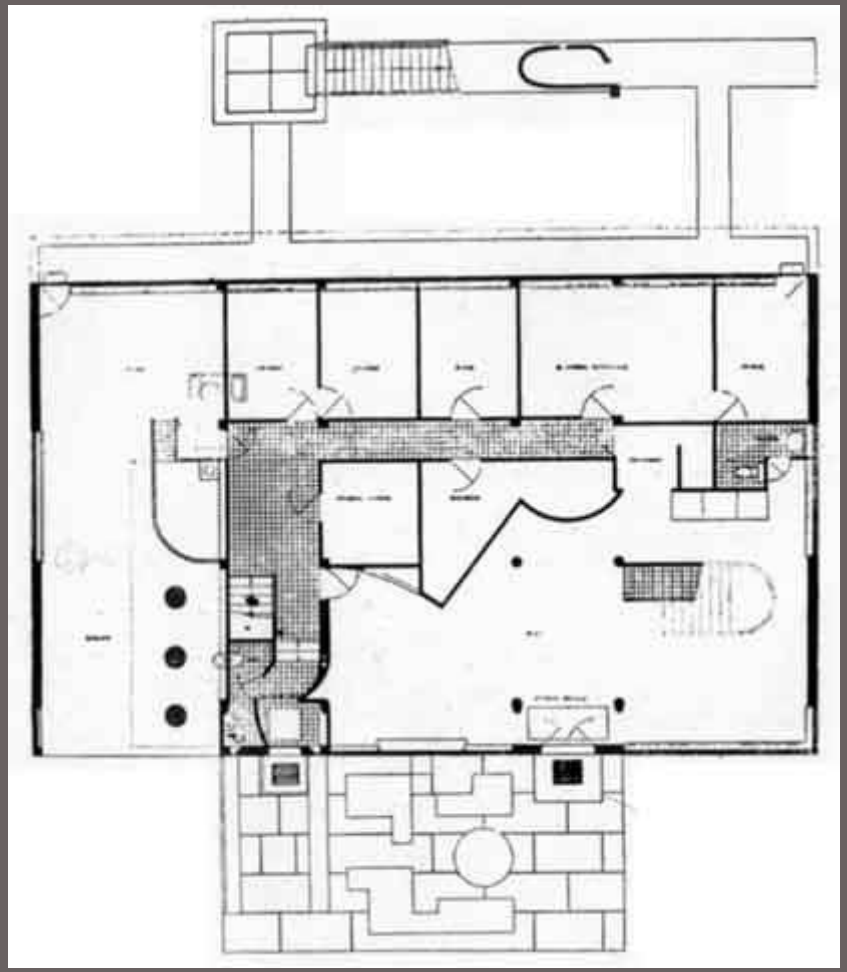
They rise directly from the floor to 3, 4, 6, etc. m. and elevate the ground floor. The rooms are thereby removed from the dampness of the soil; they have light and air; the building plot is left to the garden, which consequently passes under the house. The same area is also gained on the flat roof."

1. "**The supports**. To solve a problem scientifically means in the first place to distinguish between its elements. Hence in the case of a building a distinction can immediately be made between the supporting and the non-supporting elements. The earlier foundations, on which the building rested without a mathematical check, are replaced by individual foundations and the walls by individual supports. Both supports and support foundations are precisely calculated according to the burdens they are called upon to carry. These supports are spaced out at specific, equal intervals, with no thought for the interior arrangement of the building.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE

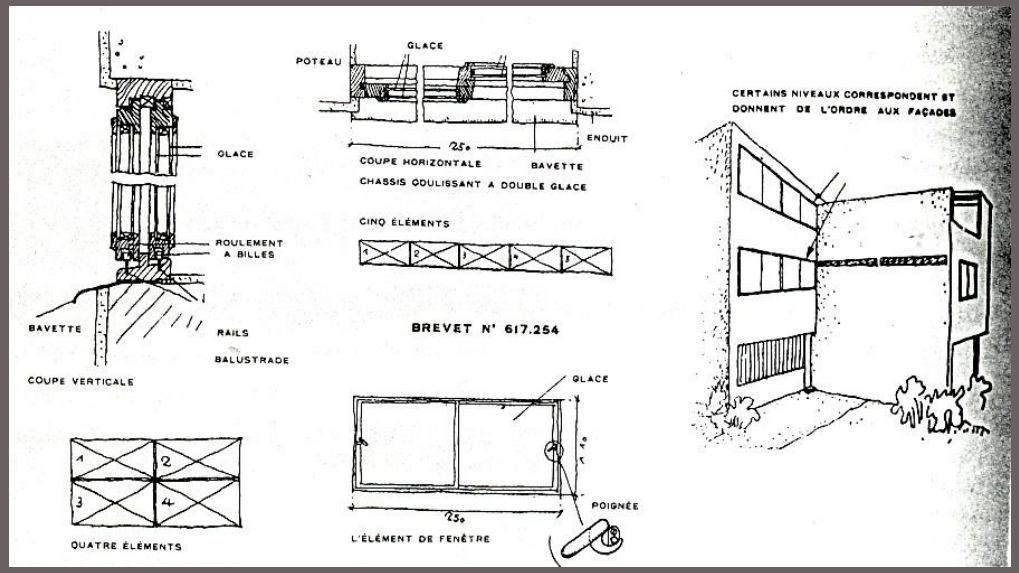
- **2. The roof gardens**. The flat roof demands in the first place systematic utilization for domestic purposes: roof terrace, roof garden. On the other hand, the reinforced concrete demands protection against changing temperatures. Over activity on the part of the reinforced concrete is prevented by the maintenance of a constant humidity on the roof concrete. The roof terrace satisfies both demands ….
- ….The roof gardens will display highly luxuriant vegetation. Shrubs and even small trees up to 3 or 4 m. tall can be planted. In this way the roof garden will become the most favoured place in the building. In general, roof gardens mean to a city the recovery of all the built-up area.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE



3. "**The free designing of the ground-plan**. The support system carries the intermediate ceilings and rises up to the roof. The interior walls may be placed wherever required, each floor being entirely independent of the rest. There are no longer any supporting walls but only membranes of any thickness required. The result of this is absolute freedom in designing the ground-plan; that is to say, free utilization of the available means, which makes it easy to offset the rather high cost of reinforced concrete construction."

