



maxmodul



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Housing policy context

Situation

The tense situation on the housing market calls for innovative concepts in the construction industry. With the serial, modular maxmodul housing system, Max Bögl Modul AG is making an important contribution to the creation of living space that also offers a high level of living comfort and quality of life.

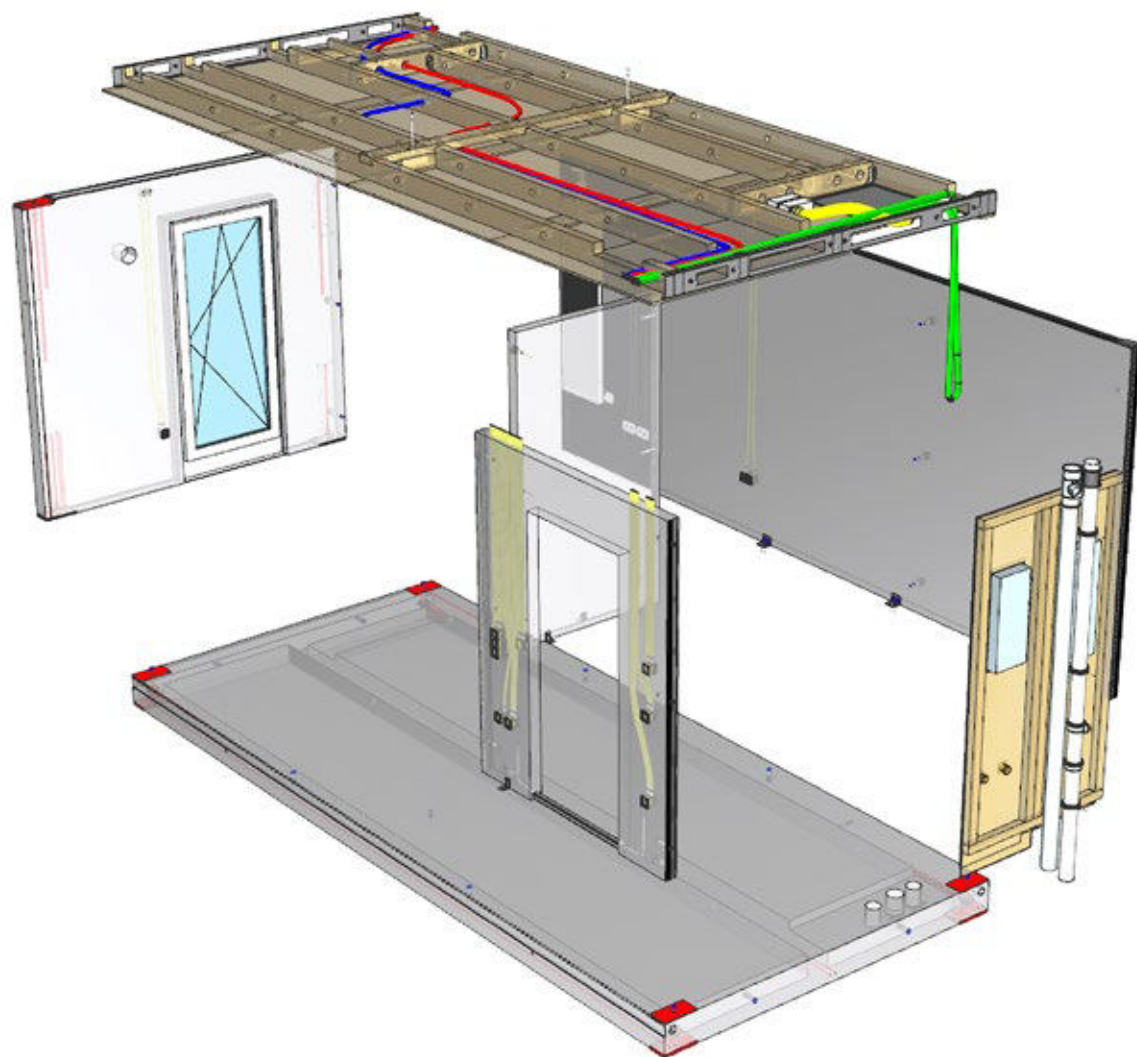
The key to eliminating housing bottlenecks lies in the greater industrialisation of housing construction. Only through serial construction can dwellings ...

