The Application of Covid-19 Regulations in Businesses
Spring 2021
Gabriel Quesada, Jose Vasquez, Abdulaziz Alshaban, Deanna Richie
IE 4466 SENIOR DESIGN
Project Background

• Impact on Businesses
• Shutdown/Open
• Adapt
• Essential/Nonessential
• Other Situations
Overall Concept

- Customer Requests Services
- Examine Location
- Determine Gap
- Provide Covid-19 Safety Training
- Supply customers with PPE
- Perform Audits

References: graphical process - Bing images
Concept of Operations

- 2. Global Sourcing: Global Sourcing and Purchasing of products
- 3. Customers: Business Owners
- 4. Analysis: Initial Analysis/Audits
- 5. Tools: Thermometers, Hand sanitizers, gloves, masks and App
- 6. Processes: Customer needs and gap
- 7. Employees: Customers Employees
- 8. Regulations: Training/Audits
System Decomposition and Requirements
### Requirements Validation and Verification Plan

<table>
<thead>
<tr>
<th>Subsystem/Part Name</th>
<th>Requirement ID</th>
<th>Reqmt Title</th>
<th>Requirement</th>
<th>Requirement Validation</th>
<th>Verification Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine gap with current Covid-19 Regulations</td>
<td>2.2.1</td>
<td>Current Safety Measures</td>
<td>Customers shall provide us with current safety measures being used against Covid-19.</td>
<td>X</td>
<td>Third party will request current safety measures being used against Covid-19 from customer.</td>
</tr>
<tr>
<td></td>
<td>2.2.3</td>
<td>Recommendations</td>
<td>Third Party shall make recommendations to improve safety measures and compliance with regulations in business operations.</td>
<td>X</td>
<td>Third party will write missing recommendations on document to be sent via email to trainers.</td>
</tr>
</tbody>
</table>

- **System will be programmed to send out a request for current safety measures being used against Covid-19 via email once the first appointment is scheduled. Appointment will be automatically cancelled if information is not sent within one (1) week of appointment.**

<table>
<thead>
<tr>
<th>Subsystem/Part Name</th>
<th>Requirement ID</th>
<th>Reqmt Title</th>
<th>Requirement</th>
<th>Requirement Validation</th>
<th>Verification Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilization of Supplies</td>
<td>3.3.2</td>
<td>Training for use of supplies</td>
<td>Employee shall have received basic training for the utilization of supplies prior to use.</td>
<td>X</td>
<td>Employee must sign up and attend training for proper use of supplies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Employee file must have a certificate showing that he/she underwent the basic training</td>
</tr>
</tbody>
</table>

A mechanism will be developed in the system where if there is a missing safety regulation that was not addressed by the reader (blank box), the system will not allow it to be submitted and forwarded to the trainers. (example: Is business following OSHA 00CFR XXXX? Yes or No. If no, explain in the box).
Subsystem and Part Design
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Location</th>
<th>BLS Code</th>
<th>Unit Cost</th>
<th>Pcs per Unit</th>
<th>Past Week Stock</th>
<th>Current Qty Stock</th>
<th>Units Received</th>
<th>Date Received</th>
<th>Unit Received Cost</th>
<th>Total Inventory Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>KN95 Facemask</td>
<td></td>
<td></td>
<td>$59.74</td>
<td>60.00</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td>$59.74</td>
<td>$59.74</td>
</tr>
</tbody>
</table>

**Training Sign-In Sheet**

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Employee's ID</th>
<th>Employee's Phone #</th>
<th>Employee's e-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**[Name of Third Party]/Senior Project Co.**

Date: 07/02/2021  
Example Business Name:  
Business Address 12345 Dr.  
El Paso, TX.  

RE: NOTICE OF AUDIT  

AUDIT TYPE: Compliance of employee training and compliance with OSHA, ISO9001, and CDC standards and guidelines in regards to COVID-19  

To whom it may concern  

The [third party name] will be conducting its monthly COVID-19 training audit this upcoming 07/02/2021. The purpose of the audit is to ensure current business and employees are in or are not in compliance with OSHA, ISO9001, and CDC standards and guidelines listed in the attached form titled "COVID-19 audit form" for COVID-19 and other respiratory illnesses.  

The business may have to show intruder to certain restricted areas in the facility in order to observe with detail the practices of employees in their usual work environment. This is done to fully provide you with the necessary guidance to become compliant with the listed regulations, standards and guidelines in the previously mentioned form.  

Additional information can be accessed through the website senior_project.com  

The assigned auditor's contact information is listed below. If you wish to reschedule the audit, you may contact the auditor to agree upon a common date.  

Auditor name:  
Auditor phone number:  
Auditor email:  

THE UNIVERSITY OF TEXAS AT EL PASO
Area in ft\(^2\) = [-6 + 7.5\(\sqrt{n}\)]^2

- 6 feet 
- 1.5 ft per side = 2.25 ft\(^2\)

Total Area for 9 people:
- 598.867 ft\(^2\)
- 92.25 ft\(^2\)
- 272.25 ft\(^2\)
Recomposing Parts into Final System

- Provide a summary of your overall system process that shows how the major parts come together to create your final system design.
- Verbally explain how you inspected, analyzed, demonstrated, or tested your part to ensure you were building the system right (verification).
Validating Overall System

- Requirement validation
  - Systematic manual analysis of requirements

- Prototyping
  - Using the prototype of the system to check the requirements

- Test case
  - Unit test
  - Usability Test
  - Code inspection
  - Customer acceptance
  - System testing
Questions?