Mid-day meal is a school meal program from Government of India (in collaboration with certain NGOs) to improve the nutritional status of school age children nationwide. Here in centralized model the meal is cooked at a given place and then the same is transported to various schools around the areas in various transportation vehicles so that Mid-day meal can be served to schools on timely manner and same can be feed to children to improve their nutritional level.

With the help of Internet of Things, a device with sensors can be mounted on Transportation vehicles which can be used to monitor from a remote location and helps in taking decisive actions on timely manner. The sensors mounted on the delivery vehicle will show the current location of the vehicle and will track the door opening locations to prevent un-authorized access. It will also monitor the temperature of containers and pH level of the cooked food to ensure healthy food are served to children. Additionally it will also monitor the inventory and helps in understanding the behavioral pattern of food used.
**Persona**

**Harish – Senior Analyst**

**Background** – Harish is 38 years old, married, with 15 years of experience is a Senior Analyst with a NGO and assigned the task to monitor the fleet of vehicles used to transport the food (both cooked food & packet food) from a centralized Government location to various schools around the area in a pre-defined route, so that the food can be transported to required destination on timely manner maintaining proper food quality.

**Goals**
- Ensuring delivery on timely manner.
- Food quality control
- Improve the transportation efficiency.
- Avoid theft of goods.

**Pain Points**
- Delay in transportation of food.
- Vehicle breakdown

**Needs**
- More vehicles for transportation of goods.
- Quality drivers.

**Job responsibilities**
- He need to monitor the temperature of the containers (where food is placed) inside the vehicles and if required direct the Driver of the vehicles to adjust the temperature.
- He can monitor the pH level of cooked foods to ensure the Quality control. In case food is spoiled then he can direct the driver accordingly.
- He can track the vehicle online and can live update the vehicle driver in case there are heavy traffic on specific routes and can plan to re-route the journey accordingly.
- He can track the door opening of the vehicles, which helps in preventing theft of food material. (same can be done by matching the door opening location with desired destinations)
- He can track the local inventory of the Vehicle so that wastage can be minimized and more / less resources can be furnished next time if required.
- He can track the Time at which the vehicles reach their destinations to ensure quality food is served at proper time.

**Competencies**

<table>
<thead>
<tr>
<th>Competency</th>
<th>Marker</th>
<th>Proactive</th>
<th>Team player</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>Reactive</td>
<td>Stand Alone</td>
<td>Conservative</td>
<td></td>
</tr>
</tbody>
</table>

Efficiency is doing things right; effectiveness is doing the right thing.
### User Experience Journey

<table>
<thead>
<tr>
<th>Actions</th>
<th>Route taken by the Vehicle</th>
<th>pH level of the cooked food</th>
<th>Temperature of the Containers where foods are kept</th>
<th>Door opening location</th>
<th>Time to reach the destinations</th>
<th>Check the vehicle inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindset</td>
<td>a) Heavy traffic on the route b) Need to re-route the vehicle</td>
<td>pH level is good</td>
<td>a) Temperature needs to adjusted within the Containers b) Sant massage to Vehicle driver to adjust the temperature</td>
<td>Door is opened at the destination only</td>
<td>Vehicle is on-time</td>
<td>Need to add more milk containers next time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>🎉</td>
</tr>
</tbody>
</table>

| Touch Points | Traffic | pH level indicator | a) Temperature indicator b) Vehicle driver | a) Vehicle b) Global positioning system | Food containers | Local inventory of goods. |

### Point of View

- I need to ensure that the temperature of the containers are maintained properly so that fresh and healthy foods are served to the children.
- I need to ensure that pH level of the cooked foods are within the permissible range so as to ensure that no spoilt food is served to children.
- I need to monitor the traffic along the routes and if required redirect the delivery vehicles so that the vehicles can reach their destination on time.
- I need to monitor the door opening locations so that to avoid the theft of food.
- I need to monitor the local inventory of the delivery vehicle so that if required I can adjust the resources accordingly for future trips.
- Finally I need to ensure that delivery vehicles reach the schools on time so that children can have their meal at proper time.
Prototype

Touch IoT with SAP Leonardo
Prototype Challenge – Nutrition & Children

DELIVERY TRUCK WITH EMBEDDED SENSORS
Model: TN0D14656789
SN: MH038007653
Contact Person: Atul

Online

- Temperature of the container
- pH level of the food
- Location of the vehicle

Alert
Optimal
On-track

Door opening alert

Inventory
- Biscuit
- Milk
- Canned food
- Cooked food

Map showing delivery route and inventory levels.