BOSTON UNIVERSITY

METROPOLITAN COLLEGE

DEPARTMENT OF ADMINISTRATIVE SCIENCES

AD 605 Operations Management

Stickley Adhesives II Case Study

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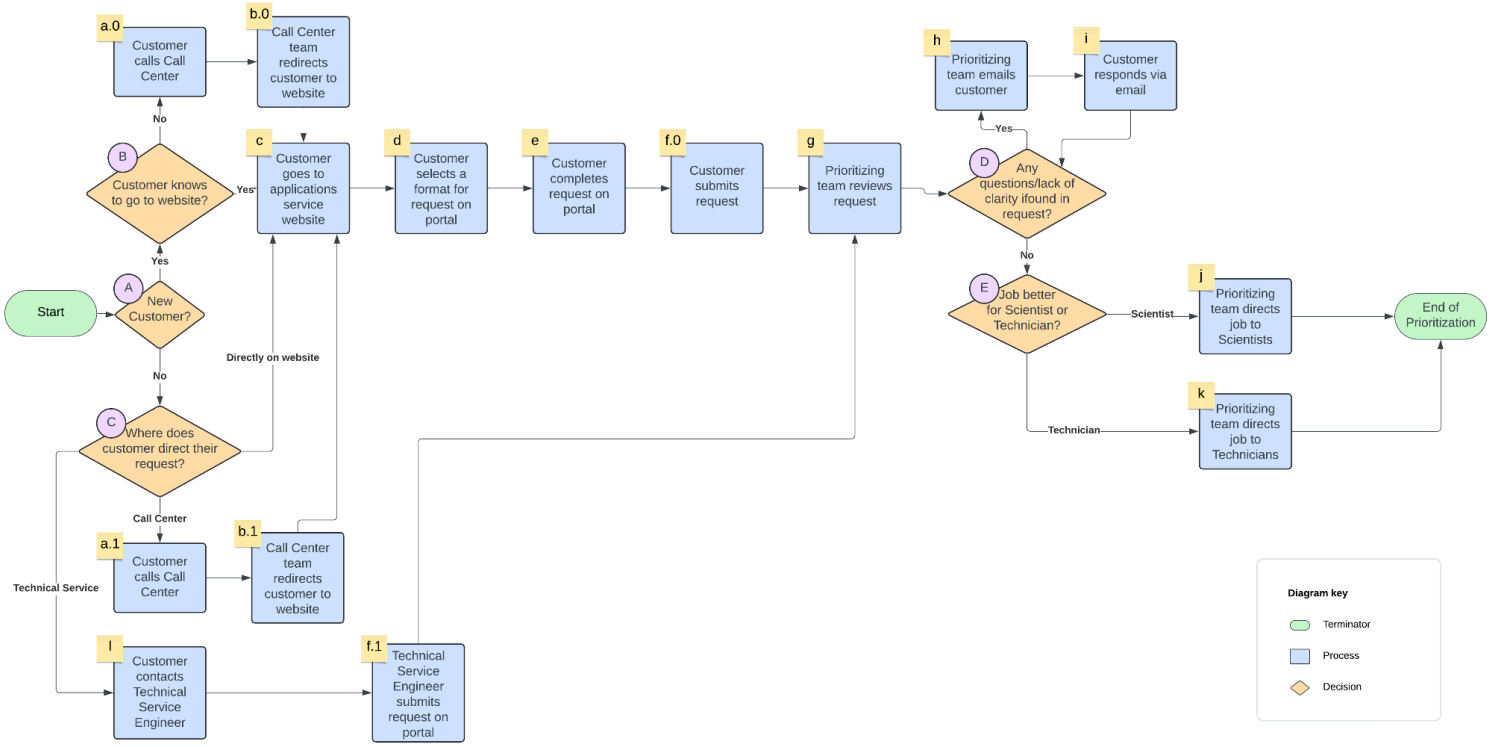
1. **Workflow Diagram:** Create a process map for the "front" of the application service, starting from the customer with a potential issue needing to be resolved and ending when the job is sent to either the technician or scientist in the scoping process. Make use of the information provided by James Anderson and other information included in the case document. Make any assumptions necessary to complete the process map and be sure to include all key activities, routes (flows) through the process, and places where mistakes, delays, and other wasteful activities occur. **Draw the flowchart.**
   a. List the value-added activities for the part of the process shown in the process map. **Word Doc table**.
   b. List the non-value-added (i.e., wasteful) activities for the part of the process shown in the process map. **Word Doc table**.



