

Implementing incentives programs to encourage right sizing

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Abstract — *Not understanding employee capacity and productivity represents a problem in the banking corporation when management wants to make the right decisions at the right time. The root causes of this are the lack of knowledge about main processes and the lack of visibility of productivity through different areas and departments. All processes from three units were measured and analyzed to identify waste, improve them and understand employee productivity and capacity in order to implement incentives. It was found that employees can do even more if the processes are standardized and by providing them visibility through dashboards of their productivity. This creates a healthy competitiveness environment and motivates every employee to perform better. Departments were right sized and optimized and an incentive program was implemented for the three units.*

Key Terms — *Capacity, Productivity, Dashboards, DMAIC*

INTRODUCTION

When a pay for performance system works properly in an operational, productivity-based environment:

- Everybody understands capacity and desirable levels of productivity
- Outstanding performers will receive the greatest rewards, to acknowledge their superior contributions and to motivate them to continue performing at an elevated level
- Average performers will receive substantially smaller rewards, which may encourage them to work harder to achieve larger rewards in the future

- Poor performers will receive no rewards, which is intended to persuade them to improve their performance or leave.

However, in periods when demand is low, and capacity exceeds necessary production levels, incentive pay should not apply to help finance excess capacity until capacity is adjusted or demand grows.

The following project is about understanding capacity and productivity on three different departments that do not have any visibility of it, employees do not have a sharp vision of their metrics and an incentive budget is available once all metrics are well established and understood.

BACKGROUND

The Commercial Credit Operations Division, is part of a banking corporation and is responsible for booking commercial loans, modify all changes related to the loan, such as: interest rates, payments, addresses, collaterals, property and insurance taxes, among others; orders and reviews of appraisals, perfection of the collateral and the custody of the collateral.

The division is moving to a lean thinking environment where all operations must be measured and take them to their optimal level by knowing the optimal number of employees needed for each operation. "Rightsizing is an integrated, internally consistent and externally legitimated configuration of organizational processes, products, and people based on (1) a shared vision of the future of the organization and (2) a clearly articulated mission and strategy supported by management, well understood by members of the organization, and in which members have a sense of ownership" [1]. Understanding employee's

productivity is needed to “right size” all departments and propose an incentive program to retain high performers and motivate low performers to exceed.

Understanding how each employee performs and let them know their numbers, will give them the opportunity to improve. “If you’re a leader, constructively tell your people how they can improve their performances” [2]. Once every department understands their capacity and incentives programs are well established, all employees will know their performance through dashboards which availability will be monthly.

Objectives

The objectives of this project are:

- Maximize capacity on 3 departments of Commercial Credit Operation Division.
- Increase employee productivity by implementing incentives based on performance.

Thesis

Incentives helps to keep employees motivated and performing better. By implementing incentives, managers and supervisors must understand capacity and productivity of their business and this will drive management to make better decisions when demands increase or decrease.

METHODOLOGY

DMAIC (Define, Measure, Analyze, Improve, Control) methodology was used because is the most complete method to understand processes from beginning to end and improve them while analyzing them.

Define Phase

Three units were selected to complete the project:

- Ordering Department – in charge of the ordering and selection of appraisers who will appraise commercial properties, mortgages, or equipment that will pass to be a collateral on a commercial loan in the bank.

- Review Department – in charge of the review and quality of all received appraisals.
- Collateral Perfection and Review – in charge of review that every document needed in the collateral file is available, completed and correct.

This units were selected because all data that defines their processes are available through existing workflows created on Access and CASPIO (online database application). Only two activities are not part of the workflow and were measured by doing activity trackers.

Measure Phase

Data collected from three departments were from January 2017 to December 2017. To measure productivity, the following formulas were used:

- *Completed Cases – Assigned Cases*
- *Completed Date – Assigned Date*
- *1 worked day = 6.8 hours (15% of allowance)*

By having these three factors, it was established how many cases or orders an employee could complete in one worked day.

As seen on Table 1, Employee 1 makes on average 122 orders, assuming 20 worked days, equals to 6 orders per day. On Table 2 and Table 3, same data was collected to the other two departments.

**Table 1
Orders per month per Employee: Ordering Department**

| Employees | Average orders per month | Average orders per day (threshold: at least 5 orders per day) |
|------------|--------------------------|---|
| Employee 1 | 122 | 6 |
| Employee 2 | 104 | 5 |
| Employee 3 | 104 | 5 |
| Employee 4 | 124 | 6 |

Table 2
Reviews per month per Employee: Review Department

| Employees | Average reviews per month | Average reviews per day (threshold: at least 4 reviews per day) |
|-------------|---------------------------|---|
| Employee 1 | 74 | 4 |
| Employee 2 | 55 | 3 |
| Employee 3 | 63 | 3 |
| Employee 4 | 71 | 4 |
| Employee 5 | 42 | 2 |
| Employee 6 | 74 | 4 |
| Employee 7 | 81 | 5 |
| Employee 8 | 51 | 3 |
| Employee 9 | 65 | 3 |
| Employee 10 | 46 | 2 |
| Employee 11 | 56 | 3 |

Table 3
Cases per month per Employee: Collateral Perfection Review Department

| Employees | Average reviews per month | Average reviews per day (threshold: at least 4 reviews per day) |
|------------|---------------------------|---|
| Employee 1 | 61 | 3 |
| Employee 2 | 90 | 5 |
| Employee 3 | 57 | 3 |
| Employee 4 | 70 | 4 |
| Employee 5 | 71 | 4 |

