



# Using Quality Mechanisms to Solve a Practical Service Business Problem of Reducing Delinquent Payments

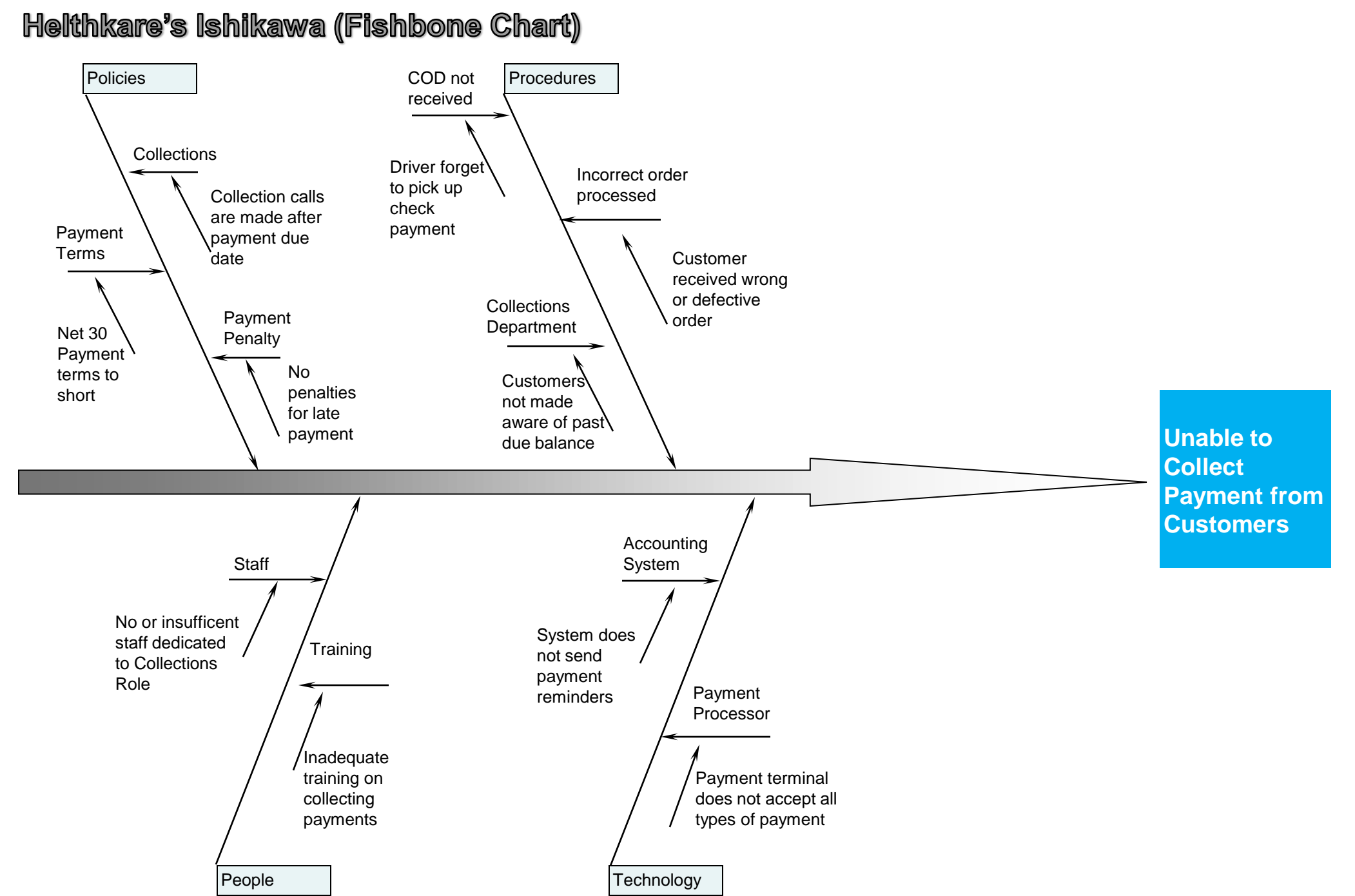
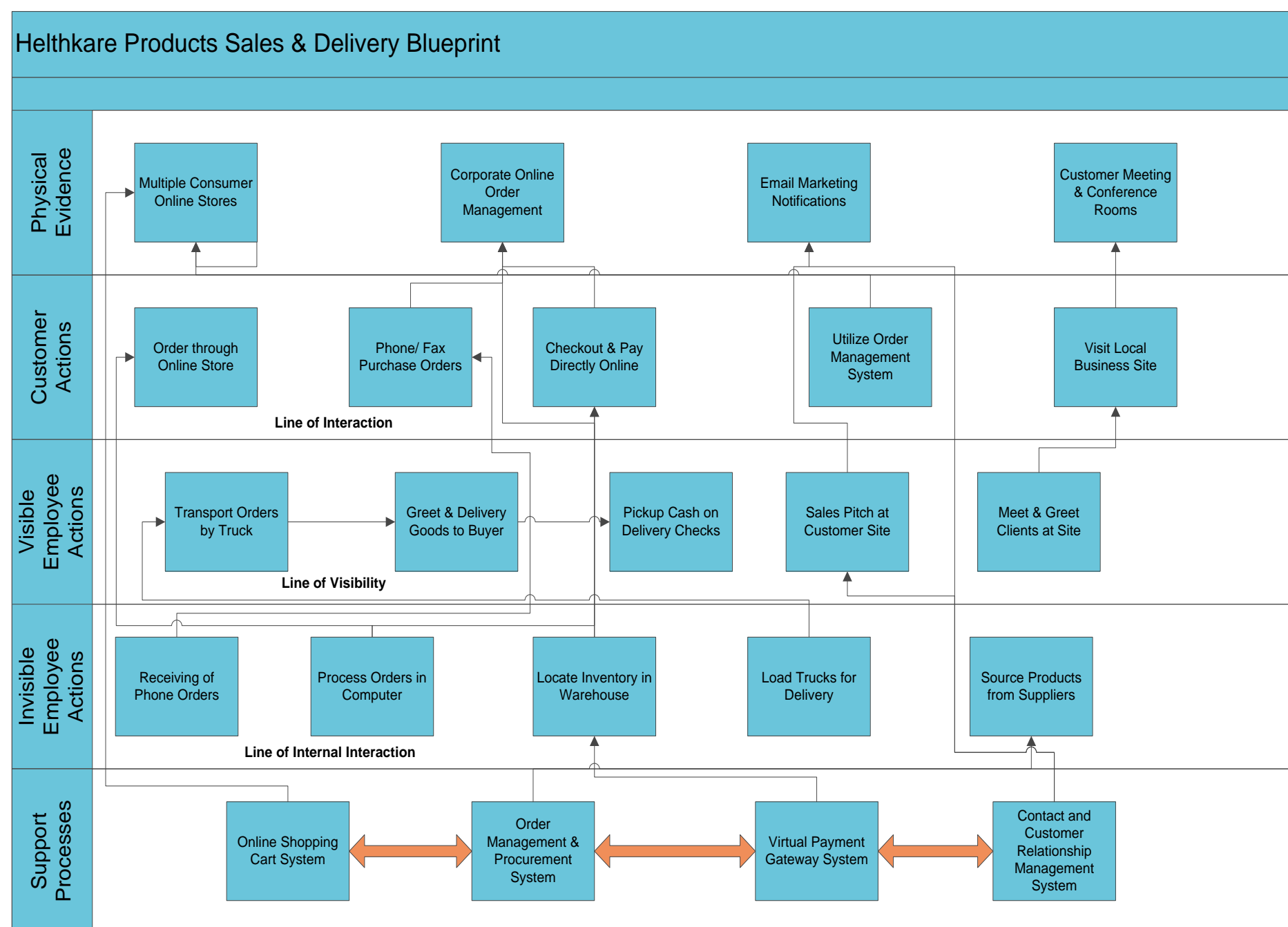
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## Abstract

This study focuses on the problem of small service business debt collection from delinquent customer accounts and the ways in which quality control methods can be applied to analyzing the occurrence of past due payments. Small businesses like Helthkare Products, LLC are particularly vulnerable to the risk of lower finances because of a limited source of revenue. Their customer bases tend to be smaller and therefore cannot afford to have too much outstanding debt from its customers because it puts them in a position of having a reduced working capital. The use of quality control can help small businesses understand their customers as well as their own internal business processes to make them more efficient so as to avoid and reduce delinquent payments.

