

## About the Client

- Client is a aeronautical company.
- Client handles the various operations of after flights landing and before take off operations .
- Client's vision to streamline the operations with elapsed time for easy of accessibility to flight passengers.

## Aims/Objectives

- Time & Motion study for identified areas. (Apron Area, Baggage Breakup Area)

Analysis to determine -

- What can be achieved in perfect condition
- What is realistically achievable on a consistent basis
- What is currently being achieved
- Controllable variables & allowances
- Uncontrollable variables & allowances

## Client's Challenge

- Delay on daily basis of identified areas under operations.
- To streamline the operations for smooth flow of baggage.
- Sustain and maintain the improved conditions for improvised points in the operations.

## PMI's Approach

The study was organized in a 3-stage process:

1. Data Collection – In person observations of all activities under scope.
2. Estimation & Data Analysis – Time & Motion study, Work sampling, Production study.
3. Results and Conclusion - Improved productivity, Improved manpower utilization, identification of NVA work content.

**Involvement of Associates –**

- PMI – 1 Project Manager, 3 Engineers.
- Client – 2 Project Co-ordinators.

## Data Collection-

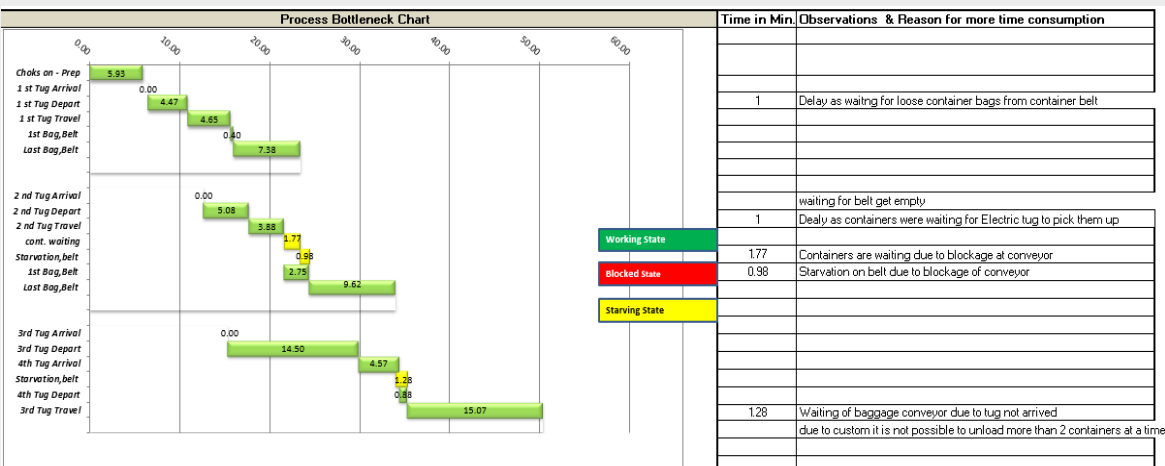
- Visiting client site and performing CFT formation and site round.
- Data collection in person observations of all activities under scope with more than **70 observations** per day considering peak and off peak timings.
- Interaction with client to understand process and timely observations.

| Stand | Flights Covered | Stand | Flights Covered |
|-------|-----------------|-------|-----------------|
| V5    | 4               | V14   | 6               |
| V6    | 5               | V15   | 5               |
| V7    | 5               | V16   | 6               |
| V8    | 3               | V17   | 6               |
| V9    | 6               | Y1    |                 |
| V10   | 6               | Y2    | 1               |
| V11   | 6               | S1    | 1               |
| V12   | 4               | S2    |                 |
| V13   | 6               | S3    | 1               |

## Data Analysis -

- Preparation of excel sheet using work sampling & validation by client.
- Analysis (Work distribution/VA-NVA identification) for manpower calculation, optimum manpower utilization & identifying capacity.
- Dashboard preparation.
- Improvement & suggestions for fatigue reduction & making existing system better.

