

From the cellular office to the "brave new working world"

Determination of requirements with user participation, description of technical qualities and services as well as project controlling as a guarantee for successful relocations and satisfied tenants, users and employees

When implementing new office concepts with titles such as Business Club, Open Space or Future Workplace, the different interests of users, employees, landlords and owners/project developers offer plenty of discussion material. It is important to reconcile human needs with investment and operating costs, user comfort or the structural and technical feasibility. The practical report from "Baubrille" shows what is important.

In addition to integral thinking and action, the planning of requirements, the determination of basic principles and the development of concepts require a high degree of diplomacy and negotiating skills from the consulting architects and engineers during the project preparation. The Canzler GmbH supports tenants or owner-occupiers in determining their own requirements, formulating them in a way that is understandable for investors, landlords or general contractors and translating them into constructional and technical terms. During the extension, reconstruction or new building the project controlling ensures qualities, deadlines and costs in the interest of the user.

The office from yesterday to now

In the 1970s, the majority of office workers spent their working day in the classic cellular office. In the worst case, doors or movement areas were generated parallel to the corridor on both sides in order to avoid contact with customers or colleagues.

It was not until years later that the classic open-plan office gained in popularity. Due to the monofunctional workstations on offer, this classic office concept did not prevail in Germany despite the very intensified race for space efficiency. The acceptance of non-territorial office forms was higher in the Scandinavian countries at that time. The combi-office celebrated its greatest successes in the 1990s: Here, individual offices oriented towards the façade were grouped around the communal areas in the middle, where, for example, meeting points and lounges served for informal exchange.

So-called multi-space concepts developed from the combi-offices. Instead of cellular offices, open team areas are now located on the façade. A common centre connects the employees and supports communicative and focused processes. Although this is a very space-efficient office form, for some time now it has been increasingly combined with desk sharing - the smart working principle.

How to formulate user needs and user requirements correctly

Generally speaking, the aim of a needs analysis is to create the best possible use of space and at the same time the best possible working conditions. By observing and analysing the different working methods and activities of the employees, different requirements can be determined: Parameters for this are, for example, meeting behaviour, average presence at the workplace or groups of people with special conditions regarding confidentiality or technical equipment. On average, workplaces are often only used half of the regular working time; the other half remains empty due to travel, coffee breaks, illness or vacation.

In addition to the analysis of space utilisation in the existing building stock and work profiles, employee satisfaction and their identification with the company play a major role. Here the question arises as to whether it makes sense to consolidate personal workplaces as much as possible in the interests of space efficiency. Or should instead the utilisation of the workplaces be increased and space for informal exchange and retreat be created? At the same time, it should be examined whether the existing cell structure is necessary and sustainable for managerial staff who are in the office even less frequently. New workplace scenarios need an entrepreneurial culture of trust and managers who set a good example. The ambience must be right so that employees feel valued and are motivated to work.

A successful implementation of a new workplace concept requires a holistic view of the user and his working environment. In workshops, interviews and/or observations, an analysis of the current situation is initially carried out. This database forms the basis for concept development and further planning. Workplaces and their surroundings are designed in such a way that the room conditions (heating, ventilation, cooling, humidification and dehumidification), lighting and acoustics as well as the furniture comply with legal regulations and user requirements. Studies show that performance increases with user comfort and satisfaction.

Planners and user representatives jointly examine work processes in workshops and determine relations with neighbourhood organisations as well as the need for working materials, storage space or work surfaces. At the same time, an evaluation of the activity is carried out in order to derive the appropriate working environment. Only rarely does a building/area with classic workstations in open-plan, group office or cell structure meet all the requirements of a company. Corresponding to the activities, the planning provides for different areas: Individually arranged single workstations, retreats for individuals or teams/groups for concentrated work or communicative areas for formal or informal work as well as secondary areas arrange themselves in an optimized relationship to each other.