Activity	Description	Classification	Explanation
a	Customer calls Call Center	Wasteful	While it does not contribute directly to the end product, the customer may call the call center for any reason. It may be necessary to take a customer call related to a request.
b	Call Center team redirects customer to website	Wasteful	Same as 'a'
c	Customer goes to applications service website	Value-added	The customer's request directly contributes to the end product. This cannot happen if the customer cannot communicate to Stickley.
d	Customer selects a format for request on portal	Wasteful	The customer may get lost or select a suboptimal format. All requests should be made using one questionnaire/template.
e	Customer complete request on portal	Value-added	This step is necessary for the customer to communicate their request to Stickley.
f.0	f.0 Customer submits request	Value-added	This step is necessary for the customer to communicate their request to Stickley.
f.1	f.1 Technical Service Engineer submits request	Wasteful	The customer is able to complete this step.
g	Prioritizing team reviews request	Value-added	This step is necessary for the prioritization process, and ensuring that the job is correctly assigned for the next process.
h	Prioritizing teams emails customer	Wasteful	There are ways to include space for ad hoc / bespoke details in a request questionnaire/template. It does not directly contribute to the end product for Prioritization and the customer to engage in side communications outside the portal.
i	Customer responds via email	Wasteful	If Prioritization contacts the customer, then a customer response would be necessary. However, communication outside the portal does not contribute to the end product and risks confusing details of the request.
j	Prioritizing team directs job to Scientists	Value-added	This step is necessary for the prioritization process, and ensuring that the job is correctly assigned for the next process.

k	Prioritizing team directs job to Technicians	Value-added	This step is necessary for the prioritization process, and ensuring that the job is correctly assigned for the next process.
l	Customer contacts Technical Service Engineer	Wasteful	The customer is able to access the website and complete the request without need for an additional team.

2. Make **two recommendations** for improvements using a Lean method to solve issues or challenges stated in the case study document. One recommendation should apply the **5 Ss** or **visual workplace**, and one recommendation should apply either **kanban, poka-yoke, or SMED**. Each recommendation should be very specific, including a sketch **(Diagram),** the standard work procedure, revised process map. **Draw the flowchart.** Your detail should be sufficient for Stickley management to make an informed decision whether or not to accept your recommendation. As mentioned in the case, Stickley requires that no additional IT solutions be necessary to implement any of your recommendations. The following parts of the system should be addressed:
    a. One recommendation to solve a "front" (before scoping) issue or challenge– pay close attention to the statement by James Anderson and other details in the case.

Problem Identified:

One of the major issues before scoping is the inconsistent and incomplete customer requests. Many requests lack critical information, which leads to delays, unnecessary follow-ups, and wasted time, especially for scientists and technicians. This problem has been exacerbated by customers' unfamiliarity with the application service, poor information management, and inconsistent prioritization criteria.

Recommendation: Apply Standard Work (Standardization of Work) and Visual Management Tools

Objective: Standardize how customer requests are submitted and reviewed by reducing errors and incomplete information before the scoping process. This recommendation will help prioritize work more effectively, reduce wasted time, and ensure greater consistency across all global operations.

Steps for Implementation:

1. Create a Standardized Request Form:
    - Action: Develop a standardized digital form that mandates the inclusion of critical information such as the type of substrate, bonding application, and environmental conditions. Customers should be unable to submit incomplete forms. A checklist should be implemented to ensure all necessary fields are filled out before submission.
    - Visual Aid: A simple visual guide should be displayed on the submission portal, showing examples of correctly filled forms, ensuring customers understand what is expected.
2. Categorize Requests Early:
    - Action: Use predefined categories for different types of requests (e.g., troubleshooting, new designs, modified designs). These categories will help the prioritization team in Puerto Rico assign the right resources more efficiently. By categorizing the requests early, the prioritization team can avoid assigning scientists or technicians unnecessarily and streamline the process.
3. Implement Visual Management Tools:
    - Action: Employ visual signals (such as color-coded flags) to denote the urgency and completeness of each request. For instance:
        - Green Flag: All information is complete and ready for scoping.

        - Yellow Flag: Missing minor information, but the request can be processed with minimal follow-up.
        - Red Flag: Significant information is missing, and the request needs to be returned for revision.
4. These visual cues will help the prioritization team quickly identify which requests need immediate attention and which can be set aside for further clarification.
5. Training for Sales and Customer Service Teams:
    - Action: Conduct regular training sessions for Stickley's sales and call center teams to familiarize them with the new standardized form. This will ensure that customers receive proper guidance on filling out requests and reduce the number of incomplete submissions. It will also help the sales teams avoid submitting unqualified leads that might waste resources.

Outcome:

This recommendation aims to reduce the wasted time spent on incomplete requests and improve the overall efficiency of the prioritization and scoping process. By applying standardized work and visual management tools, Stickley will create a more structured front process, which will lead to fewer delays and better utilization of scientist/technician time.

b. One recommendation to solve a "back" (reporting) issue or challenge - pay close attention to the statement by Michelle Cranberry and other details in the case.