Analyze Phase

Data was collected and tabulated to understand it. On the measure phase it was seen that on the Ordering department, orders were not different one from another, complexity was not an issue. But on Review and Collateral Perfection Review departments, each case has a specific complexity and it all depends on which type of case arrived, how many cases the employee could work. For example: if a review of a commercial property like a hotel arrived it was classified with medium complexity on the workflow and the average time of completion for that case was 4 hours. But if a review of a residential property arrived, it was classified as low complexity on the workflow and the average time of completion was 1 hour. Also, there were review cases where the employee determines the appraisal has an error, they call it “Finding” and when a case have a “Finding”, depending of the complexity of the case the more time it takes to complete it, because a correction

must be made from the appraiser and the reviewer must review it again. Because of this, reviews were classified as shown on Table 4 and Collateral Perfection Review cases were classified as shown on Table 5. Complexity equals to the classification given to the case and points are the hours that the case will take from the employee to complete it.

Table 4
Review Cases Classification

| Complexity | Points |
|-------------------------|--------|
| Low | 1 |
| Low with Findings | 3 |
| Medium | 4 |
| Medium with Findings | 5 |
| High | 8 |
| High with Findings | 10 |
| Very High | 10 |
| Very High with Findings | 13 |

Table 5
Collateral Perfection Review Cases Classification

| Complexity | Points |
|------------|--------|
| Low | 1 |
| Medium | 2 |
| High | 3 |
| Very High | 4 |

On Collateral Perfection Review an extended analysis was made, because each complexity has a purpose and depending of that purpose the lead time on completed cases decrease or increase. For example: a real estate collateral arrived and the complexity for that one is high (3 points), if the purpose equals to new (a new loan), the employee lead time was 3 hours and that one complies with the established amount of points. But if the purpose was an amendment (an existing loan with some change), the employee lead time was 1.5 hours. Because of this variability, points were assigned depending of the complexity and the purpose.

To establish the thresholds or control limits where the employee productivity is acceptable, a histogram was made to each department like the one on Figure 1. These thresholds will also allow to know at what point an employee starts gaining an incentive. Each histogram helped to decide how many cases an employee must work, because they all show where the 50% of the data relays and the

frequency of observations through historic data helped to prove the normal capacity of each department.

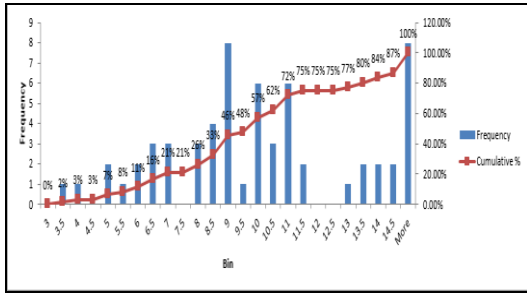


Figure 1
Points per month threshold

After analyzing all histograms, Table 6 shows the results from the three departments. All results contain the average from all 2017 data. There were 7,223 orders from Ordering and Review Department and 5,076 cases from Collateral Perfection Review.

Table 6
Departments Productivity and Incentive Goals

| Department | Minimum Cases per Day | Maximum Cases per Day |
|------------------------------|-----------------------|-----------------------|
| Ordering | 8 | 10 |
| Review | 4 | 6 |
| Collateral Perfection Review | 8 | 12 |

The actual capacity was calculated to understand where all departments stand. Capacity was calculated as follows on each department:

- Ordering Department – Total Workdays (Sum of all workdays from each employee) / Total orders
- Review and Collateral Perfection Review Departments – Total Workdays (Sum of all workdays from each employee) * 8 / Average Complexity

As seen on Figure 2, capacity from Ordering Department is shown.

If we took for example this graph we have that:

- Ordering Capacity – minimum orders the department could work monthly
- Ordering Demand – orders that are arriving to the department

- Ordering Capacity Stressed – maximum orders the department could work monthly on a stress level

On Figure 2, the gray line is the ordering demand, and to say the department is working at the right capacity, that line should be inside the control limits (Ordering Capacity and Ordering Capacity Stressed). From January to March, it is seen that they are working on a right level, on April they went below the minimum amount of orders. This could be because the department received a lower amount of orders and if this is constantly seen, the supervisor must rethink how many employees are needed. Staying under this line, means that they have more employees and they are over capacity. From July to September, and the last two months of the year, it is seen the contrary, they are above the stress level. And staying above this line, means that they have less employees than the needed ones and they are under capacity.



Figure 2
Ordering Capacity per month

This capacity graphs will be very helpful to managers and supervisors to always know when they need more or less employees to always be right-sized. But also, can help to acquire more demand from other departments and that helps the business growth.

Employees will start gaining incentive if they achieve the minimum total cases required per month and the amount of incentive will increase at a proportional rate if they achieve the maximum total cases required.

REFERENCES

- [1] Hitt, Michael A., et al. (1994) "Rightsizing: Building and Maintaining Strategic Leadership and Long-Term Competitiveness." *Organizational Dynamics*, vol. 23, no. 2, pp. 18-32.
- [2] Patkin, T. (2012). Tap into the Power of Thanks: Six Effective (and Affordable) Ways to Improve Your Organization's Morale, Motivation, and the Bottom Line. *Hudson Valley Business Journal*, 1(14), 4.