Dear Reviewer #2,

I am grateful for your suggestions regarding my paper, and my answers to your comments are provided below.

#1. This article advocates for better flexibility (in the sense of adding and removing when necessary) of smart city services and better integration between them. The authors argue that this would be precious to predict and fight against a pandemic, and as such they propose a smart city structure model. First, I have a series of concerns regarding the form. There are some phrasing issues and typos throughout the paper.

In order to improve the quality of the thesis, professional translation has been carried out again. We sincerely apologize for the rudimentary mistakes related to some expressions and errors.

#2. There are also many in-text reference errors with tables, which makes it hard to follow given the high number of tables (13!). Also, references to figures seem to include the full caption and cause line breaks instead of the figure number only. Please check especially the conclusion, this is hardly readable.

The reference confirmed that the error occurred when the formatting was moved. In addition, errors in the sentences have been reviewed and corrected. We apologize again for the rudimentary mistake.

#3. There are referencing issues with sections as well (e.g. line 213: "As mentioned in 0") Finally, and most importantly, the format of the bibliography is highly problematic. For many references (e.g. [15], [22], [25]) it is impossible to retrieve the source. For many other sources, the local access path of the file is provided, which again prevents the reader from retrieving the source. All these issues could have been picked up by a simple check. Unfortunately, they are enough for me to recommend to reject the paper, as I consider that submitting a report of scientific quality in this form is unacceptable.

References are rechecked and deleted or erroneous references are recited or deleted. We humbly accept the reviewer's opinion that there are many references, and we have deleted references that are deemed unnecessary. We humbly accept the reviewer's comments that there is a quality problem, and we sincerely apologize. We did our best to double-check, revise, and improve the quality of our papers.

#4. The content of the paper raises major concerns as well. In the introduction, I could not understand the motivation of the paper. The authors argue that the smart city services failed to be flexible enough to predict and fight the pandemic. However, I am lacking a concrete example of failure that proves the authors' point. It is well-known that different services are hard to integrate together (this is not specific to the smart city), but I would have liked the authors to illustrate in

light of the pandemic context, and maybe to the context of Korea since their contribution is specific to this geographic context in that it integrates the 12 smart city categories of Korea and the healthcare phases of Korea. The contribution is not presented in the introduction, only the problem is.

We fully agree with the reviewer's comment that integration between services is difficult not only in smart cities but also in other fields. As advised by the reviewer, the situation in Korea was described in Figure 5 (Outbreak of COVID-19 in Korea and the limitations of smart city services) and Table 10 (Limitations of smart city services in each phase). The spread of COVID cannot simply be blocked by smart city services, but by simplifying the current state and proceeding with the thesis, we did not reflect Korea's medical stage with geographic characteristics. We will conduct additional research in the future to fully reflect the reviewer's comments. Thanks for the advice.

#5. The literature review is very long (it represents half of the paper) and can be significantly shortened as it contains few information that is actually useful to the rest of the paper. It is also hard to read, as it contains more tabular content than text. In Table 3, what is an EA?

We reviewed the literature review and deleted redundant or unnecessary content. Also, we have checked and corrected the Author's initials that you pointed out. We also Cognized that the expression ‘EA’ is a unit used only in certain countries. The 'EA' refers to the quantity, but all have been deleted. We sincerely apologize for the basic mistake. We will check in more detail later.

#6. Table 4 presents smart city projects of several different countries. The authors than write that hese services have a limitation in that cannot predict and prevent transmission of threats such as COVID. It the threats concern COVID only, it does not really make sense, as many of the mentioned services simply do not have this goal (e.g. smart grid). If it goes beyond COVID, this is a claim that needs to be backed with a sound and transparent evaluation by the authors or literature.

We agree with the reviewer's comments. Smart city projects are underway all over the world. Also, although smart city services differ by country, the smart city structure has a similar framework to a certain level. Therefore, if we can transform the structure of the smart city, we decided that it would be a great tool to cope with situations such as COVID, even a little.

#7. Table 5 is useless in my opinion. It is well-known that many standards exist and are not used in every service, which causes integration issues. The authors could remove the table and mention 1-2 standards relevant for pandemics and make the same point.

Like the reviewer's comments, the rest of the table's contents other than those related to pandemic have been deleted.

#8. Section 2.3 has the same title as Section 2.2.