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



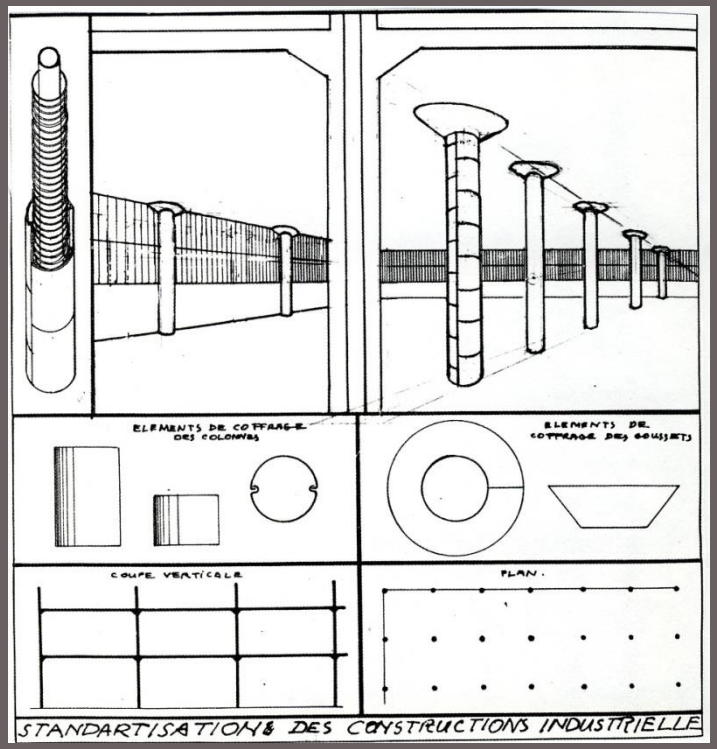
4. **"The horizontal window.** Together with the intermediate ceilings the supports form rectangular openings in the façade through which light and air enter copiously. The window extends from support to support and thus becomes a horizontal window. Stilted vertical windows consequently disappear, as do unpleasant mullions.

In this way, rooms are equably lit from wall to wall. Experiments have shown that a room thus lit has an eight times stronger illumination than the same room lit by vertical windows with the same window area. The whole history of architecture revolves exclusively around the wall apertures. Through use of the horizontal window reinforced concrete suddenly provides the possibility of maximum illumination."

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE

5. "**Free design of the façade**. By projecting the floor beyond the supporting pillars, like a balcony all round the building, the whole façade is extended beyond the supporting construction. It thereby loses its supportive quality and the windows may be extended to any length at will, without any direct relationship to the interior division. … The façade may thus be designed freely. The five essential points set out above represent a fundamentally new aesthetic. "

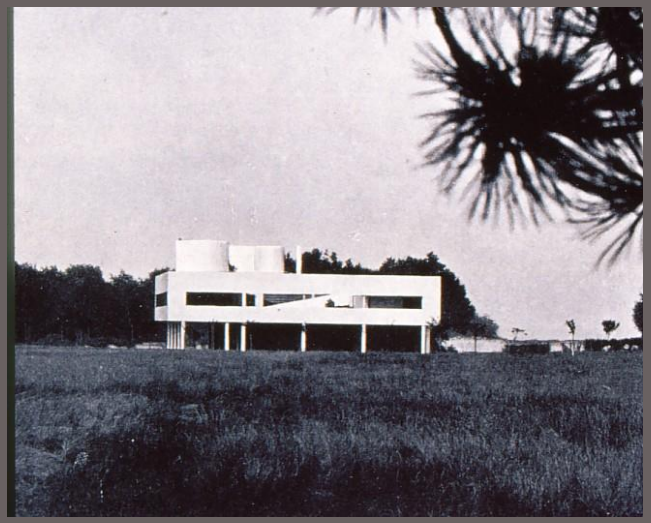
LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



Constructional considerations

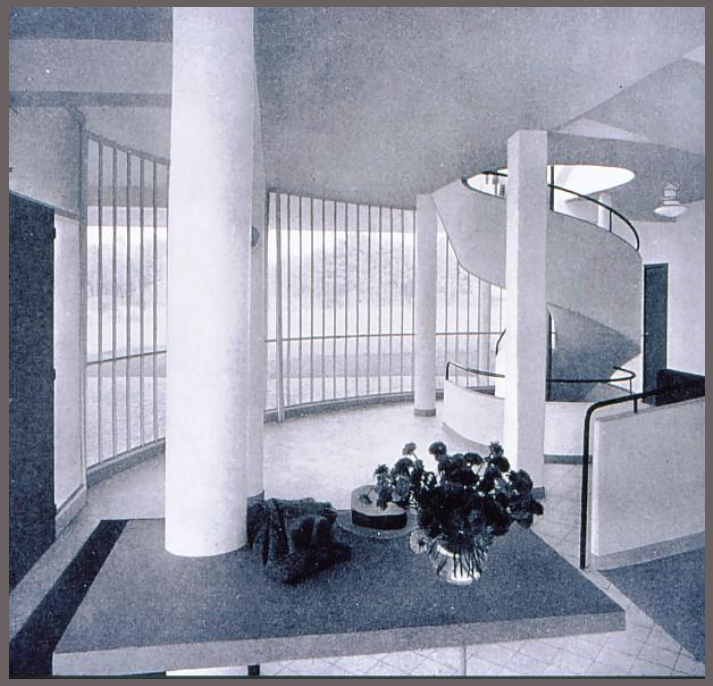
Building construction is the purposeful and consistent combination of building elements. Industries and technological undertakings are being established to deal with the production of these elements. Serial manufacture enables these elements to be made precise, cheap and good. They can be produced in advance in any number required. Industries will see to the completion and uninterrupted perfecting of the elements. Thus the architect has at his disposal a box of building units. His architectural talent can operate freely. It alone, through the building programme, determines his architecture. The age of the architects is coming.

LE CORBUSIER: TOWARDS A NEW ARCHITECTURE



Designed by Le Corbusier and his cousin, Pierre Jeanneret, with interior spaces and furnishings by Charlotte Perriand, the Villa Savoye was named after its original owners, Pierre and Eugénie Savoye. Intended as a country home for the family, Villa Savoye was built between 1929 and 1931 on an open area of farmland in the town of Poissy, approximately twenty-five miles outside of Paris.

