

## ABSTRACT

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Nowadays there are a lot of methods to control the quality of civil engineering projects, whose finality is obtain this quality using exclusively severe control in design and editing processes.

Inside this working area we can find the ISO 9001, project auditory and in last years the “total quality” concept, which it’s being used too much.

These methods are the answer to statistic fact, which says that main problems in construction, all around the world, are due to the project.

With all these references, and due to the fact that there are not methods to control and evaluate the final quality of the civil engineering projects, this investigation thesis has the objective of calculate the quality index for urbanization projects with an evaluation system of the quality, based in the valuation of main parameters to indicate this quality, applying an expert’s valuation method, similar to Delphi’s Method.

The elements we need to define the system to evaluate the quality index of urbanization projects, are:

- A list of parameters which indicate the quality of urbanization projects.
- The specific weight of all these parameters, to represent the more or less importance of every parameter comparing the other ones.
- A model to evaluate the quality of urbanization projects thanks to these parameters and their weight.

So first we have to do is define which are the parameters to determinate the quality of urbanization projects. In this sense, we have to emphasise that parameters we use are the ones from the memory, the annexes, the graphic documentation and aspects involved with project presentation. The parameters from the rest of project’s documents are not included, because of a tutor’s decision, due to the long of the studying result, in case of include all parameters.

When we have the parameters defined, we have to elaborate a questioner, to be evaluate by an expert group o urbanization projects. The valuation rang for the parameters are: Indispensable (5), Very Important (3), Important (2), Convenient (1), Complementary (0,5), No necessary (0).

Then we have to define the experts group, with project engineers, public administration engineers and constructor engineers, and do the questioner valuation.

Next station is make a model to work with the questioner results, and get the specific weigh, with some statistic functions, that allow us to get it easily and objectively, measuring the process guarantee. Functions used are Arithmetic Average and Average Deviation.

Finally, when we have parameters list and their weighs, we have to design the evaluation model for the quality of real urbanization project. In this model we have to indicate in every case if the parameter has to be evaluated. If it has to, we have to evaluate them, using a rang between 0 and 4, to express how is the parameter defined in the studied project.

We can get project quality index adding the product of weighs of every parameter with the evaluation of how are the parameters defined in the project. We’ll have to compare this index with the best quality index, which we can get applying a worth of 3,5 for the parameter’s definition.

So we have defined a system to valuate the quality of urbanization projects, which have the next characteristics: Open, because we can apply it to other type of projects, Easy, because we don’t need to use complicated calculations, Credible, because is based on expert opinions, an finally, and very important, Objective.