- in large quantities and in a short time,
- in the highest social, economic, ecological and architectural sustainable quality
- and cost-efficient

... be planned and built.







An industrial construction system

Room module

The modules are manufactured and expanded in the modern building factory with the highest precision and quality in solid construction. After assembly at the construction site, only finishing work and the building shell are carried out.

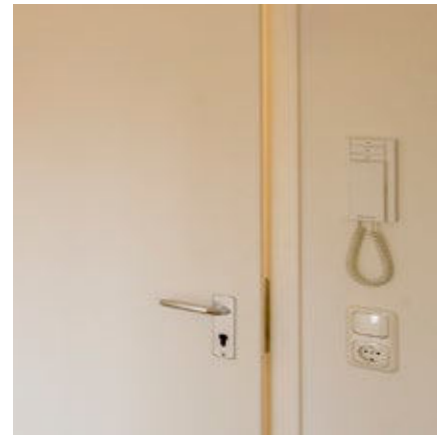
- Room modules in solid construction
- Production with maximum degree of expansion in the factory, e.g. from wet cell, window or floor
- For all typecast able building categories, especially for residential construction
- Configuration of urban development ensembles and buildings according to planning catalog
- Assembly site instead of construction site
- Up to eight floors
- Terracing



The wet cell is prefabricated and inserted into the module in the building factory.



The room modules are delivered with flooring, windows and heating according to customer requirements.



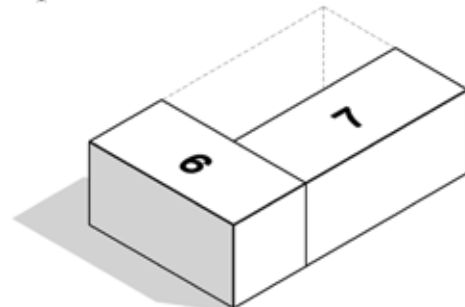
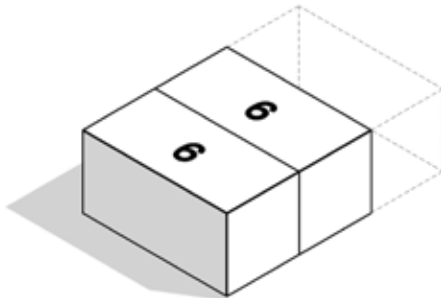
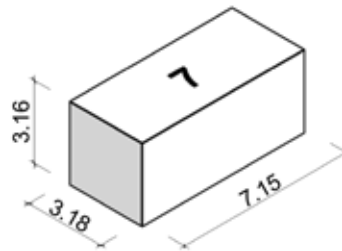
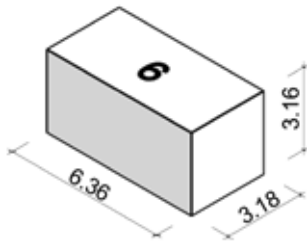
Electrics such as sockets, switches and door communication are also installed in the production hall.

