**Smart Food Supply Management**

**Project/ Problem Overview:**

Currently, many areas of the globe, especially North Africa, are facing food shortages due to various ecological unbalances. To aid the situation, many non-profit organizations lend their hands to soothe the case. But despite honest efforts, food is not adequately distributed amongst the needy due to factors such as communication discrepancies, logistic problems, and geopolitical issues. Our project concentrates on developing an effective network of global food suppliers and the government and the NGOs, which are working on the ground level in South Sudan by creating the direct request-response workflow between them.

**Key Functionalities(WORKFLOW):**

* The NGO will send a **food packet request** to both, the food supplier and the regulatory body i.e. the government
* Both the entities who **receive the request** for food will check the inventory at the NGO for already available food packet to send only the difference amount to avoid wastage
* If the request for food is validated, the government will be the primary entity that will send food to the NGO. If the requested quantity is higher than the quantity with the government, the food supplier will provide the rest.
* If NGO has stock & has requested food packets, they will be prompted to check the availability and confirm if the available food is valid for usage. In case the food packets in stock are valid for that particular request, it will be used. But, if the food request from NGO is different from the stock contained, only then will the request will be fulfilled by government or supplier, upon acceptance by the user.
* The NGO will have a food storage limit to 100 packets. If the final storage at NGO after fulfilling a food request exceeds 100 packets, the donation will not be successful & the NGO will be asked to modify the request so that final difference upon donation is within the limits of storing for the NGO
* If the packet ready for donation contains any expired products, the donation will send only the non-expired packets and populate the expired products to another table for deletion. Sending expired food products will not be tolerated. A separate food request will have to be made for food packets that didn’t go ahead because of expired products.

**Entities:**

* Ecosystem
* Network
* Enterprise Directory
* Enterprise- Food Supplier, NGO, Government
* Organization Directory
* Organization- (Food Supplier) Logistics, Administration. (NGO) Volunteers, Organizers
* Employee Directory
* User Accounts

**Ecosystem Architecture**

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