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE

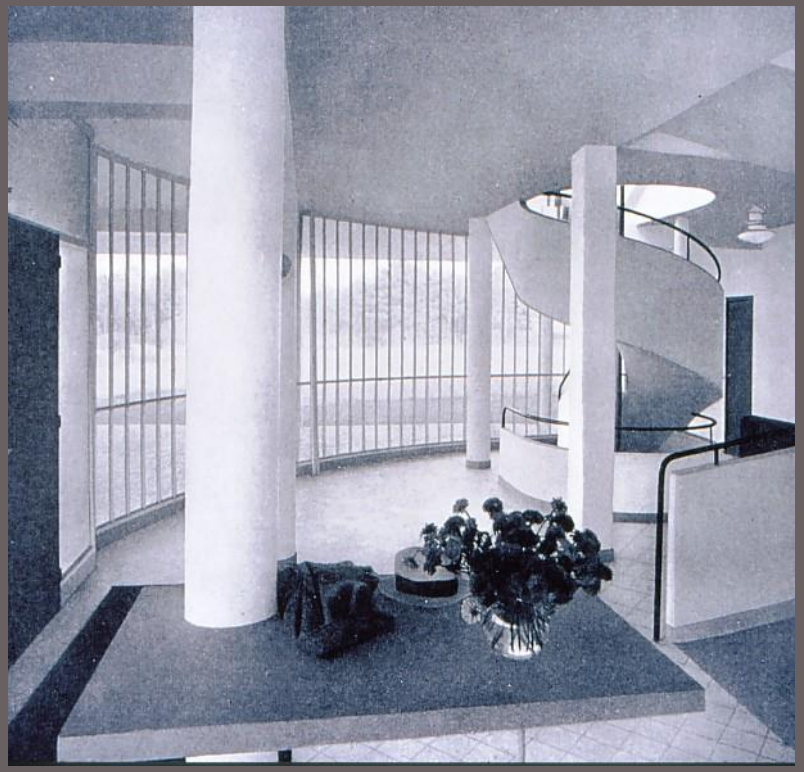


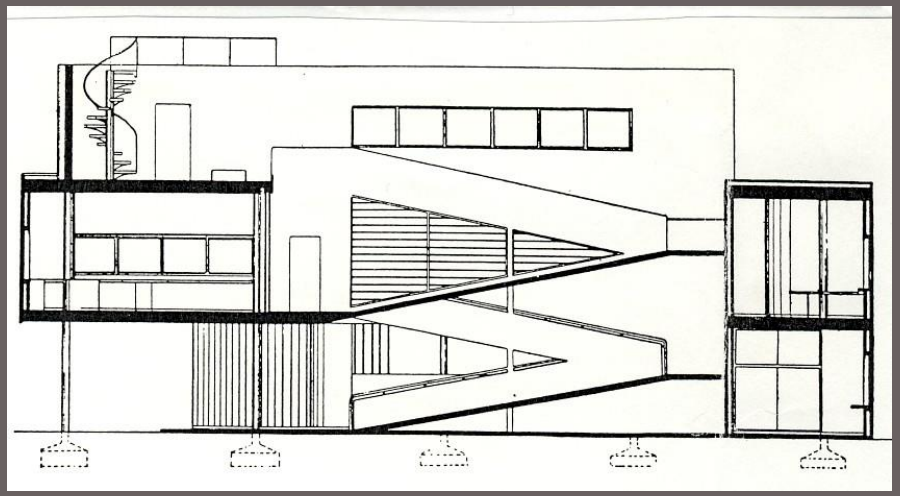
The Savoye family was the first to own a car in the area, and Le Corbusier included features in the design of the house to accommodate the automobile. For instance, there is a ramp for the car leading into the garage and the driveway, the curve of which equals the turning radius of a large car. The interior of the house, which also contains ramps (as well as a spiral stairway) echoes the ramps and curve of the driveway.

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE

The curve of that hallway wall is famously determined by the turning circle of a 1927 Citroën– that'll be the B14 then. The hallway wall curve may or may not be determined by the turning circle of some automobile but the basic configuration of the plan is an attempt to fuse automobile and house.

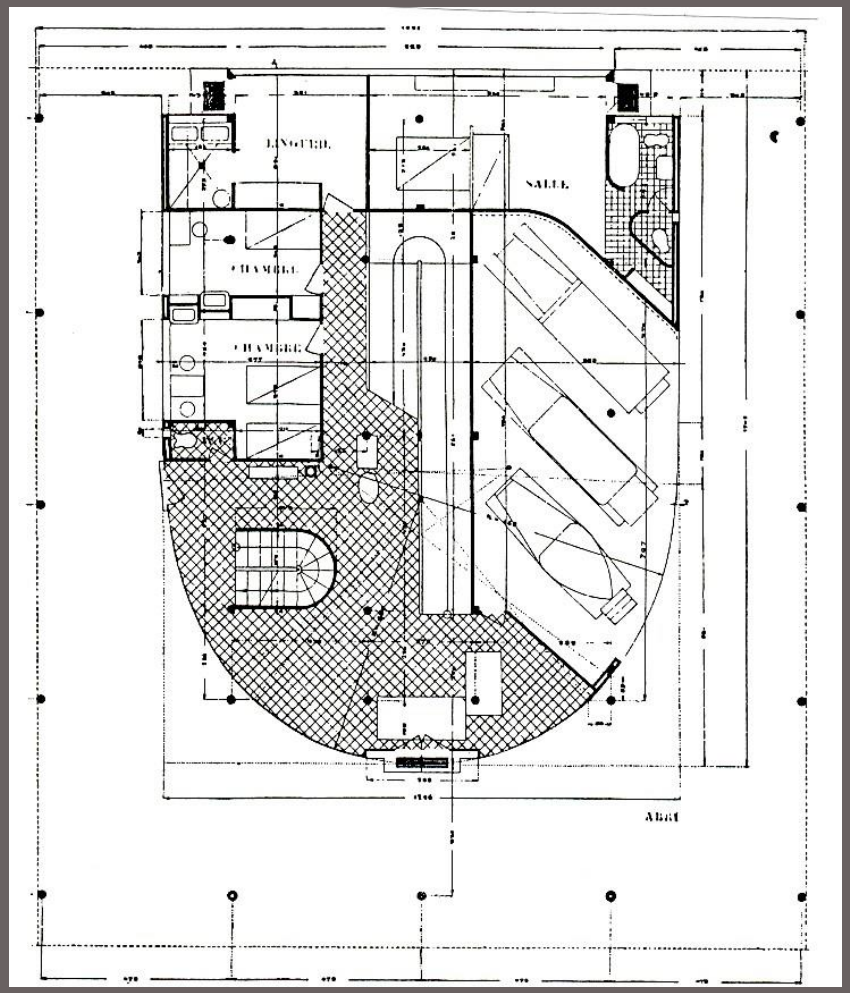
LE CORBUSIER : TOWARDS A NEW ARCHITECTURE