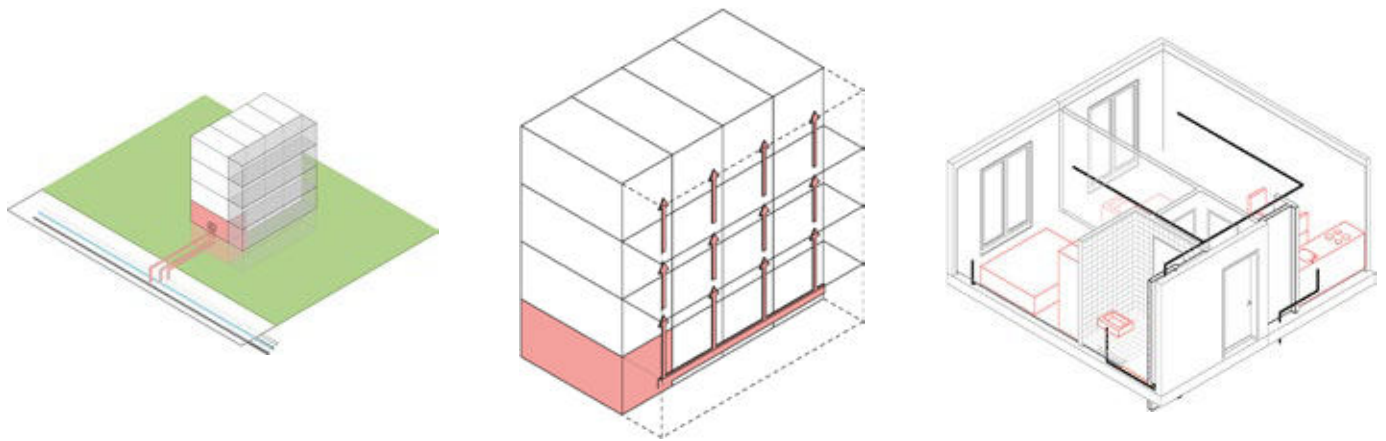
Room module

With the room modules in two lengths, almost all apartment sizes and types can be configured by horizontal addition and vertical stacking – including all building types and settlement types derived from them.

Module dimensions

- Length: 6.36 m / 7.15 m
- Width: 3.18 m
- Height: 3.10 m
- Clear room height: 2.50 m





TGA concept

The technical building equipment (TGA) is modular and divided into zones. Depending on the energy concept, there are different options, such as a gas boiler with solar thermal system or district heating.

By catalogue

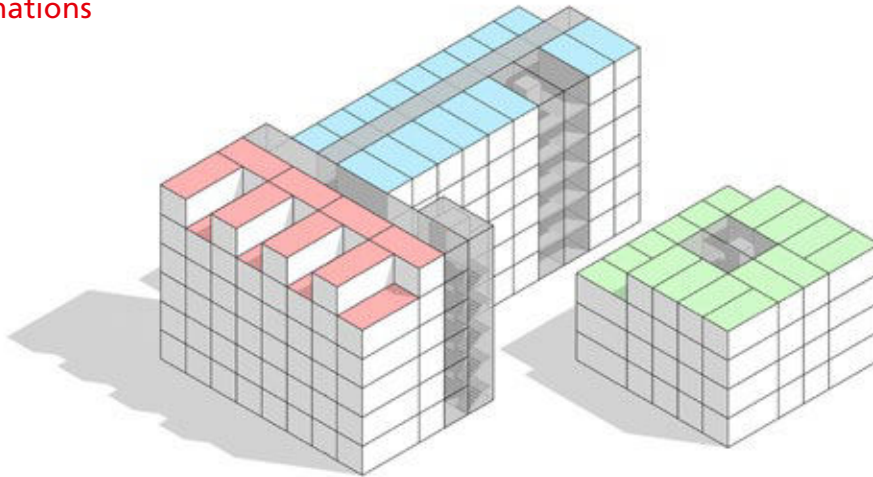
Systematic planning

No urban planning situation is the same as any other. The maxmodul construction system offers an optimum solution for almost every urban planning requirement with different building types.

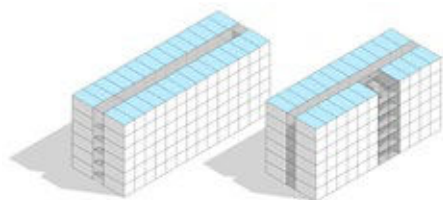
The planning is carried out in a clearly structured process in which the partners – the client and Max Bögl – can achieve cost effects through mutual cooperation. Planning according to a catalogue saves time and avoids errors.

The configuration is very simple: Room modules for apartments and bathrooms as well as building access (corridors, arcades, staircases or elevators) are prepared and typified in a catalogue.