Sections 2.2 and 2.3 have identified errors with the same title. Accordingly, the title has been modified as follows. We apologize once again for repeating basic mistakes.

- 2.2 Status of smart city services
- 2.3 Status of Pandemic

#9. It presents phased plans for pandemics. Several different plans are described, which is useless information for the reader. Indeed, the phases in a Texan county are of no use to understand the authors' contribution. They could easily break the section down to the essential information that would be the WHO phases and the Korean healthcare phases, and mention that there are global and local plans throughout the world with different phases. Tables 8 and 9 can thus be removed. Table 7 is not very informative, all the phases say that actions from the previous phase should be continued or initiated. I have checked the online source and it mentions other aspects such as treatment and isolation for the recognition phase, which have not been picked up by the authors. A case study approach restricted to Korea would be more informative and more consistent with the contribution of the paper, which is as I mentioned specific to Korea.

We completely agree with the reviewer's sharp points. Accordingly, the contents including Tables 8 and 9 were deleted and reorganized into World Health Organization (WHO), Control and Prevention (CDC) and Korea Centers for Disease Control (KCDC).

#10. Section 3, named "Main discussion", should be renamed to be more explicit regarding what the reader can expect to find. I suggest e.g. "Revised model of smart city service structure".

Thanks for the reviewer's comments. The title of this section 3 has been changed according to the comments of the reviewers.

#11. The contribution is a proposition of services such as screening people with thermal cameras and tracking infected people through CCTV. However, it misses a critical point of COVID. Infected people are in the public space without knowing that they have COVID, since contagion happens before symptoms appears. Once infected people have been identified, they are supposedly in quarantine. Do the authors propose to track everyone and then go back to the records of infected people to retrieve their paths and contacts? Or do the authors want to check if infected people are outside their home instead of in quarantine? This is not clear to me. Also, and more importantly, the integration and flexibility aspects are not really addressed in the end. The authors do not explain how the services they propose could be integrated with existing ones (e.g. which standards should be used) and how the services can be added or removed. This part is only represented as clouds in the proposed structure model but not discussed further. Therefore, it seems that the contribution breaks down to proposing strict tracking services which feasibility and acceptance by the population is not assessed.

We agree with the reviewers' opinion that the biggest cause of this COVID-19 transmission is the rapid spread of infected people around them by moving to public places before they show symptoms. In the case of Korea, rather than finding the infected person in advance, the focus was on identifying and blocking the spread of the infected person. Therefore, Smart City Service checked the movement of the infected people by time, found close contacts in the vicinity, and took measures to self-quarantine immediately. As a result, the critical point of being identified before an infectious disease spreads was missed. However, Korea has prevented a rapid collapse of the medical system by slowing the rate of propagation around it, and the role of smart city services has been significant in this regard. Reflecting the reviewer's opinion that it is not clear, the entire sentence has been revised and translated clearly.

#12. My last concern is the ethical aspects of the proposed services. The authors acknowledge that not addressing these is a limitation of their research. In my opinion, this is more than a limitation, this is essential to discuss given the nature of what the authors propose.

We fully agree with the reviewers' comments. Therefore, as the limit of this paper, the limit of the ethical aspect was first specified, and in the situation where the service is not needed, the service is deleted in consideration of the ethical aspect in the structure of the smart city. Also in Korea, it is legally required to be used only when necessary.

> Ministry of Land, Infrastructure and Transport (Korea): "…… But the scope of data collected will be kept to minimum and a due procedure should be followed in acquiring the data. First, an epidemiological surveyor should decide whether additional collection of personal information is needed. If the answer is yes, the official should seek approval from relevant authorities to get access to the data. For example, as for the location information, separate permission from the National Police Agency is required."
>
> Source: http://www.molit.go.kr/english/USR/BORD0201/m_28286/DTL.jsp?id=eng_mltm_new&mode=view&idx=2931

#13. In summary, my suggestions are to focus the paper on the Korean context, in an in-depth case study approach where authors detail more their contribution, clearly illustrate what the problem is and how their contribution helps solving it.

Many revisions have been made to this paper according to the reviewer's comments. Although there are still many things incomplete, we did our best to reflect the opinions of the reviewers. Also, we really appreciate the accurate comments from the reviewers. In addition, we will use a more advanced paper by reflecting it in the ongoing research.

Thank you again for your supportive review to improve the manuscript.

Yours sincerely,

The Authors