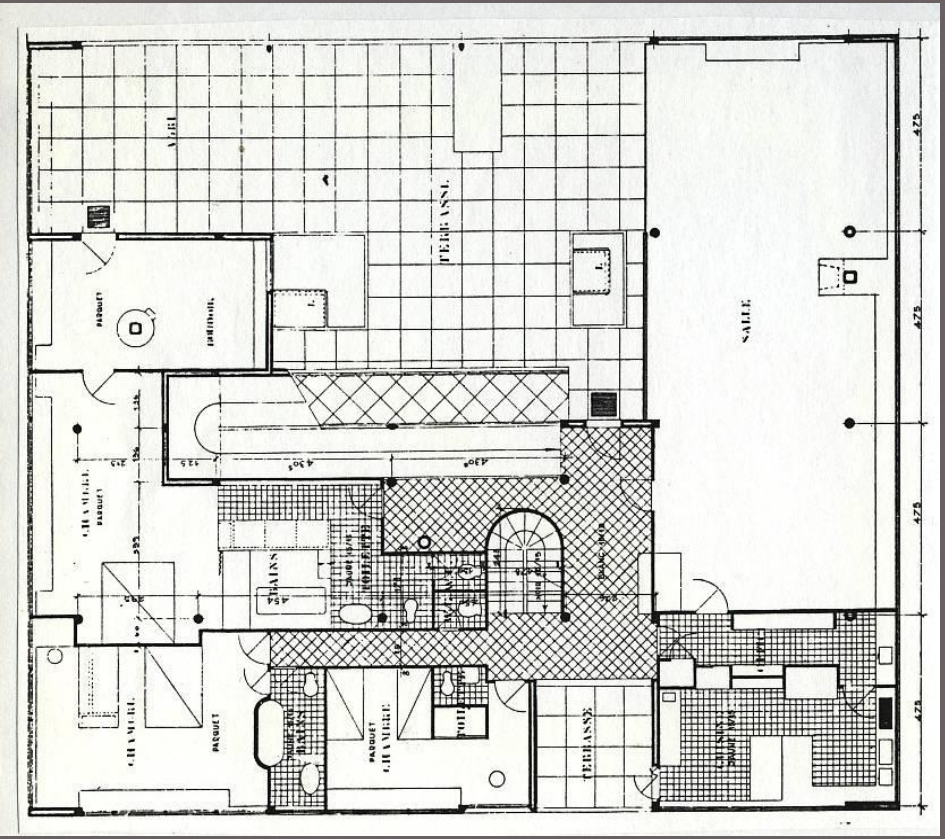
The four columns in the entrance hall seemingly direct the visitor up the ramp. This ramp, that can be seen from almost everywhere in the house continues up to the first floor living area and salon before continuing externally from the first floor roof terrace up to the second floor solarium.

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



On the ground floor he placed the main entrance hall, ramp and stairs, garage, chauffeur and maid's rooms.

LE CORBUSIER: TOWARDS A NEW ARCHITECTURE

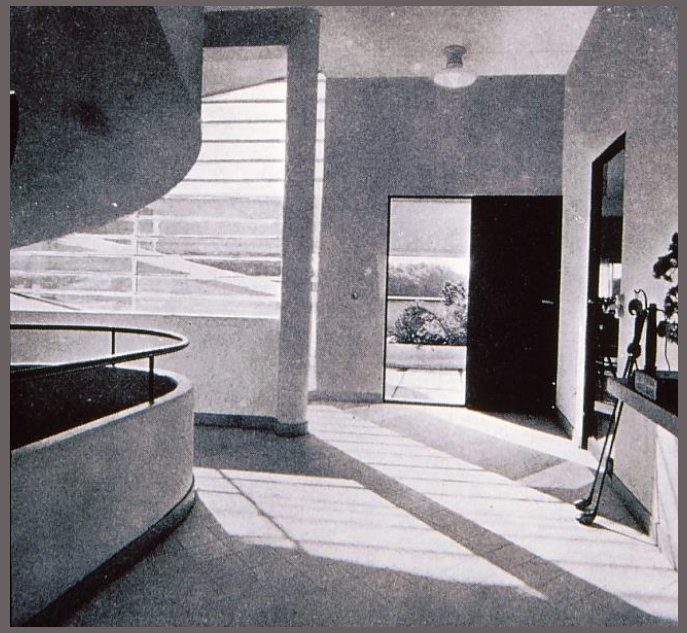


On the first floor, the bedrooms, guest room, kitchen, bathroom, and living room are arranged in an L shape around a terrace.

The salon was oriented to the south east whilst the terrace faced the east.

The son's bedroom faced the north west and the kitchen and service terrace were on the south west.