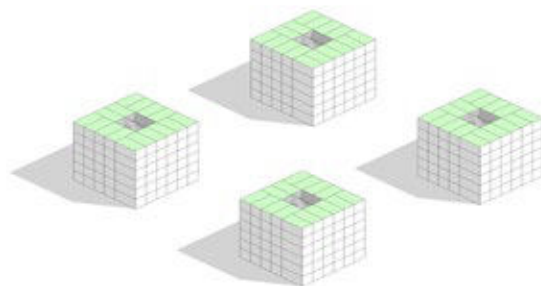
Free combinations



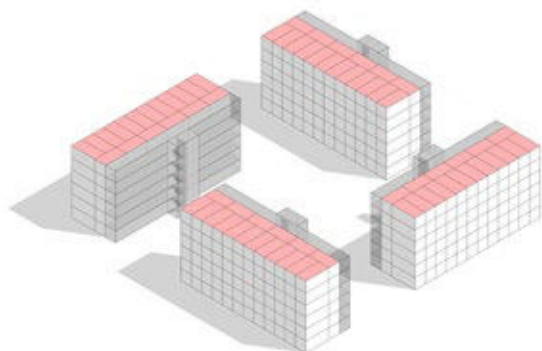
Middle-floor building



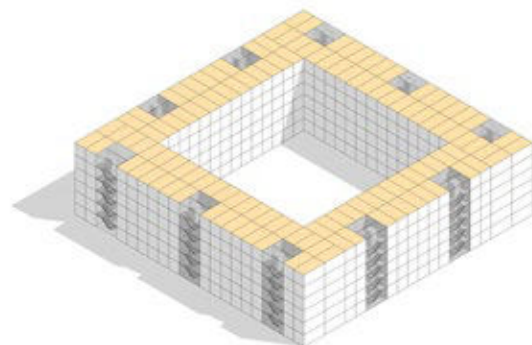
Dot house



Pergola house



Block

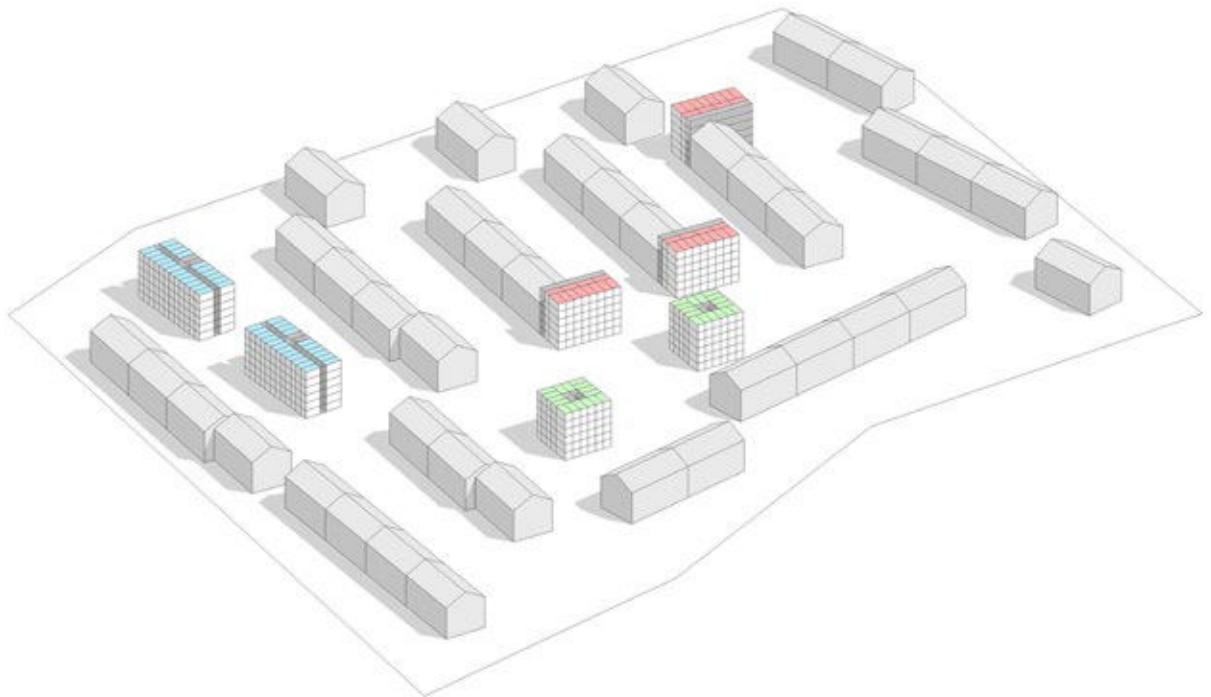




Post-compaction

Subsequent compaction with serially built residential modules offers further advantages that confirm this concept as a trend-setting design:

- No "construction site" with many approaches and large space requirements
- Fast assembly with minimal disturbance for the occupants
- Depending on position: mounting from "outside", e.g. space-saving from the street from
- Possibility of inserting different types of housing from the "catalogue"



Apartment types

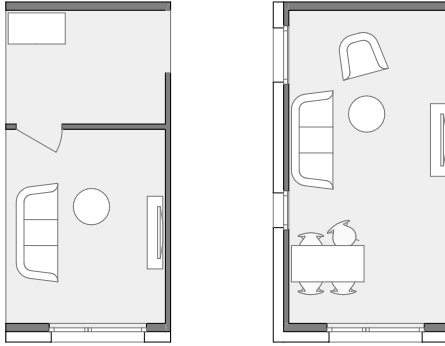
The apartment matrix comprises 1- to 5-room apartments in various variants and layouts.

The same apartment layouts are suitable for a wide variety of building types:

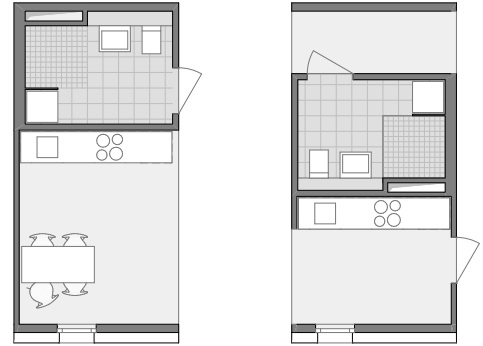