Problem Identified:

The final reports produced by the centralized system often contain jargon, idioms, and complex language that confuses customers, particularly those who are not native English speakers. This has resulted in a significant increase in follow-up questions, which slows down the overall process and negatively affects customer satisfaction.

Recommendation: Apply Poka-Yoke (Mistake-Proofing) to the Reporting Process

Objective: To prevent confusing language from appearing in final reports, ensuring that the reports are clear, concise, and easily understandable by customers from different regions. This will reduce the volume of follow-up questions and improve the effectiveness of the reporting process.

Steps for Implementation:

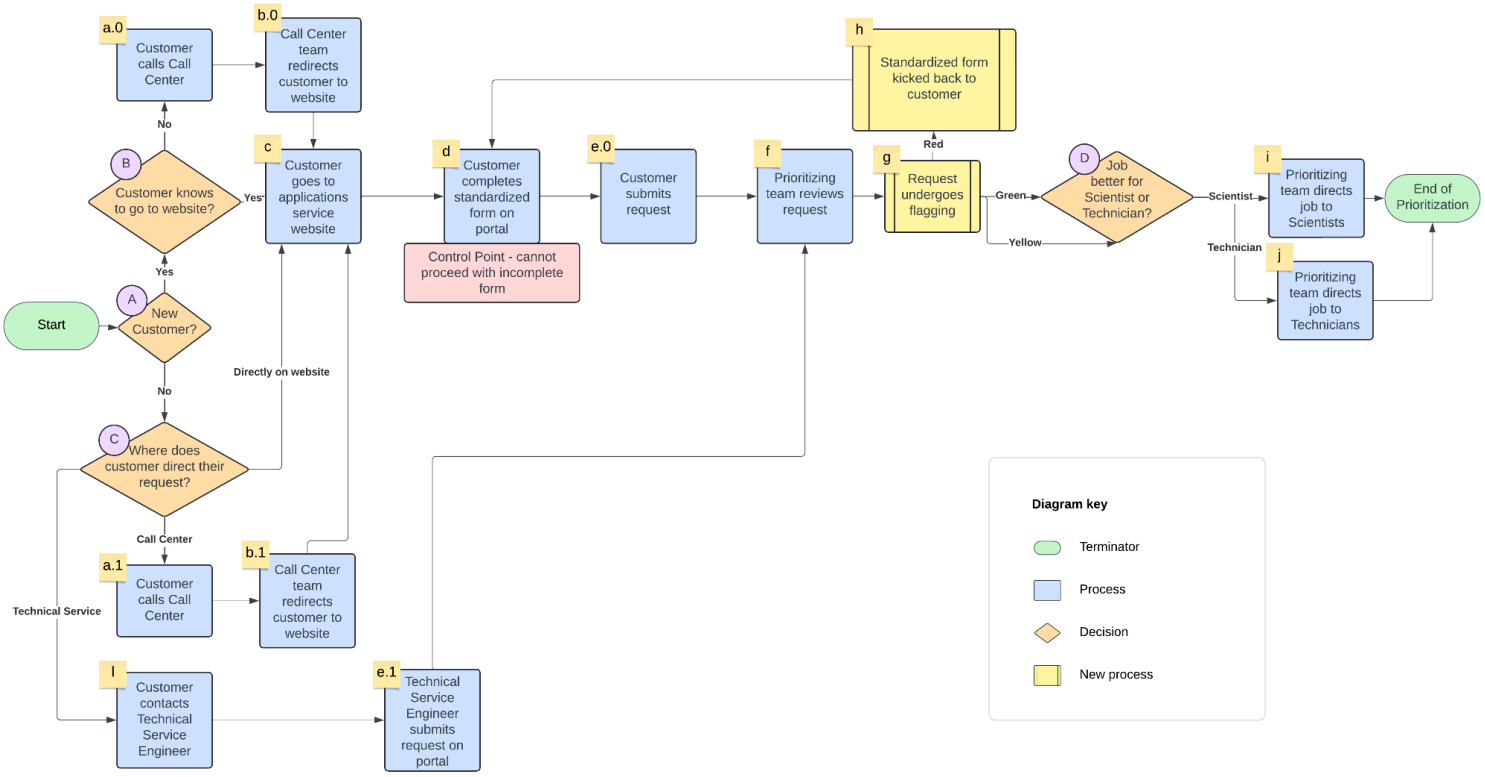
1. Create a Simplified Language Filter:
    - Action: Implement a basic language filter that scans final reports for jargon, idioms, and unnecessarily complex words. This filter should automatically flag any problematic phrases and suggest simpler alternatives. The filter can be updated regularly based on new customer feedback and any recurring issues.