LE CORBUSIER : TOWARDS A NEW ARCHITECTURE



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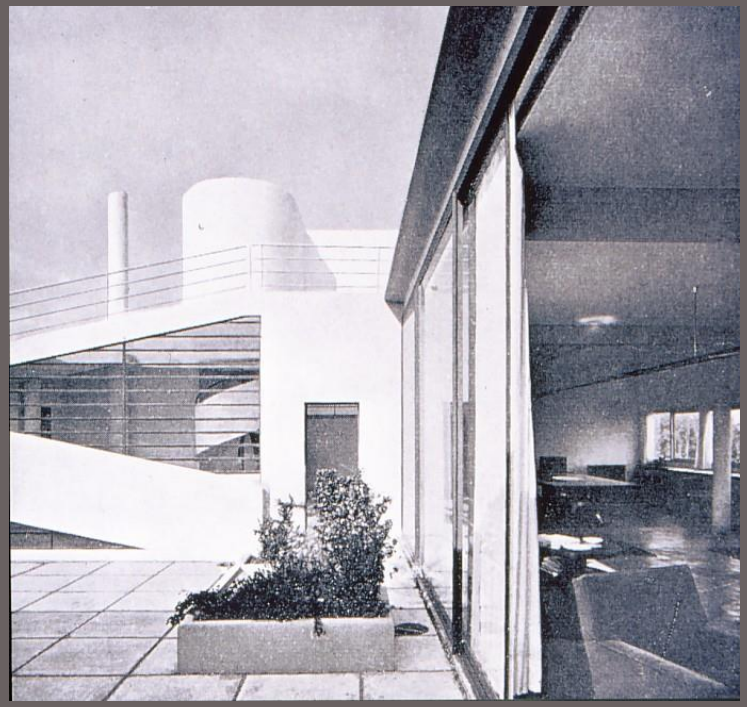
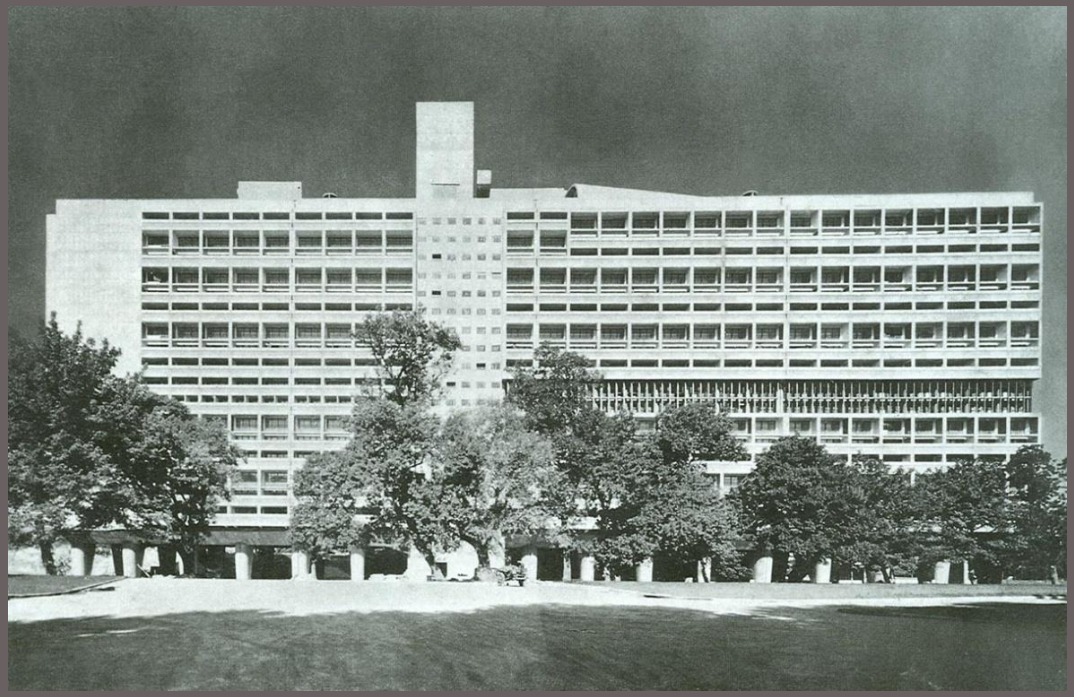
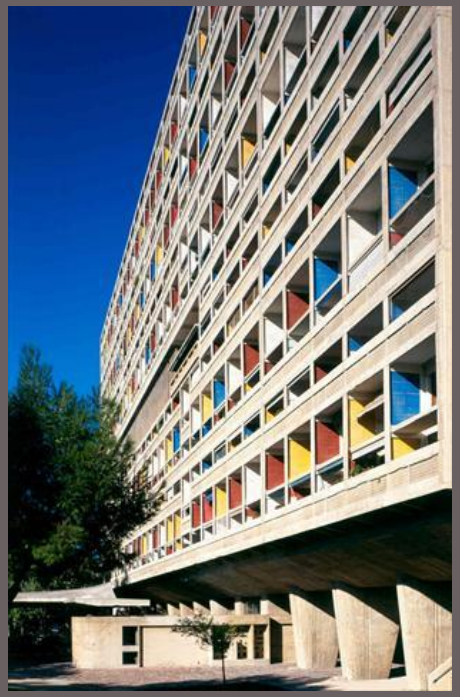


At second floor level were a series of sculpted spaces that formed a solarium.