- The floor plans are as follows with regard to the housing subsidies of the federal states evolved
- Social sustainability by avoiding transit rooms, furnish ability with standard furniture etc.
- Continuous expansion of the floor plan catalogue
- There are variants for every type of floor plan: standard barrier-free, wheelchair-accessible floor plans, micro-living and penthouse apartments
- The diversity of supply reflects the differentiation of demand habitation



Living room



Bathroom, kitchen



Bedroom, storage, WC

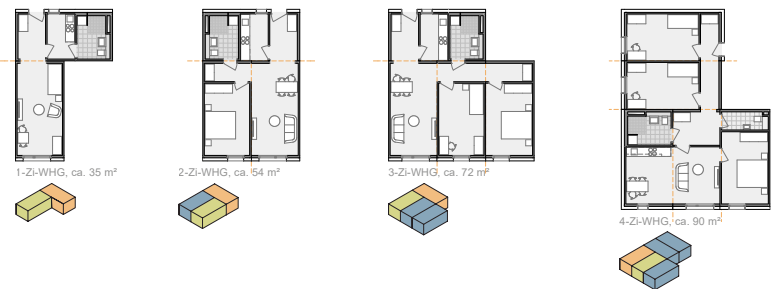


Excerpt from the apartment matrix

Block



Pergola house



Dot house, middle floor, block



Standard apartments

- Eligible in various sizes and designs
- Barrier-free or wheelchair accessible

New forms of housing

- Micro flats
- Penthouse apartments
- Living and working special housing

Special housing types

- Living groups for the elderly
- Apartments and groups for students

Integration of:

