**Cover Letter**

Dear Editor, Dear Reviewers,

this article is the upgrade of the paper presented to 2018 IEEE International Workshop on Metrology for Industry 4.0 & IoT held in Brescia, (Italy) on April 16th – 18th 2018.

The article shows the methodology to develop a scale-up of the "Smart Street" pilot site, through the combination of Reliability Analysis and FMECA in order to identify the best configuration to scale up systems without incurring in marginally reliable configurations. With respect to the paper already presented to the Workshop, as novelty, this one deepens the reliability approach to COTS (Commercial Off The Shelf) components; this level of reliability quality is affirming its use in both civil, aerospace and defense application. The study approach cannot be the classic one of the MIL-HDBK-217/F2 Handbook, but this has been integrated by taking into account new physical factors inherent COTS components and performing a FMECA analysis. Therefore, we show a new type of approach based on several related and unrelated degradation factors representing a case study of Industry 4.0.

We affirm that the research is completely new and never already published before.

My best Regards

Fabio Leccese