Response to Reviewer 3 Comments

We sincerely appreciate your kind and detailed review and comments on several important points in this paper. We provide our replies below and request your valued opinion.

**Point 1:** The estimation of the number of machines capable of linking to the network (10%, line 155) was made eighteen years ago. Although the lifetime of a machine it is said to be known as more than 10 to 15 years, looks like most of those machines should be now out of use. Further, although the machines were not prepared to connect to a network, they could be prepared to connect to a single device and allow the communication of the data to be monitored.

**Response 1:** Although no more up-to-date references were found than the reference pointed, many of machine tools were found to be in standalone use without adding a network interface from the authors’ experience in the industry and the collaborations with machine tool builders. In addition, as the research background of this manuscript, the recent IoT use, which is easily spotlighted in the industrial machine and equipment reflects that the legacy machine tools may not have a level of monitoring functions for the smart factory. Therefore, the lifetime (10 to 15 years) used in the manuscript can be applied not only to machine tools being used for more than ten years, but also to rental machine tools. Also, it is already described in the text that a single device can be used to monitor data communication but this may require equipment modification and additional costs (Line 158). Please consider that this paper focuses on how to solve these problems easily without modification of equipment and technical difficulties at the SME level.

**Point 2:** With all, an estimation of the answer to the question: “How many of the controls for machine tool sold in the last ten years do not allow the communication between the HMI and an external device?” will help to see the range of application of the presented device.

**Response 2:** It is true that recent machine tool development has made it possible to incorporate monitoring functions, but this is an optional configuration. Thus, rather than having state-of-the-art monitoring functions, customers of SMEs or developing countries are adopting manual way and cost-effective configurations that workers operate their machine tools directly according to their economic availability (Lines 75-80). With this situation, the estimation on the networking function and lifetime used in this paper is intended to emphasize the potential need for networking of legacy machine tools for building smart factories in SMEs and developing countries, but it is not intended to predict the potential coverage. Therefore, the authors believe that this meaning can be delivered by the present description in the manuscript.