Ensuring a feel-good atmosphere and open communication

In addition to these organisational topics and the space requirements, the requirements for air quality, cooling or acoustic quality as well as lighting or IT must be determined and described. In practice, it happens time and again that uninformed or poorly advised tenants/users are rented space that does not meet the technical requirements for the planned uses. The pure consideration of the floor plans or furniture does not take into account either internal or external loads. Whether a property originally planned as a cellular office is suitable for representing multi-space concepts cannot be determined without a

closer examination of the existing building. The internal loads are increased by densification. Therefore, it is necessary to check whether, for example, the existing electrical connection capacity or ventilation and cooling are available in sufficient quantities.

While works councils demand from employers that workplaces be equipped in accordance with the Workplace Ordinance and its technical rules for workplaces (ASR A), architects and engineers plan in accordance with DIN standards. Unfortunately, these regulations are not always coordinated with each other, and so it may be that the planning is correct in terms of building regulations, but the employer can only start using the space through risk assessments or structural/technical upgrade measures of a newly rented property. To avoid retrofitting at the tenant's expense after moving into new premises, it is advisable to examine the building description and the technical infrastructure in detail before signing the lease.

Parallel to this, transparent communication with the users in the sense of active change management is advisable to counteract employees' fears of change. Fears, e.g. with regard to workplace hygiene or acoustics, must be allayed as far as possible in advance through adequate operator concepts, information and open communication.

Existing or new building

Integral teams of architects and engineers support their customers not only in the planning of new offices, but also in the search for space, for example for technology-heavy types of use such as computer centres, laboratories with pilot plant stations or hazardous materials storage with associated office workplaces.

The requirements profile described above can be implemented in existing buildings as well as in new buildings, depending on the time frame and project scope. A move to a larger new building requires several years of planning: After the requirements have been determined and defined in the form of a tenant building description, the search for investors, planning and construction follows. On the other hand, the location often plays a similarly important role or the planned amount of space can be sensibly mapped due to the processes in the existing building; in this case, a completely new building can hardly be justified.

A real-life example

In the past, Deutsche Telekom AG (DTAG) has realized more than 50 project developments of service centers and office buildings with future work place concepts in existing and new buildings with the help of consultants/project managers. Existing and new buildings were in direct competition. In Darmstadt and Hamburg, new office worlds were built in new buildings with 25,000 m² to 34,000 m². Comparably large conversion projects, either in the process of implementation or already completed, can be found in Frankfurt. a. M., Düsseldorf and Bonn. The requirement, quality and process standards for project management were developed in cooperation with Deutsche Telekom and other specialists such as acoustics experts and pollution experts. In negotiations with landlords and investors, these properties were specifically adapted and served the respective planning teams as the basis for conversions and new buildings. Since the customer usually did not act as the client himself, the selection process and the decision on the locations were based on a defined procedure. The

conversion and new construction projects were subject to regular checks with regard to the specified qualities, the schedule and the costs and were accompanied until the move. A clear tendency towards new construction or existing buildings cannot be deduced from these experiences. It always depends on the consideration of the individual case and the evaluation of each location, object including deadlines and costs.

The perfect office property

The requirements for office properties are high and varied. Flexibility and pre-fitting of technical equipment is important, but usually also a significant cost driver. There is no real estate that can equally represent all known office forms - for this reason alone, goals and requirements must be fixed in advance when looking for space.

Using an evaluation matrix and profitability calculations, specialist planners assess and compare the properties offered by developers and landlords on the basis of a variety of criteria such as rent, location, but also equipment and design qualities. The criteria and their weighting are individually agreed with the user in advance and adapted to the requirements. Depending on the use and the selected office concept, the façade grid, building depths, room heights and the type and extent of ventilation and air conditioning as well as IT and media technology must be coordinated. Once room heights or installed air volume flows have been determined, they cannot be changed at reasonable expense. The ability to think integrally plays a key role both in the description of requirements and in the evaluation of selected properties, since ultimately everything is linked to everything else.