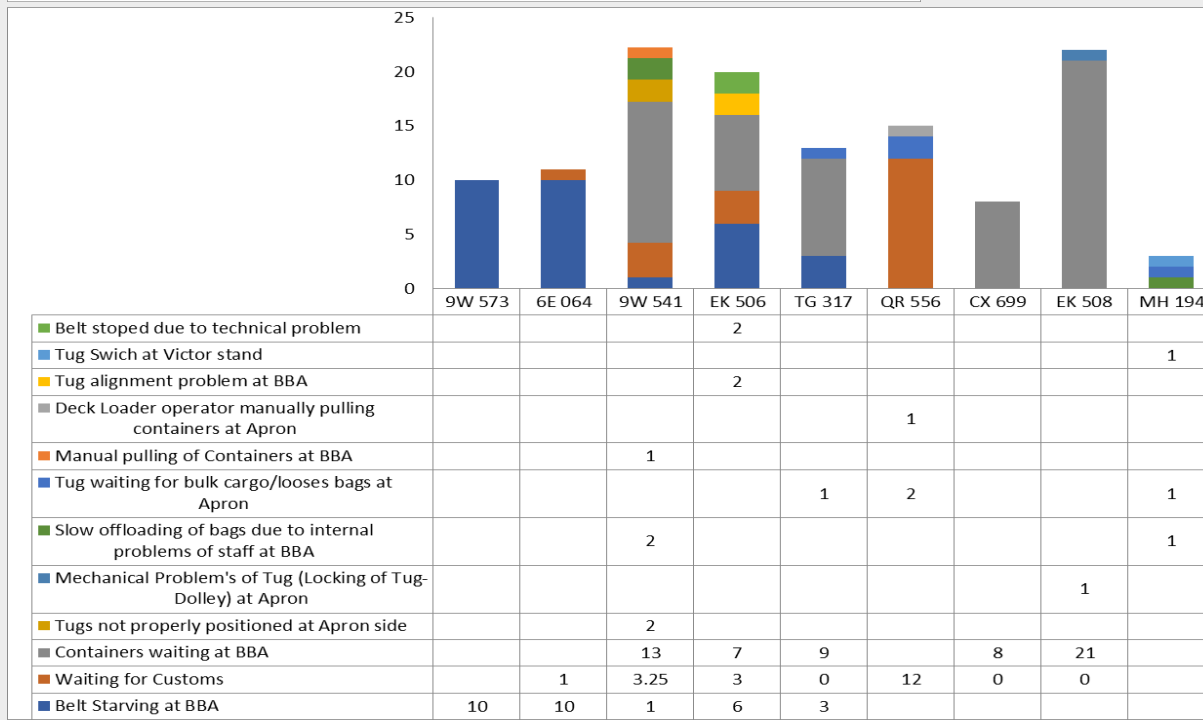
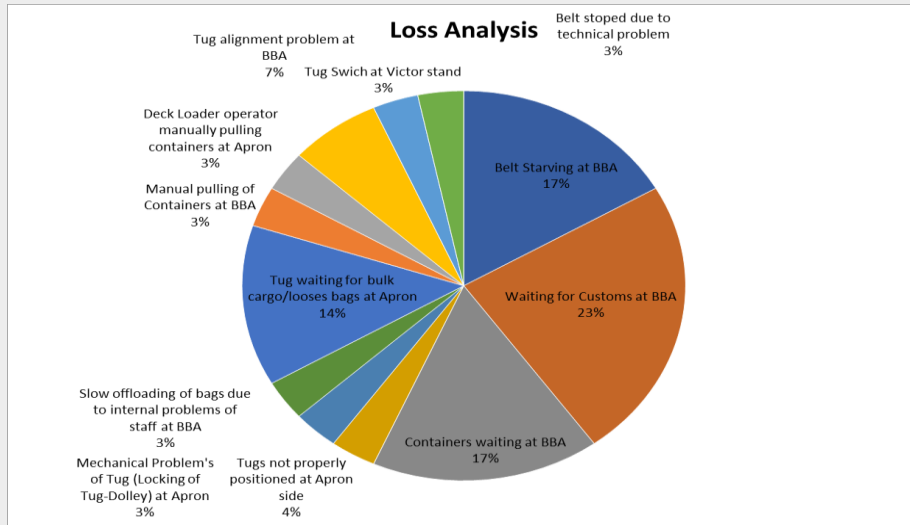
| MH194-16-17 Dec   |         | <a href="#">BACK TO SUMMARY SHEET</a> |                  |       |       |
|---|---------|---------------------------------------|------------------|-------|-------|
| Activity - 1st Tug  | Contain | Time                                  | Resource         | start | End   |
| 1st & 2nd Baggage, belt conveyor Door opening, Crain lifted & attached to front & rear side |         | 5.93                                  | Choks on - Prep  | 0.00  | 5.93  |
| 1st tug arrival, align to rear side   | 3       | 0.00                                  | 1st Tug Arrival  | 6.50  | 0.00  |
| 1st Tug departure to the break up area-Electric tug with 3 container                        | 3       | 4.47                                  | 1st Tug Depart   | 6.50  | 4.47  |
| 1st tug arrival at breakup area   |         | 4.65                                  | 1st Tug Travel   | 10.97 | 4.65  |
| 1st baggage on the belt   |         | 0.40                                  | 1st Bag,Belt     | 16.62 | 0.40  |
| Last baggage of 1st tug on belt   |         | 7.38                                  | Last Bag,Belt    | 16.02 | 7.38  |
| Cummulative time for 1st lot empty  |         |                                       |                  | 23.40 |       |
| <b>Activity - 2nd Tug</b>   |         |                                       |                  |       |       |
| 2nd tug arrival-Diesel containers   | 3       | 0.00                                  | 2 nd Tug Arrival | 12.67 | 0.00  |
| 2nd tug arrival at breakup area   | 3       | 5.08                                  | 2 nd Tug Depart  | 12.67 | 5.08  |
| 2nd tug arrival at breakup area   | 3       | 3.88                                  | 2 nd Tug Travel  | 17.75 | 3.88  |