2. Develop a Reporting Style Guide:
    - Action: Create a standardized style guide for report writers, emphasizing the use of clear and simple language. The guide should highlight common problematic phrases and provide recommended alternatives. This guide should be mandatory reading for all report writers, particularly those based in the Philippines who might struggle with understanding certain English idioms or complex terms used by U.S.-based scientists.
3. Automated Checklists:
    - Action: Before any report is finalized, an automated checklist should be completed. This checklist will ensure that the language filter has been run, all flagged terms have been reviewed, and the report adheres to the style guide. This ensures a final quality check before reports are sent to customers.
4. Ongoing Feedback Mechanism:
    - Action: Establish a feedback loop where customers can provide feedback on the clarity of reports. Regularly review this feedback to identify any recurring language issues and update the language filter and style guide accordingly. Additionally, report writers should be trained periodically to address any emerging issues.

Outcome:

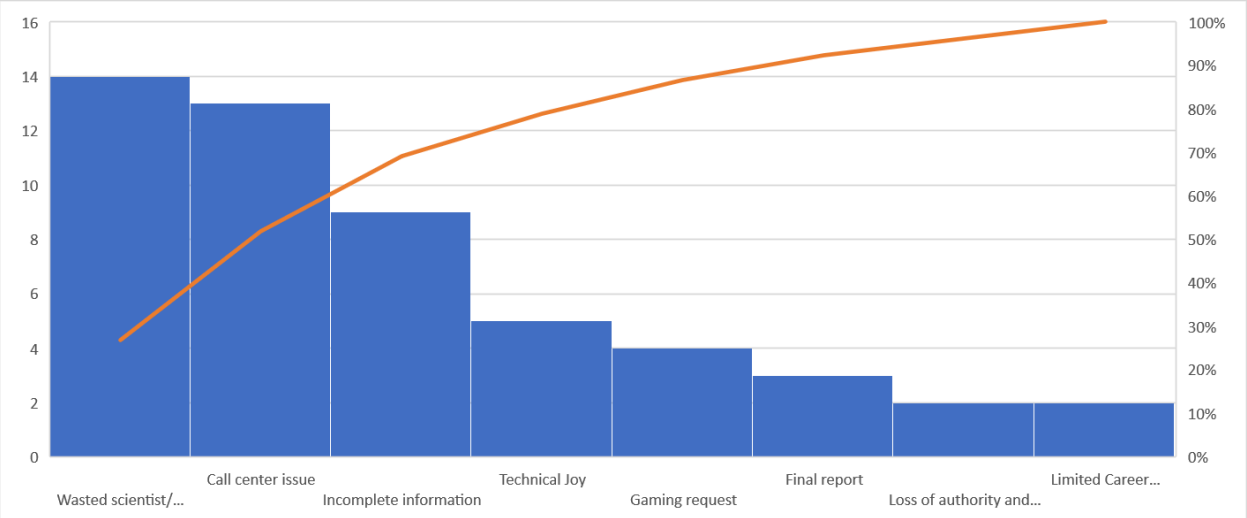
By applying Poka-Yoke to the reporting process, Stickley will ensure that final reports are clear, concise, and easily understandable by all customers, regardless of their native language. This will reduce the volume of follow-up questions, improve customer satisfaction, and make the reporting process more efficient.

New Flow Chart:



3. Make **two recommendations** for the application of the following Tools of Quality: (a) **check sheet** and (b) **Pareto chart**. For the method chosen, be very specific and provide a detailed example. The example should be related directly to Stickley application service. Your detail should be sufficient for Stickley management to make an informed decision whether or not to accept your recommendation.

Proposals lack information		
	Incomplete information	𝍸 𝍸
	Gaming request	𝍸 | | |
	Wasted scientist/ technician time	𝍸 𝍸 𝍸 | | | |
Communication issue		
	Call center issue	𝍸 𝍸 | | |
	Final report	| | |
Business-Related Issues		
	Loss of authority and control	| |
	Technical Joy	𝍸 | | |
	Limited Career Opportunities	| | | |



If recorded correctly, it is obvious that out of all of the reasons mentioned in the survey, wasted scientist/ technician time and call center issues are the main issues with the proposal service system.

In this case, we recommend 2 solutions to improve the proposal service system.

1. Establishing standardized criteria on assigning to scientists vs technicians for prioritizing personnel. This would reduce the delays and minimize rework on misassigned proposals.

2. To enhance our customer service efficiency, we will develop comprehensive phone routing documentation and train call center employees to adhere to a standardized set of yes/no questions. This approach will streamline call forwarding processes and improve overall customer satisfaction. Additionally, we should establish clear guidelines to prevent call center staff from telling customers that “they cannot be helped.” Instead, employees should be trained to escalate such cases to a manager, ensuring that customers feel valued and heard by Stickley. This commitment to support will foster a more positive customer experience and strengthen our brand’s reputation.