

# DATA INTEGRITY AT INSTRUMENT MANUFACTURER

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A medium size instrument manufacturer found many errors and missing information within their customer database. These gaps in information caused the sales force to disregard the data when making decisions on sales strategy. The gaps also caused delays in processing orders through-out the organization, from Sales through Shipping and Logistics. The problem had occurred for many years and was thought to be too overwhelming to correct, so it continued to get bigger. Prior to beginning this project, the entry personnel were encouraged to do “whatever was needed” to process the order as quickly as possible. What we’ve found since implementing the project, this lack of standardization has had the opposite effect – the orders take longer to process.

Problem – Incomplete or wrong information within the customer data leads to communication of confidential information to ex-employees, errors in the sales strategy due to unspecified sales by market segment, and lost time in order delivery.

- Outdated representative information allows confidential information to be sent to ex-employees;
- Cannot accurately predict sales because customer industries have not been identified seen as \$12 million in unknown sales;
- Orders cannot be shipped within 5 day lead time due to errors in customer shipping address.

Countermeasures – Following the A3 and PDCA format, the team evaluated the current state of each phase, using histograms, pie charts, and value stream maps. This led to the use of cause maps and fishbone diagrams to determine the root cause of each issue. During the implementation portion we cleaned the data, identified ownership for the information, and documented standard work, including leader standard work to insure accountability.

## Goals:

- To improve the representative contact date by reducing the number of representative entries from >1000 to 68, which corresponds to the number of firms in contract.
- To improve value of unknown sales by industry designation such that there will be less than 30 unknown NAICS codes daily, resulting in less than \$10,000 in unclaimed sales by day.
- To reduce the lead time for order entry and shipment by eliminating the customers with wrong address information and duplication of information.
- Establish standard work for all responsibilities, including leader standard work for the managers to check reports and hold employees accountable.

Results – Phase one and two of the project are completed, and the results are shown below, phase three is still in process, so results are not available.

- All representative information is merged from the more than 1000 records into 68 records,

- The average number of unknown NAICS codes is from >1600 entries to less than 30, averaging 17 entries, for a value <\$2000.
  - o This has enabled us to analyze our sales strategy against the market values.
    - We found we were heavily focused in some smaller markets and not focused in some bigger markets
    - We've reorganized our sales staff to align more closely with the industry markets; to build our market share in those areas where we are weak.
- Ownership has been identified and standard work established
- Used the Value Stream map to identify wastes:
  - o Purchase Order is received with missing information, so our Inside Sales personnel must delay the processing of the order.
    - Representatives now have the ability to configure and verify the order before submission to us.
  - o Determined time to enter an order, typically <13 minutes, which led to setting the goal and meeting it to reduce transfer time to Production from 2.5 days to less than 1 day.
  - o Still need to create a tool, such as a template, which would identify fields requiring completion.
- A3 format for problem solving is now being used across the organization to create a problem solving methodology and to document the problem solving process.
  - o We found we need to emphasize the analysis of the current state – truly understand the impact to the organization.
  - o Using the form as designed by Toyota takes some training and discipline, we're continuing to practice.
- Using Cause Maps, Fishbone diagrams, and 5 Whys led to identification of true root cause, instead of a superficial solution; all were easy to teach and follow.

Overall the process for entering data is now standardized and simplified. It's process and impact on the business is better understood. Our challenge will be to sustain the improvements; we've implemented leader standard work to prevent any slippage.

#### Return on Investment –

The instrument manufacturer was able to account for \$12 million annually in unknown market sales resulting in a shift in sales strategy and organizational structure to improve market share in 2013. Additionally, entry time was reduced from over 2 days to less than 1 day; this ability to get to market faster should drive higher sales. We anticipate improvements in data will also reduce errors in shipping and invoicing.