

# **Construct**

## *Potential and pitfall of a design brief*

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When developing a family house project, it is usually people who lack the knowledge of the issue who shape the project brief. Their point of view is limited by their experience, education and very often strongly biased. The paper describes various possibilities of briefing the design of this range and further explores ways of rapidly extending the spatial experience via curated sessions in 3D space using VR. It speculates whether it is possible to mediate the spatial experience in VR and positively influence the design brief.

### *Project phases of a family house construction*

A family house is the most common building constructed. In Czechia there are around 17000 family houses built every year. Czech chamber of architects states 4180 registered architects in Czechia. Even though data on how many of these new family houses are designed by architects it is clear that also for architects to design a family house is the most common commission.

Client asking an architect to design a family house is the first step, followed by the design phase which usually takes a few months up to one year to be completed. Design phase is divided into several parts, each developing the project in smaller detail. Most common phases for basic two storey family houses consist of three phases: architectural study, building permit documentation and construction documentation. Later two might be combined for simple objects. During the construction itself the architect might be assisting the client during dealing with the contractors and solving issues arising during the construction. ČKA defines seven phases as a standard for architects' services: 1. project initiation, 2. Preliminary –Concept Design, 3. Land Zone Permit Design, 4. Building Permit Developed Design, 5. Detailed Design, 6. List of Works and Deliverables, 7. Architect's Supervision. However in practice these phases are often combined together especially for smaller scale projects such as family houses. Common practice in Czechia is to have an initial meeting with a short briefing phase then the design phase starts.

During each phase the project becomes more complex and involves more specialists working on a given phase such as structural engineers, experts on heating, fire safety etc. Thus changing substantial parts of the design in a later stage is much more costly because it results in a chain reaction of changes involving a lot of man hours spent on it. Most expensive are of course changes already during the construction when the client sees the design in its physical form and real scale for the first time.

That is why it is crucial to have good communication between the client and architect right from the beginning even before the first design phase starts - during the design briefing.

### ***Risks***

Common practice in Czechia is to have an initial meeting with a short briefing phase then the design phase starts. Architect prepares the first design and presents it to the client. After each presentation the architect receives feedback from the client and adjusts the design accordingly. If everything goes well after a few iterations the design is finished and handed over to the client.

During the process there is a risk of more and more iterations and variations of the design demanded by the client if he or she is not satisfied with the result. Usually resulting from poor communication of design aspects or misunderstanding of the assignment. This leads to increased costs on the side of an architect which, depending on the details of a contract, might be transferred to the client. Either way this situation eventually leads to frustration on both sides. Therefore it is essential to find clients' real needs and capabilities and communicate them precisely and clearly. Architect should be the one helping the clients right from the beginning, meaning from the development of a design brief.

### ***Importance of a design brief***

Since design brief influences the final form of a building in such scale it has also major influence on price of the construction. If it proves inaccurate or faulty it leads to many

issues. Fundamental decisions made during the early stage of the project are very costly to change in later stages. Thus it is crucial to be as well informed as you can be when you create a design brief for your house, which not many people are.

It is also hard for many people to imagine various spatial possibilities of a house since they only have a limited experience from the past since most of them only experience a few spaces they actually lived in and experienced first hand. This leads to tight constraints already from the beginning, which might be hard for an architect to eliminate in a given budget dedicated for a design stage. These constraints might include sizes of rooms, type of a roofing, window sizes and many other parameters of the building. Most of them are about architectural and spatial expression of the building, which might be hard to talk about before the design phase even begins.

Clear flow of information between all participating parties always leads to better outcomes. Most of the current research is dealing with communication between architect and a client only during the design phase. Visual representation of a design is examined from many sides, however there is a gap right at the beginning at the assignment phase.

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### ***VR session***

VR is slowly creeping inside the architectural studios as mentioned before. It is however still not used very often for small scale projects and only for presentation of a design. The capabilities of the technology however could be beneficial even for the early stage of the design or even for the briefing phase by showcasing either older projects or VR sessions designed to broaden the spatial experience of the client. It would be focused on the sizes of various rooms, presenting the subject several options and designed layouts with various dimensions and window sizes. Dimension infographics will be accompanied by financial costs and energy consumptions calculated from floor area and average statistical values. This interactive feedback should help the subject understand the links between various building parameters.

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