| Container waiting   |         | 1.77                                  | cont. waiting    | 21.63 | 1.77  |
| Starvation at Belt  |         | 0.98                                  | Starvation,belt  | 23.40 | 0.98  |
| 1st baggage on the belt from 2nd tug  |         | 2.75                                  | 1st Bag,Belt     | 21.63 | 2.75  |
| Last baggage of 2nd tug   |         | 9.62                                  | Last Bag,Belt    | 24.38 | 9.62  |
| Cummulative time for 2nd lot empty  |         |                                       |                  | 34.00 |       |
| <b>Activity - 3rd &amp; 4th Tug</b>   |         |                                       |                  |       |       |
| 3rd tug arrival to rear side containers   | 4       | 0.00                                  | 3rd Tug Arrival  | 15.33 | 0.00  |
| 3rd tug arrival at breakup area   | 4       | 14.50                                 | 3rd Tug Depart   | 15.33 | 14.50 |
| 3rd tug arrival at breakup area   | 4       | 4.57                                  | 4th Tug Arrival  | 29.83 | 4.57  |
| Starvation at Belt  |         | 1.28                                  | Starvation,belt  | 34.00 | 1.28  |
| 1st baggage on the belt from 3rd tug  |         | 0.88                                  | 4th Tug Depart   | 34.40 | 0.88  |
| Last baggage of 3rd tug   |         | 15.07                                 | 3rd Tug Travel   | 35.28 | 15.07 |
| Cummulative time for 3rd lot empty  |         |                                       |                  | 50.35 |       |



# Results & Conclusion

After doing analysis and evaluation following results were obtained –

1. Detailed analysed losses identified for collected observation.
2. Recommendations under constraints for productivity improvement.



## Contact Details

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|-----------------------------|--|
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