Each component or technical system has advantages and disadvantages which have to be taken into account in the decision-making process. Unfortunately, effects on other trades often remain unconsidered in isolated considerations / variant investigations. Concrete core activated ceilings offer, for example, heated and cooled surfaces with high rooms at comparatively favourable investments compared to buildings with the same clear room height and suspended heating-cooling ceilings. At the same time, from the point of view of room acoustics, a filled or plastered ceiling is usually significantly worse than suspended and perforated metal band grid ceilings. Furthermore, concrete core activated ceilings are often used in combination with floor lamps and therefore offer little scope for the distribution of ventilation and cooling. Suspended ceilings, on the other hand, often come with inflexible recessed luminaires, but have installation space in the space between the ceiling, which allows more flexibility for selective adjustments in terms of ventilation and cooling. Both systems have their advantages and disadvantages and their justification. An isolated consideration of investment or acoustic properties rarely leads to the desired overall goal.

Conclusion

The trends towards multifunctional office environments and smart working are irreversible and most new office space will have to be built in existing buildings in the future. However, multi-space concepts do not necessarily require large office spaces. Even in the smallest of spaces, the various forms of work can be mapped and combined with one another. The challenges for consultants, architects and engineers are to adapt the technical infrastructure

of the properties as well as the design to the requirements of the users to future multi-space concepts. Without sufficient project preparation and description of the structural and technical requirements, all efforts of change management will inevitably fail.

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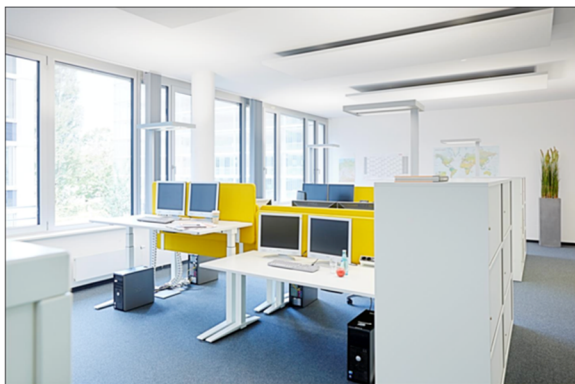


Bild 1: 3_02.png

Storage furniture delimits the work areas and contributes to good room acoustics. Height-adjustable desks allow dynamic working in sitting and standing positions.

Source: © König + Neurath AG.



Bild 2 4_02.png

Concrete core activated ceilings in combination with mechanical ventilation and acoustic sails ensure good room conditions and high user satisfaction.

Source: © König + Neurath AG.



Bild 3 111319: Lounge areas or open tea kitchens support communication among colleagues or offer space for teamwork.

Source: © Canzler GmbH.

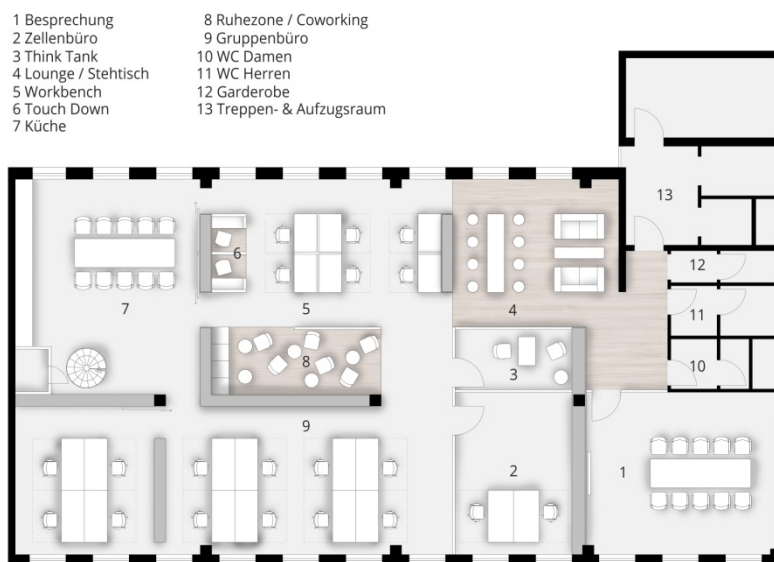


Bild 4 : Canzler floor plan: Sample floor plan for a multi-space office in a very small space. Centrally arranged are lounge, rest and coworking zones as well as a think-desk-sharing workstation. Group, cellular and meeting rooms are grouped around the outside.

Source: © Canzler GmbH.