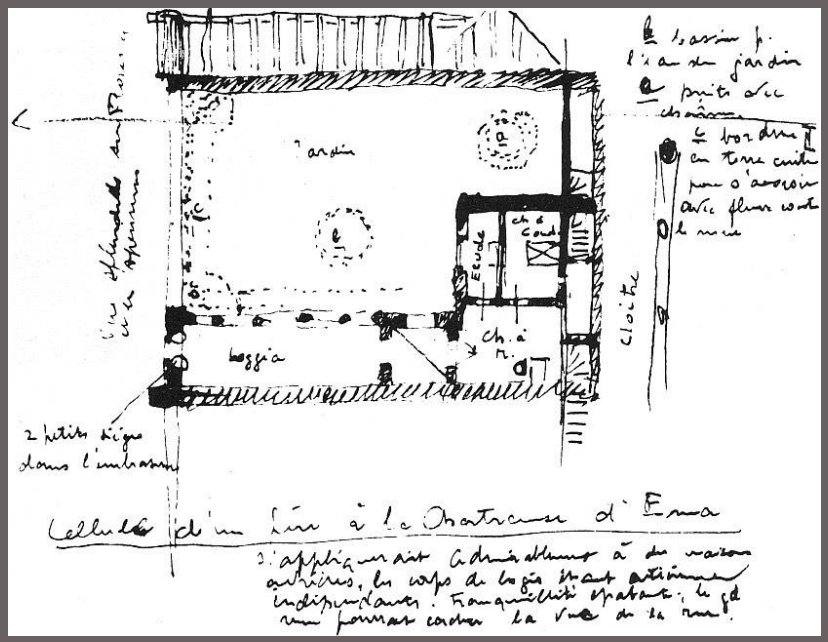
LE CORBUSIER:TOWARDS A NEW ARCHITECTURE





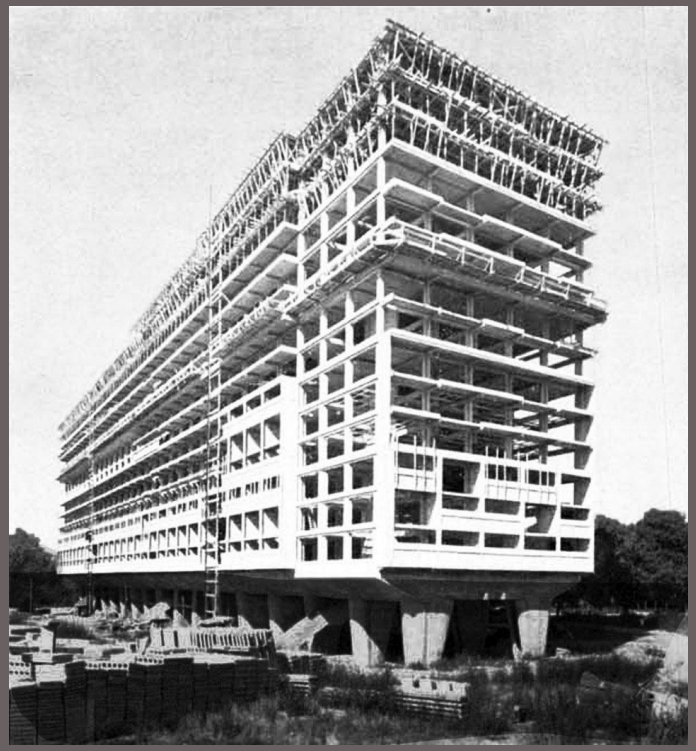
"The State was the client, and there were no restrictions. The first stone was laid on the 14th Oct. 1947 and inauguration was on the 14 Oct. 1952, but it was entirely fortuitous that both should have occured on the same day of the year. I thank the State for having made this enterprise possible."

LE CORBUSIER: TOWARDS A NEW ARCHITECTURE



"The theme of the Unité d'Habitation first came to mind during my first visit to the Chartreuse of Ema in Tuscany in 1907. It appeared in my plans at the Salon d'Automne in 1922: a contemporary town for 3 million inhabitants: "les Immeubles Villas" and again at the Pavillon de l'Esprit Nouveau in 1925. It did not cease to haunt me throughout all the projects on which I worked so indefatigably during the next 30 years (town plans for large and small towns, etc.). After the Liberation there was an urgent need, and it became possible to put these studies into practice."

LE CORBUSIER:TOWARDS A NEW ARCHITECTURE



"The realization of the Unité at Marseilles has shown the splendour which is possible by the use of reinforced concrete as a natural material of the same rank as stone, wood or terra cotta. It seems to be really possible to consider concrete as a reconstructed stone, worthy of being exposed in its natural state."

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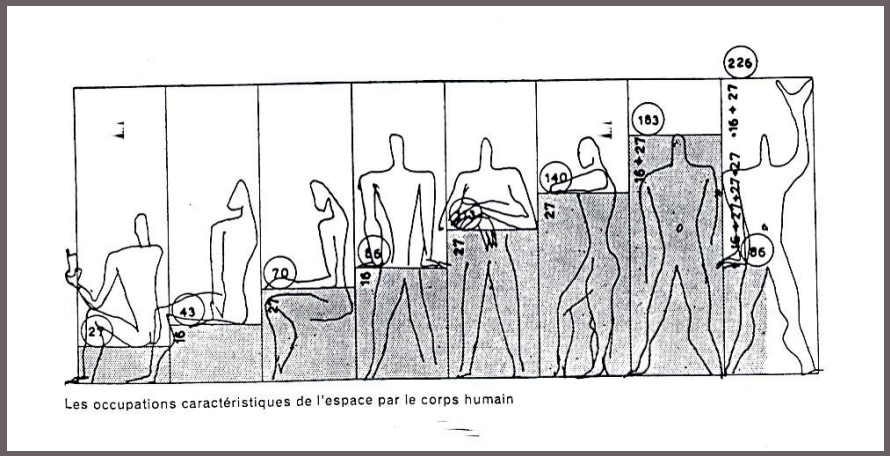

“In view of the immense task of manufacture and prefabrication to be completed, a unified scale of measurement based on the human body had to be created, a highly significant mathematical expression capable of giving innumerable combinations that are really satisfactory and above all harmonious.” (LC).

The Modulor Man is segmented according the "golden section", a ratio of approximately 1.61; so the ratio of the total height of the figure to the height to the figure's navel is 1.61. These proportions can be scaled up or down to infinity using a Fibonacci progression.

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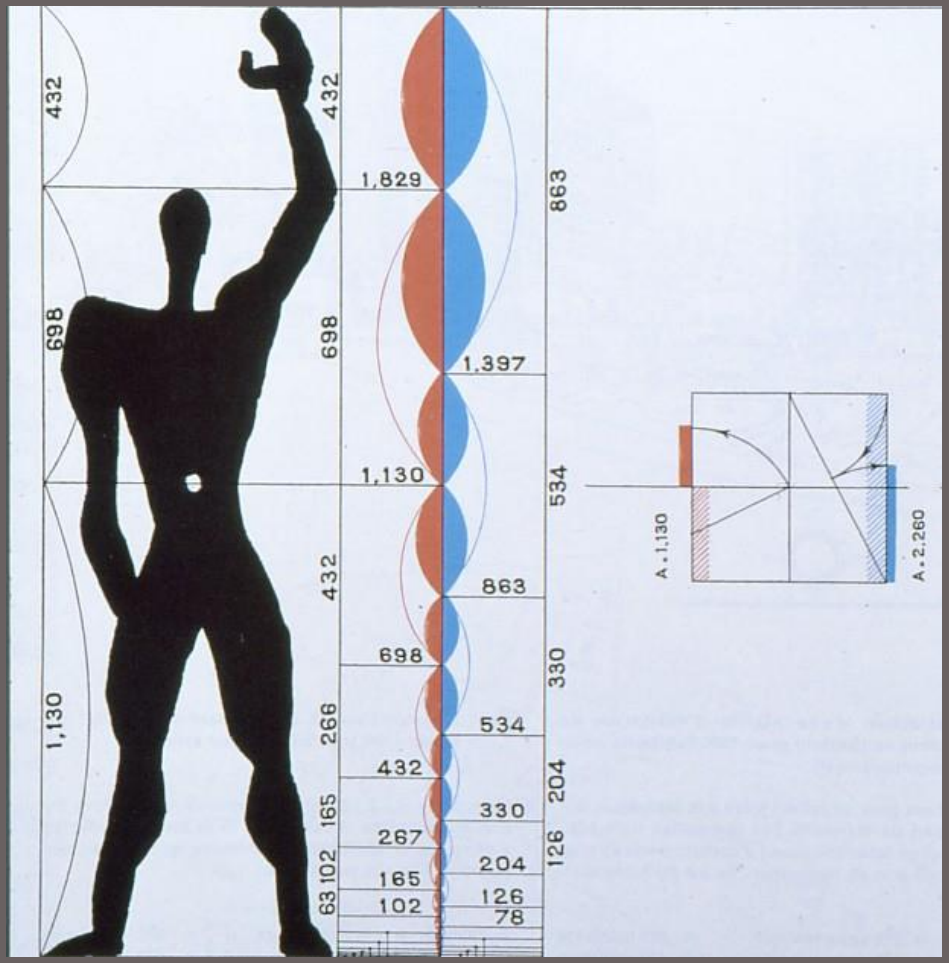

