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| To | Jason Chen, Yun Sung, Andrew Mole | | Date  19 August 2020 |
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| From | Gavin Wu | | File reference |
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| Subject | IiA25638 Data Platform – Level 1 Database | | |
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1. **Recap**
   1. **On our evening meeting on Teams on the 18th, we decided to focus on extracting SpeckleGSA data as charts to be our first objective. The carbon insight plugin for Speckle made by Tom Bunn will be investigated to see if a similar system could be developed.**
   2. **From the email thread between us and Sean, it seems that they are using JSON and loop through all objects to do data extraction. As we have discussed before, this will be very slow and unrealistic for large models. So the data structure of carbon is not so useful for our study.**
2. **Observations**

**Here are some key observations from the carbon insights repository that is worth noting:**

* 1. **For data handling and storage of their system, apparently they utilize Google Cloud and GCP app development tools (Firebase). Is a google solution secure and/or capable enough for larger models?**
  2. **The charts and diagrams shown in carbon are made with VCharts, a UI plugin for Vue.js. There are many templates on their site that we can reference to. For the data source, another “vuefire” plugin pushes a realtime database on Google Firebase into the javascript. (Vuetify library needed)**
  3. **In their data folder, there seems to be some experimental vue scripts on different charts and table with steps (failed ones followed by the final product). Could be used to debug future problems we face.**
  4. **For the chart colour/value reference, it seems like that those values were stored as list within the javascript structure. Also, the involved project information and other text items employs the same storage method.**
  5. **Overall, the system is of a fairly standard web-based application construction (Javascipt components should not be of problem to understand). The plugin method as a speckle add-on is much clearer after looking at the carbon example. More knowledge on vue is essential as it consists of custom commands and libraries.**

1. **Questions for discussion**
   1. **Will our system be using Google cloud services for data storage? From yesterday I heard from Yun that AWS is also an option, maybe we could compare the two to see which one is more optimal?**
   2. **Vue seems to be the way of doing Speckle plugins, but it is not so familiar to me at least. Is it nice/possible to ask for guidance along the way from the carbon devs if we run into problems during our development?**
   3. **Since that carbon is using a JSON data query structure, as we have discussed yesterday, should we explore the possibility of using a sql instead? It seems the chart libraries are quite useful and polished, but the JSON idea don’t fit well with our plans.**
2. **Action Plan**
3. **Decision**