REFLECTIONS

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TITLE: T.E.S.T – T.echnical, E.conomical and S.ustainable T.ransformation

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The main objective of the project was the implementation of integrated panels in the process of redesigning one of the office buildings in Amsterdam. The process of adapting the research part to the design part was pretty simple. From the beginning established methodology was focused on the design part, together with schemes and calculations. Itself part of the theory, on the façade, was necessary to determine the boundary conditions for the design. The division, which I made in the research part, clearly marked the design part - material issues have been resolved in the study, while the issue of integration and installation of the panels and to adapt them to the requirements of each function, clearly dominated during the design process. Despite the clear conclusions, recommendations, and specific guidelines for the design in the end of the research part, I had to keep a compromise between the conventional technique and artistic expression (which was not part of the research). Selected building was difficult to design - Its shape and size meant that minimal change in elevation (detail) affect the shape of the entire facade. Design assumptions and research were based on the design of each panel, whose implementation in the building seemed to be a matter of proper configuration. However, the question of the scale of the individual elements become the most difficult to solve.

Studio Architectural Engineering is trying to find an answer to the relationship between the engineer and architecture. Balancing between purely technical issues and the broader aesthetic and spatial game proved to be particularly difficult in the case of operating a small element, which is integrated panel in the height of the building. My technical issue - integrated panels –excluded in the research part an aesthetic issues - I focused on engineering, hence the problems in determining the studio assumptions raised. Is it engineering or architecture more important? Can these two disciplines be inextricably equivalent? During the design, I realized that focusing on technical issues most of the time makes impossible to create interesting and attractive architecture using only the dry calculations or typical technical solutions. Architecture and Engineering at the same time should interact with each other from the beginning of creation. During work on the part of the research clearly ran out of space on aesthetic issues.

Methodology adopted by me is not too different from the studio assumptions. While working on research I focused 100% on the issue of the panels. The choice of the building has been made at the very end of the research process, making it impossible to resolve the above mentioned issues of aesthetic. The study was based on the literature
theory and research through design. The same model I adopted during the design part. It became clearly to use specialized software - that have managed to solve many technical problems, and partly aesthetic. There are no standard solutions that could fulfill my design assumptions. Most of the time I spent on solving simultaneously technical and aesthetic problems, often creating new solutions. Integration of biodegradable panels remains in the field of innovation, which also was a tempting challenge.

Research assumptions and partially the project itself I leaned on modularity and technical reproducibility, with the possibility of adapting the function and aesthetic. From the very beginning I had in mind the broader social, economic and environmental context. The sustainable development, with more broadly define benefits achieved by my design, shows that idea of integrated panels can influence environment in broader sense. Undoubtedly, the problem of adapting existing facilities to new requirements, both spatial and energy, will soon be a pressing social and economic problem. My research and the design had to be a kind of manifesto – this is a technique (the research part), and this is how the solution may look like (project). Implementation of integrated panels can be made, in principle, everywhere, solving many of the aforementioned problems. Nevertheless, the technique exist, but it will always be a problem of standardized and modular architecture to adjust to local circumstances and adjust to architects creativity. One of the main issues during the design process was to adapt idea of integrated panels to restore the whole building and surrounding area. As mentioned above, the typical technical solutions cannot solve social and economic problems, so during the design process simultaneously I tried to find answers to this difficult questions – for instance by creating the business model for the refurbishment. This multidisciplinary task gave me an opportunity to create non-standard solutions based on both – environmental and economic aspects, and configure existing building towards the requirements of XXI century.