Le Corbusier developed the Modulor in 1943, and the first volume of his study of it was published in 1950. From the Unité d'Habitation in Marseilles (completed 1952) onwards, Corbusier applied the Modulor to his buildings, including the government complexes he built in Chandigarh, India, and his rural retreat, Le Cabanon. It won widespread praise, and was used by architects and designers including Georges Candilis and Jean Prouve-Albert Einstein said: "It's a tool that makes the good easy and the bad difficult."

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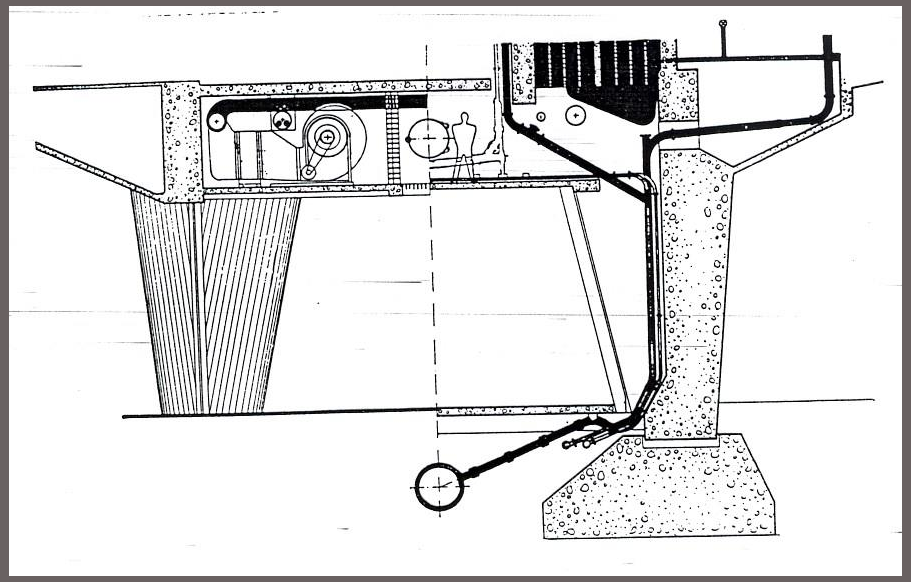

The building stands on pillars, leaving the space underneath for car and bicycle parking and pedestrian circulation, except for the entrance hall with janitor's box and elevators. The plenum underneath the first floor contains the air-conditioning plant, elevator machineries and diesel generators.

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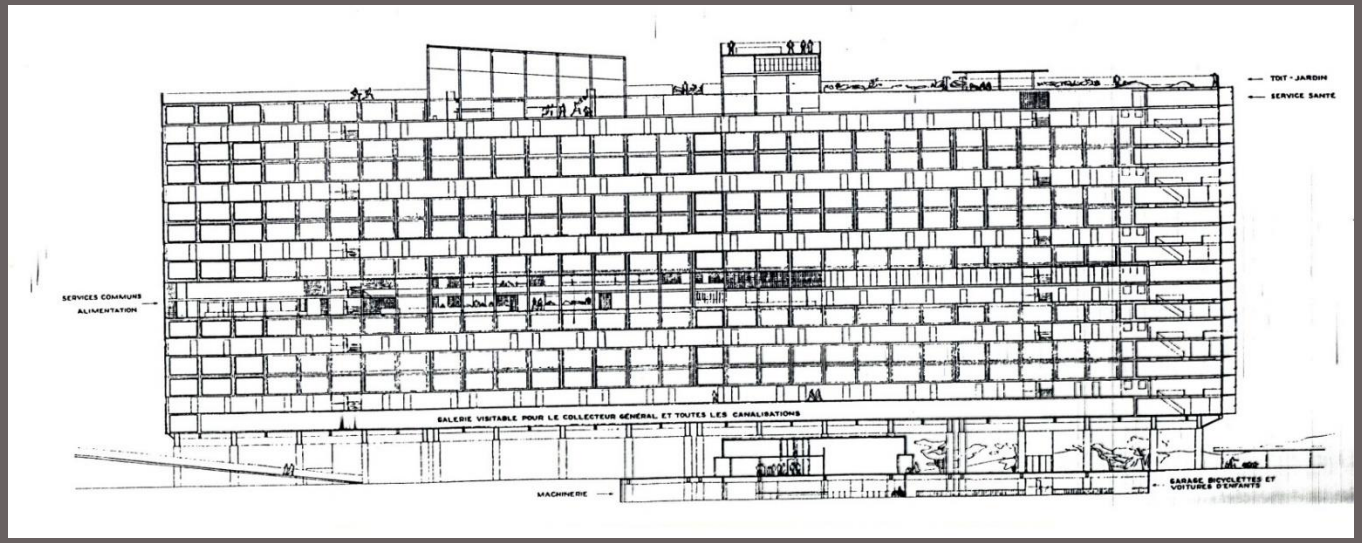

The building holds 337 apartments of 23 types, varying from bachelor apartments to such for families with 8 children. Along the interior road on level 7 and 8 lies a shopping centre, containing a fish, butcher, milk, fruit and vegetable shop as well as a bakery, a liquor and drugstore. Furthermore there is a laundry and cleaning service, pharmacy, barbershop and a post office. Along the same corridor lies the hotel accommodation and a restaurant snack-bar with special service to the apartments.