- Infrastructure, e.g. kindergarten
- Workspaces
- Common areas

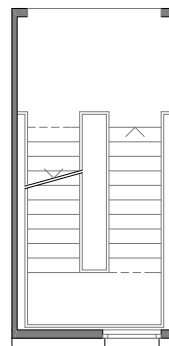
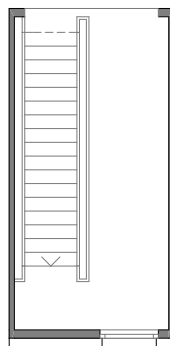




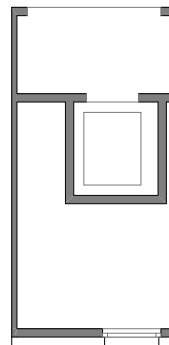
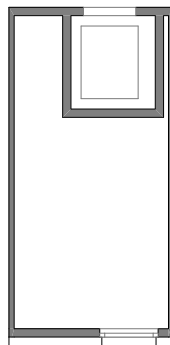
Building development

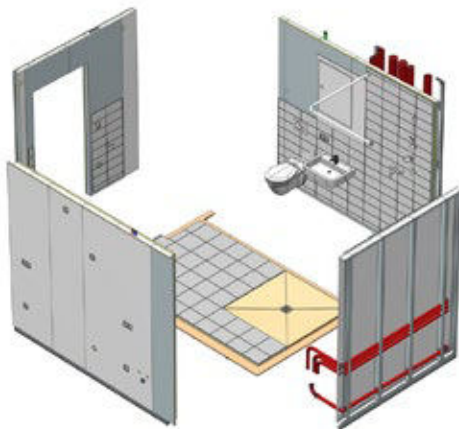
Not only the spatial modules of the apartments, but also the elements for horizontal and vertical building access (corridors, pergolas, staircases and elevators) are catalogued.

Stairs



Elevator





Baths

Baths are typified. The same bathrooms can be used in different types of apartments.

- Barrier-free
- Micro
- Wheelchair accessible with shower/tub

External appearance

Windows as well as French windows can be configured by catalogue. They can be positioned anywhere within the statically predefined wall surfaces.



In addition to the view, facades must also meet structural and energy requirements. Our facade systems, such as plaster, clinker, stone or a curtain wall, help to consciously fulfil these requirements and to recognise the design potential.

Variable, presented balcony systems and suspended roof terraces increase the well-being and increase the living quality.



