Appendix I - Workshop "The Erection of a Full-scale Laboratory at the University of Florence"[1]

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Frame Conditions

The planning work erection of a full-scale and light laboratory principally is to be regarded rather a prototypical matter. The workshop was aimed at defining the basics regarding the many questions arising as well as those not even properly identified, thus issuing a pool for ideas to carry on with and consequently to be made available to those concerned with the erection. The more open-minded the thinking tank the more potentials would be furnished to the "next generation". The interactions of space, light and color could be finally studied and checked in full-scale within realistic conditions. The participants to the conference all of which being well-acquainted with the work in and at such a lab inevitably concentrated on the question as to the planned focus of work and subject scope. The cooperation between a lighting company and the university seems to narrow down the subject matter from the very beginning. As the prime interest is the work with light the proportion dedicated to building as such would bound to be lower . But what is light without the accompanying room. The language of light certainly requires the "paper" where the plot is to be written.

Florence is a city full of history practically making erection of such a laboratory impossible within the city center. Thus is seems pretty logical to consider the re-utilization of a disused building. Erection costs would be affordable also living up to the omnipresent preservation of historical monuments.

Location and Facilities

Which position within the urban structure should such a laboratory obtain? The restrictive regulations regarding protection of historical entities force a lab to be erected in the down-town area behind the walls of an already existing building. Thus the lab would certainly have to be integrated into present substance. A new building would doubtlessly have to be drawn up at the

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[1] The local Florence lighting company Targetti was particularly interested in the idea of arranging a workshop in order to gather the basics - more or less basic parameters - for a laboratory to be erected in Greater Florence to be financially supported by the Targetti company, the administration and teaching aspects of which to be taken over by the University of Florence. This Appendix attempts to briefly document the discussion topics. Special thanks to Volkher Schultz whose suggestions submitted in writing were gratefully integrated in this paper.

outskirts of the city. Due to the fact that the university in the city center would act as the operating authority of such an institution, the alternative at the outskirts does not prove wise, as it is the direct vicinity to the operating authority that makes for intense utilization. Considering integration of the lab into existing buildings only few buildings would lend themselves to re-utilization due to the required cubic volume and clear height. A former factory building or a church might most likely meet these requirements.

Purpose of Utilization

Once the location of the laboratory is determined the future users are to be defined considering that a top-quality representation will be provided. With regard to post-graduate education particularly teaching purposes based on empirical experience in the course of experimenting will be treated. Concerning evaluation and validation of simulation findings a vast field of research so far has not been tackled. Beyond university research activities such a laboratory can also prove useful to the local architects e.g. in simulations of lights and its impact. The lab thus serves as an object to be rented and for providing of services. Remarkable new ground for all involved is broken particularly regarding the resulting feedback to practical work: the productive combination of teaching, practical work and research are bound to make for a promising lab environment and the undoubtedly resulting interactions will issue an accordingly vast scope for performance.

Personnel and Budget

An issue of major importance is who is to be in charge of such a lab, as the same will also handle conservation of the findings and their analysis providing for appropriate integration of work into the suited context. Processing of knowledge finally is required granting its adequate transmission. A lab also will not work without regular financial contributions. The expenses, however, are always to be in proportion to the object. The complexity of planned work defines the expenses and thus the financial requirements. Simulation in the 1:1 scale causes comparatively high costs which could be cut down somewhat by implementation of basic elements. In the long run acquisition of small devices and utensils results in setting-up a (semi-) permanent storage calling for extra care. Limitations concerning personnel and financial resources, normally a matter of fact, does not have to be a disadvantage, as over and over again spartan equipment may contribute to creativeness: necessity is the mother of invention. A minimum of personnel resources has to be provided, to be in charge of general maintenance and electro-technical and electronic assistance as well as with regard to skilled technical support apart from the pure didactic work. This help also makes for the required safety and smooth execution of work.

Equipment and Technical Infrastructure

Simulating in the 1:1 scale often calls for no surrounding buildings. In the history of simulation several examples of execution right at the site or simply in the backyard are known. In order to keep expenses low and to avoid climatic influences at the simulation site the suited building facilities prove wise. A green patch will rather only lend itself to a one-time experiment than to an economically drawn up test series. In the case of internal simulation experimental fields relying on the natural daylight differ from those of simulation carried out so to speak in the blackbox. Moreover, manipulation of heavyweight parts is easier with the adequate devices. The integration of mobile stages or a crane trolley surely will be useful. A deposit facility will be prove meaningful as a secondary spatial requirement and furthermore suited facilities for presentation and filing are necessary. A connection to the model workshop certainly would be beneficial as the parallel work in differing scales results in an instructive course for those involved in experimenting. The stepwise feeling one`s way straight to the 1:1 scale is valuable considering a meaningful genesis of design work.

External Relations

Relations to extra-university institutions promoting outside contacts would also come in handy. New approaches would thus be opened and possible synergy-effects might result from the situation. As particularly in the field of 1:1 material availability is of importance resulting in considerable expenses donations of the private industry should always be welcome and any wishes from the private industry should find a willing ear. What is to be considered in this context is that a purely commercial thinking in line with the private industry`s interest is to be regarded carefully: the university might likely become the matchball of private interests acting rather discouraging considering the variety of opinions. Awarding of open-market subventions, rewards and scholarships might be a promising approach. This enabling the “open market” to acknowledge remarkable work at the university level and also to make for an exchange and close relation between theory and practical work.

The presented aspects for erection of a future full-scale and light lab are merely to be regarded as global recommendations for further decisions considering the erection of a 1:1 lab. Advanced studies and detailed planning will be required in order to develop an appropriate lab not only being in line with the specific circumstances, the strong points being ideally based exactly on these parameter. May we hope that the “dream” of a cooperation model will be translated into reality in the course of the erection of a 1:1 laboratory.