**Lean Application: Value Stream Mapping**

**Case Study: The Payup Insurance Company**

You have just been hired by the Payup Insurance Company to improve their claims processing. Customers have complained about the delays in processing, and Payup Inc. has found that the costs of processing claims are too high to be profitable enough. You begin by looking for opportunities to eliminate “Muda” (waste) in the process.

The number of claims per day averages 200, and a day is 7.5 hours.

You have discovered the following steps in the processing of a claim at Payup Inc.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task #** | **Task Name** | **Task Time** | **Dedicated**  **Resources** | **Quality Level** | **Current Inventory / wait time / delays** | **Distance Traveled** |
| 1 | Call Received | 15 min. | 6 |  |  |  |
| 2 | Enter more data after call ends | 7 min. | 4 | 50% | 920 cases |  |
| 3 | Wait for Available Adjustor | 1.5 days |  |  | 5 cases |  |
| 4 | Adjustor calls customer to verify data | 20 min. | 13 | 89% | 3 calls to reach customer over 2 days |  |
| 5 | Customer submits 2 repair estimates | 4 days |  | 100% |  |  |
| 6 | Adjustor travels to site | 50 min. |  | 95% |  | 11 miles |
| 7 | Adjustor inspects damage, enters data | 65 min. |  | 75% |  |  |
| 8 | Check mailed to customer | 4 weeks | 3 | 94% | 400 requests for checks |  |

Adjustors are paid on commission, based on number of completed estimates done per day.

This mini-case may be missing some needed information, may have extraneous information, and you will need to convert some of the units provided to be consistent. Make any assumptions necessary regarding the operational definitions of the data provided above, or about anything else that you think is pertinent but not provided.

1. Draw a **Value Stream Map** of the existing process (using any software package, or just draw it manually and take a picture of it with your phone).  Be sure to include the stair step at the bottom with Lead times and task times at each step. Compute **Takt Time**.

[Here is a video on making a Value Stream Map](https://youtu.be/nOLWp99bCsI).

1. Calculate the **Total Lead (waiting) Time** (the sum of the time waiting between steps) and the **Total Process Time** (the sum of the time within the process steps).  Add them together to get the **Total Throughput Time**.  Divide Total Process Time by Total Throughput Time, and multiply by 100 to get the percent.  The resulting calculation will be the **Process** **Efficiency**.
2. What part of the process needs to be improved most? Make suggestions for how the process might be improved to reduce Total Throughput Time.