

Dear Stefaan G. Verhulst and Dr. Richard Benjamins

With regard to the paper “Mobile Big Data to address COVID-19 in Nigeria”, please find below an explanation of how I have addressed the reviewer comments.

<p>The contractual framework of work under which MTN carried out its activity, including the forms of financing the project. Is it a probono contribution of MTN or is it expected to receive some external funding? This is shortly explained in section 2, but I consider a longer explanation is needed. Also, the collaboration agreement seems to be signed by MTN and NGF but other stakeholders are mentioned later on. It would be convenient to clarify whether they were also part of the agreement or not.</p>	<p>This was a probono contribution by MTN as part of its COVID Intervention support under the broader name <u>Yello Hope Package</u>. Clarification added as paragraph 3, section2, page 2.</p> <p>Phase 3 was a private sector intervention initiated by Softcom, and was not part of the scope with the NGF. This has been clarified in paragraph 1, section 5, page 7.</p>
<p>The specific role of MTN and that of the rest of the stakeholders mentioned in each of the phases of the project.</p>	<p>Stakeholder roles added via Table 1, page 8.</p>
<p>At a technical level, during phase 1, where an epidemiological modelling tool was built, clarify whether said tool was built by MTN or the tool was built by others and MTN provided the mobility data</p>	<p>MTN used its in - house prediction modelling platform, powered by SAS and open source analytics tools. This has been clarified in section 3, page 2.</p>
<p>In phase 2, clarify how the different data sources were integrated to build a “vulnerability score” and its granularity. In phase 3 the transfer of direct monetary aid to individuals is mentioned, so it is convenient to clarify whether the score was generated individually and using personal data of MTN clients (to then prioritize the aid) or if it was an aggregated value how that insight was transferred to individual people.</p>	<p>MTN confirmed the following and this has been included in paragraph 3, section 4, page 4: Vulnerability Score was aggregated at cluster level with a cross industry database of socio-demographic segmentation groupings, incorporating data from, Lagos State; World Bank Data on the poorest households; LASRRA Data on aged Lagosians; Lagos State Residents for those living with disabilities; Bank of Industry Data on Market Women. Note: The data referenced is not opens source and was made available to MTN by Lagos State.</p>
<p>Add / Modify the figures so that they are more informative in order to illustrate the type of insight mentioned in the text (forecast of demand and infections in relation to mobility, detection of vulnerable population ...)</p>	<p>Figures 2, 5 & 6 have been added</p>
<p>Clarify whether impact objectives were designed for each of the project phases.</p>	<p>None were set as this was a rapid and accelerated intervention to meet a major national crisis. Added reference via paragraph 5, section 6, Page 11.</p>
<p><i>Minor comments.</i></p>	
<p>Figures. Add an explanatory figure caption for each of the figures.</p>	<p>Updated</p>
<p>Page 1. Email address of the corresponding author is not provided</p>	<p>included</p>
<p>Page 4. Sections 3.1 and 3.2. Regarding spatial aggregations, please clarify whether "region" refers to "state" or it is an administrative unit</p>	<p>This was an error. Corrected to state.</p>

<p>of greater granularity than state. If so, I suggest the inclusion of a map with the divisions by regions of the entire country and an example of the profile built for each of the regions.</p>	
<p>Page 4. Section 3.3. It would be interesting to comment on whether the forecasts produced by the tool could be contrasted with the real figures that the epidemic has produced over the months.</p>	<p>Challenges with measuring real cases references at the end of paragraph 1, section 3.3</p>
<p>Page 5. Provide more details on how the multi-SIM effect could be mitigated with open data.</p>	<p>Update to paragraph 5. Section 5 clarifying how geo-demographic factors may be a proxy for more accurate profiling.</p>
<p>Page 6. Section 5. Check section numbering as it appears that it should be a subsection of section 4.</p>	<p>updated</p>
<p>Page 7. Section 6. Clarify whether the relationship between the coalition of private sector organizations (HelpNow initiative) in relation to the initial collaboration between MTN and NGF</p>	<p>Clarified in section 5 page 7 that Phase 3 was a private sector intervention initiated by Softcom, and was not part of the scope with the NGF.</p>
<p>Page 7. Clarify how aggregated insights were used to prioritize donations at the individual level.</p>	<p>Paragraph 3, section 5 page 8, clarified “While the distribution was done generally, the areas identified with highest concentration of the most vulnerable population received direct on-site intervention by the Lagos State Emergency Food Response Initiative (Sadekoge, 2020).”</p>
<p>As a suggestion for improvement, it would be interesting to include a table with all the open data sources used in the project, including their categorization and access url. I would also suggest including a description of the project communication actions designed by MTN.</p>	<ul style="list-style-type: none"> - Added table 2, page 9. (Please advise if incorrect formatting) - MTN did not provide project communication actions.

Sincerely
Jo Gilbert