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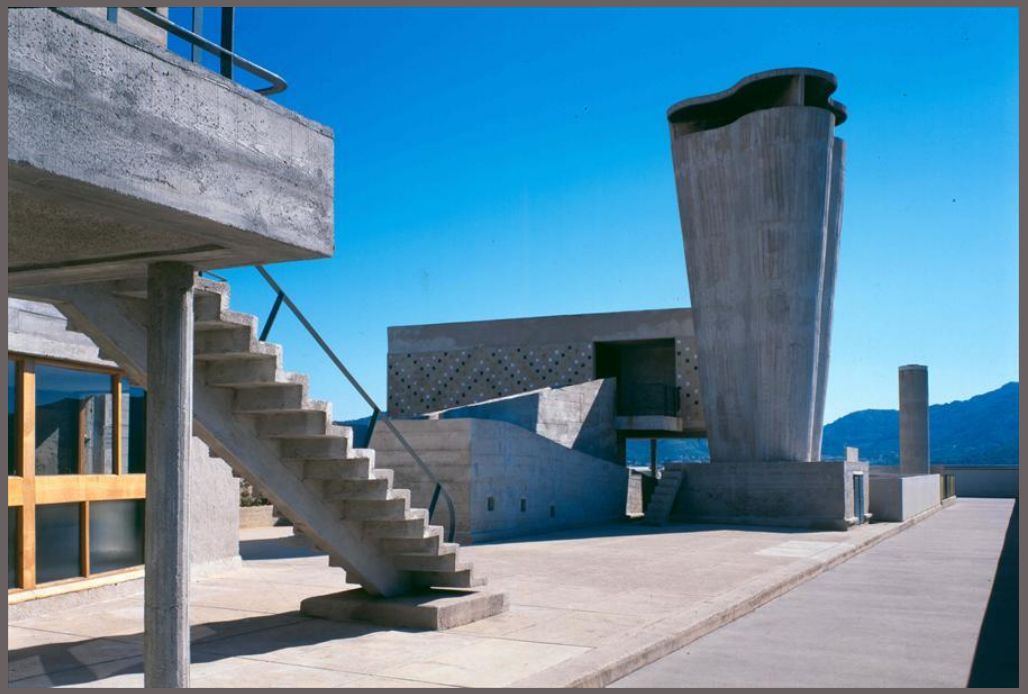

The 17th and last floor contains a kindergarten and a nursery, from where a ramp leads to a roof-garden and a small swimming pool far children.

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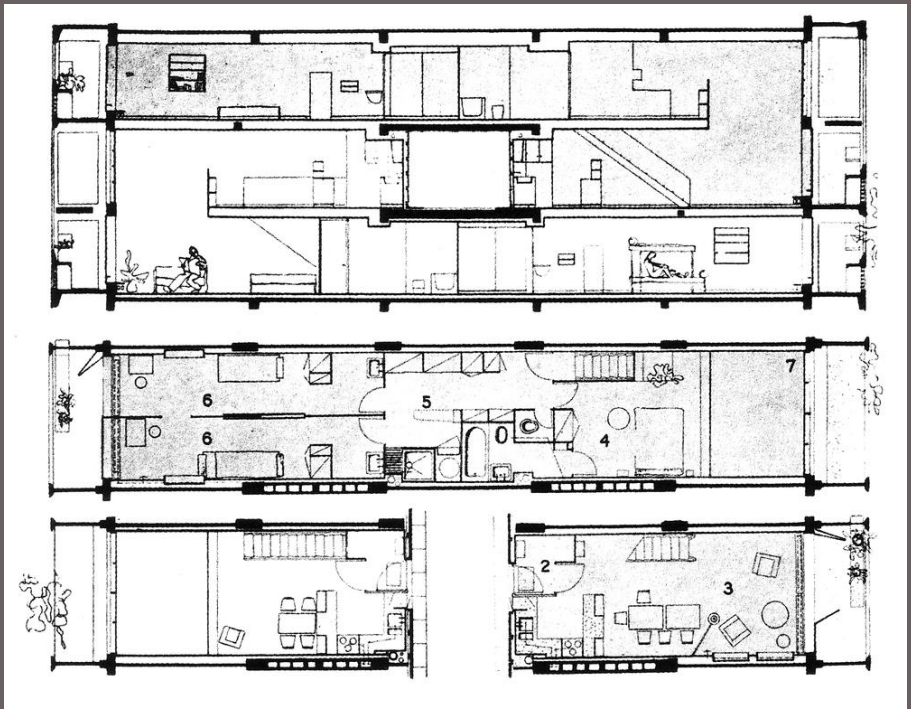

The apartments, being distributed in pairs on three floors, need only 5 corridors, called interior roads, one on every third floor. They run in the longitudinal axis of the building,

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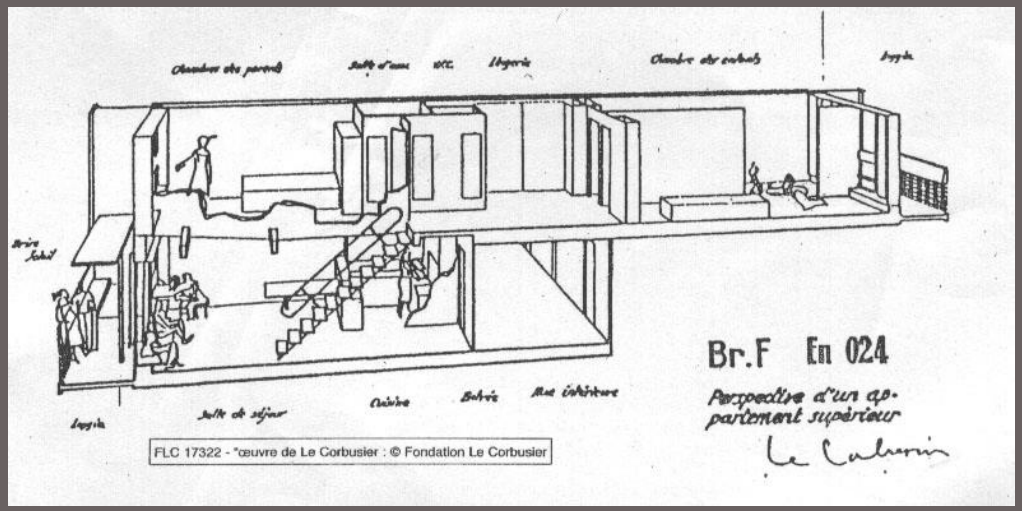

"Each apartment contains two floors connected with an interior stair case. The day room with a height of 4.80 m extends over 2 floors. A large window of 3.66 x 4.80 m allows a full view of the beautiful surrounding landscape. The kitchen equipment contains a four plate electric range with oven, a double sink with automatic garbage disposal, refrigerator and working table. The kitchen unit is air conditioned by the central system. The sound insulation consists of lead sheets put in between the separating walls of the apartments."

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