Curtain-type textile concrete facade



Rooftop terrace



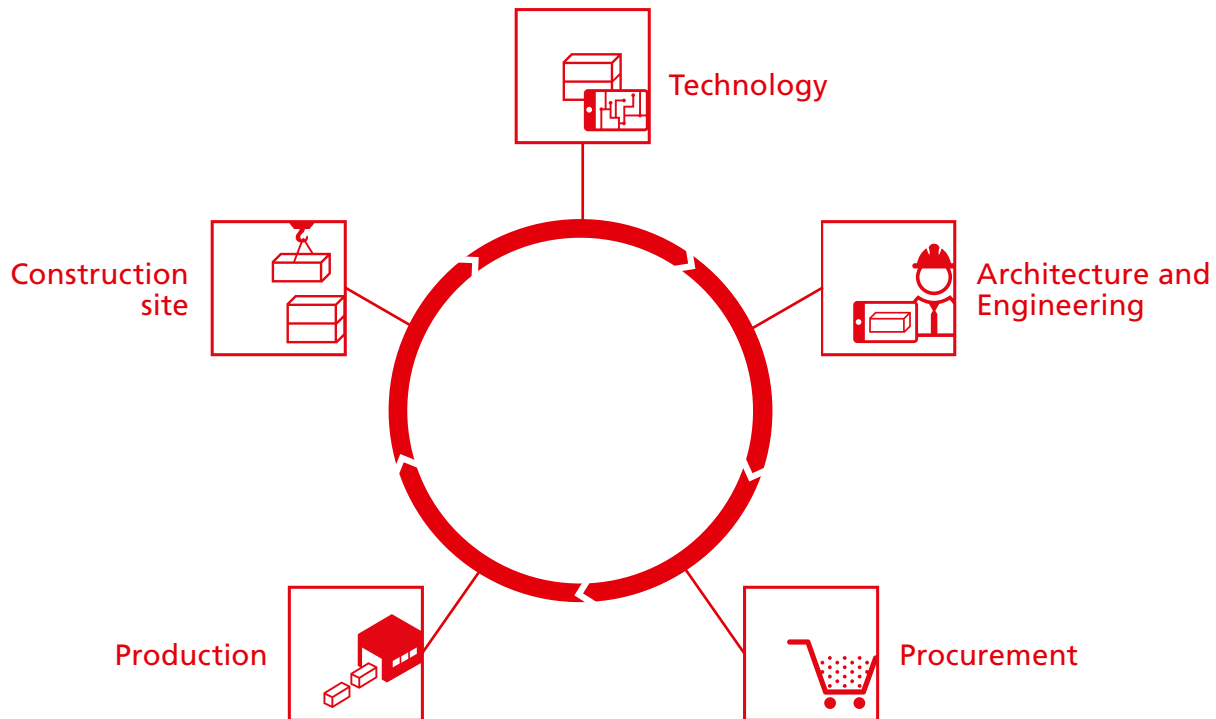
Balconies

Integral building

Entire process

Planning and execution are considered holistically with a comprehensive approach. All specialist planners and trades are involved at an early stage. The integral working method of planning, production, transport and assembly is based on

a precisely structured approach. This enables processes and procedures to be efficiently designed and further developed using BIM and LEAN methods.





Planning



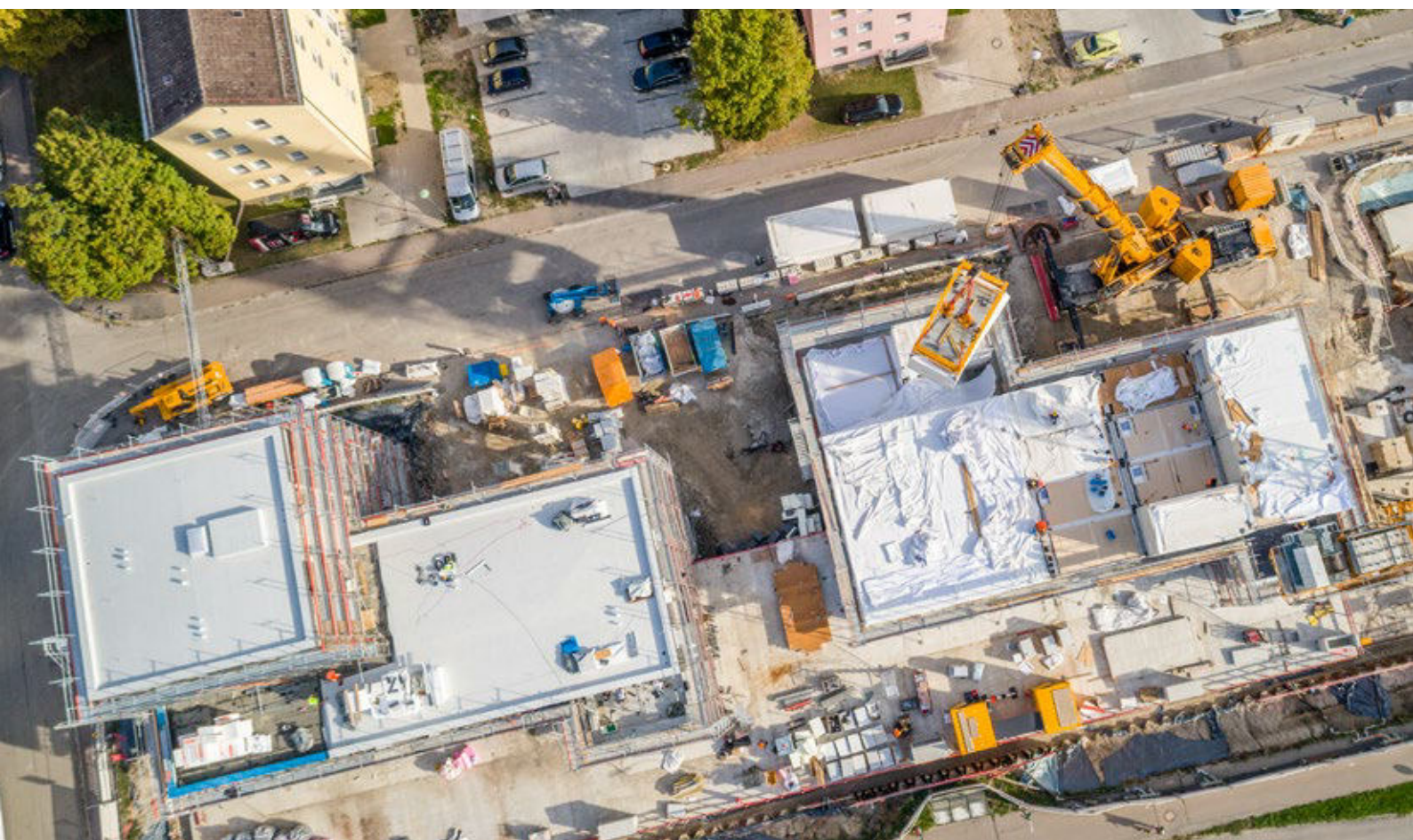
Production



Construction site

Cost and time efficiency:

- From the first sketch to input planning
- From factory planning to production planning
- From assembly planning to facility management
- All in one continuous flow
- Integrated 3D planning with planning modules right from the start of the project
- Fast visualization of the building
- Quick calculation
- Finished TGA concept
- Systematized statics
- Transfer of data to facility management





Advantages

Short construction times, quick usability and manageable costs: maxmodul impresses with its high quality, cost-effectiveness and flexibility of the room modules as well as the use of the latest building material technologies – environmentally friendly, technically sophisticated and ecologically sensible. Affordable living space with a wide range of configuration options and a high level of quality of life.

The main advantages summarised:

- Solid construction up to 8 storey – long service life
- High storage capacity – good room climate
- Barrier-free and wheelchair accessible
- Consistency of data from design to operation
- Reduction of planning costs
- High quality and precision through factory production
- Short production time – short assembly time
- High recycling rate – “clean construction site”
- Avoidance of waste



Outlook

maxmodul can be designed for many building types: With one and the same technology, all urban and suburban residential typologies can be realised with the same quality and economic efficiency.

- Hotels and boarding houses
- Kindergartens
- Student flats
- Administration building



maxmodul among the winners

GdW competition





Under the leadership of the GdW, the construction of affordable apartments in Germany is to be accelerated in high quality and rapid completion in cooperation with the Federal Ministry of Construction, the Federation of the German Construction Industry and the Federal Chamber of Architects.

With the framework agreement, housing companies throughout Germany will have the opportunity to realize their new residential construction projects faster, easier, more cost-efficiently and in high quality with maxmodul.



Max Bögl Group

With over 6,500 highly qualified employees at 40 locations worldwide and an annual turnover of over 2 billion euros, Max Bögl is one of the largest construction companies in the German construction industry. Since its foundation in 1929, the company's history has been characterised by innovative strength in research and technology - from tailor-made individual solutions to constructionally and ecologically sustainable overall solutions.

With forward-looking in-house developments on topics of our time, such as renewable energies, urbanisation, mobility and infrastructure, the Max Bögl Group is already realising solutions for the megatrends of our globalised world. Based on many years of experience and competence in high-prec-

sion precast concrete construction, Max Bögl is also positioning itself as an important driving force in the development of innovative products, technologies and construction processes.

The wide range of services and the high level of vertical integration with our own steel construction, our own precast plants, the most modern fleet of vehicles and equipment as well as our own raw materials and building materials guarantee the highest quality. The use of BIM, lean management/ production and standardised project management ensures adherence to schedules and cost-effectiveness from the initial concept idea to the finished building product.

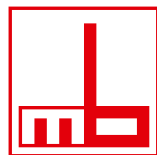
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Progress is built on ideas.