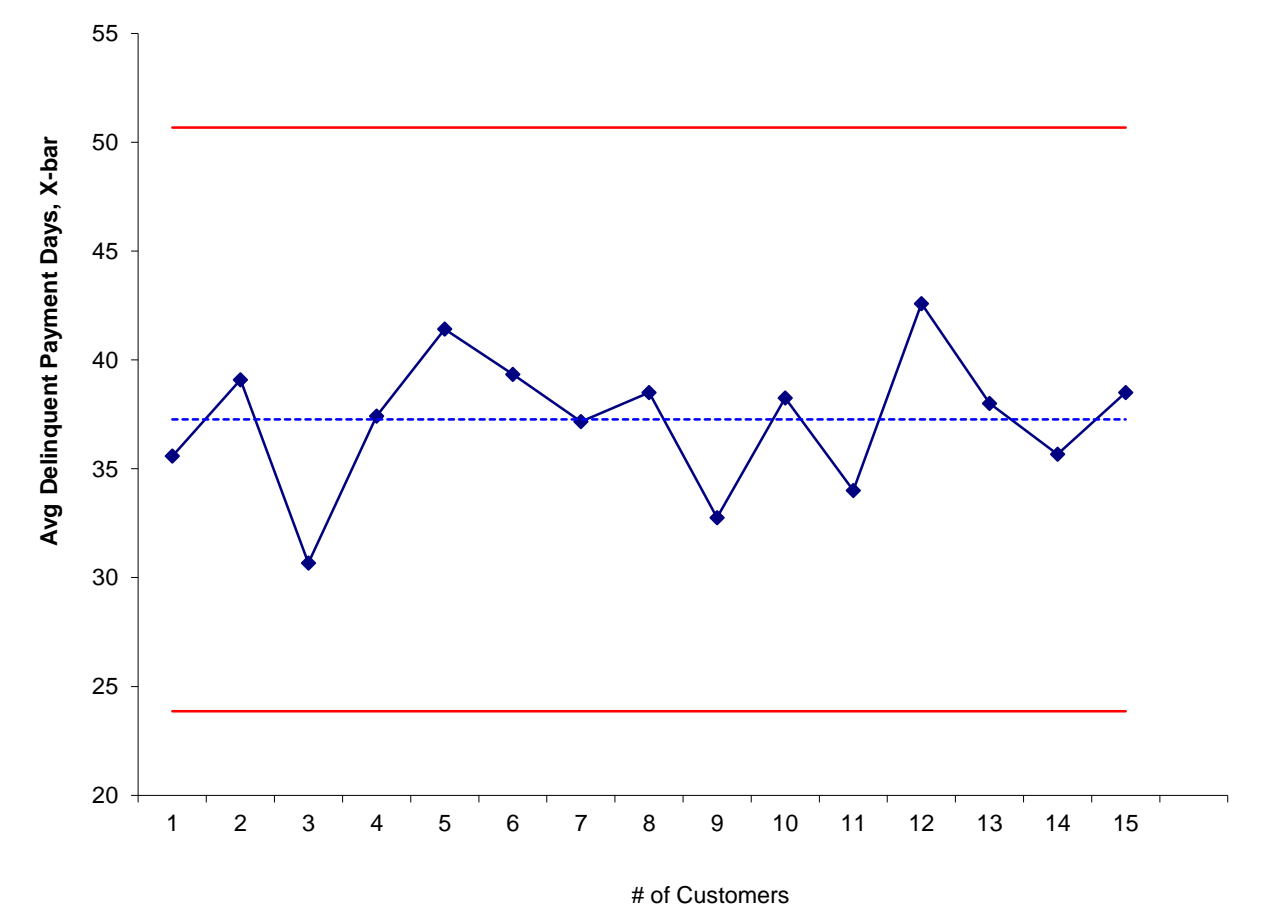
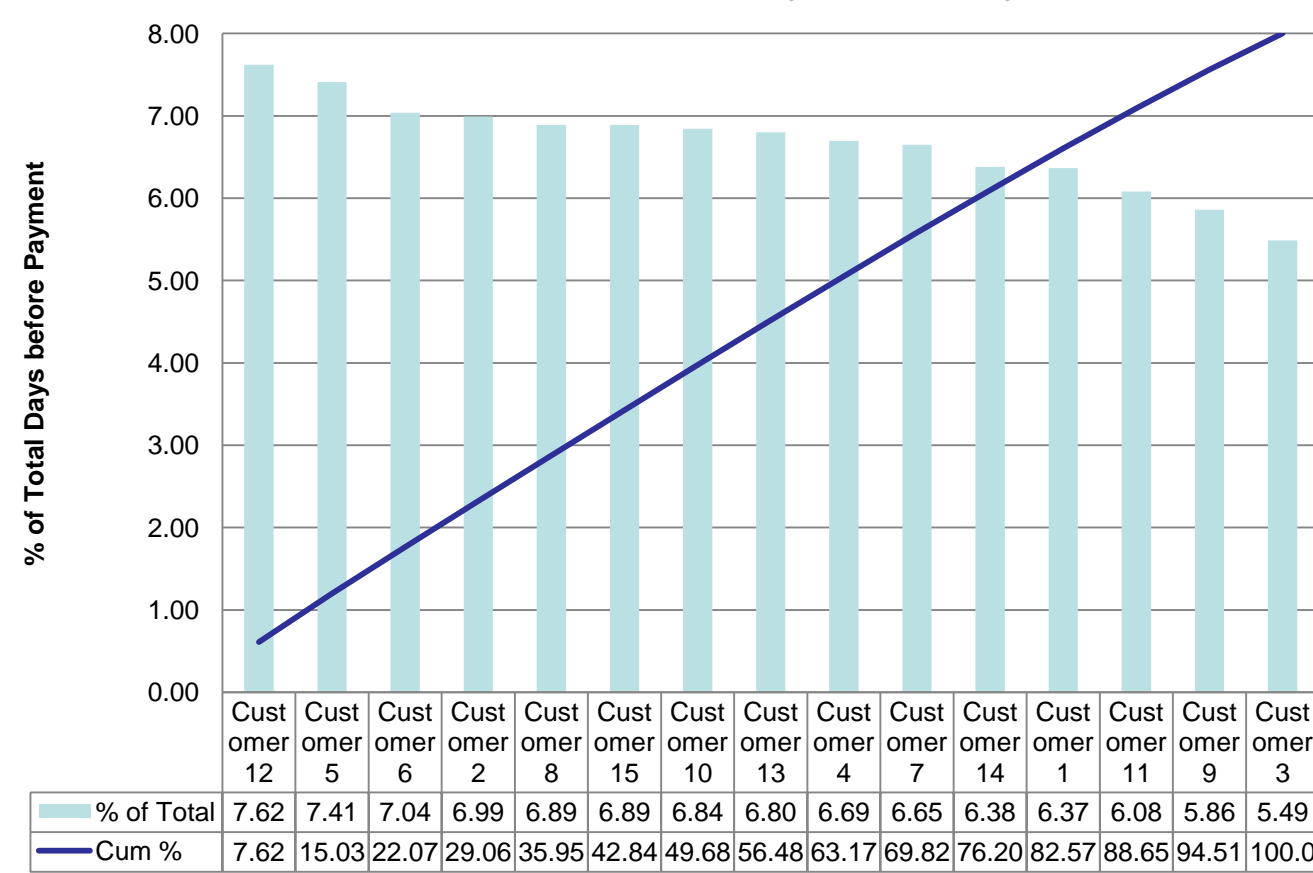


A service blueprint was done to map out the business services which aided in developing an Ishikawa diagram to gain further analysis into the cause and effect relationship of the problem being investigated.

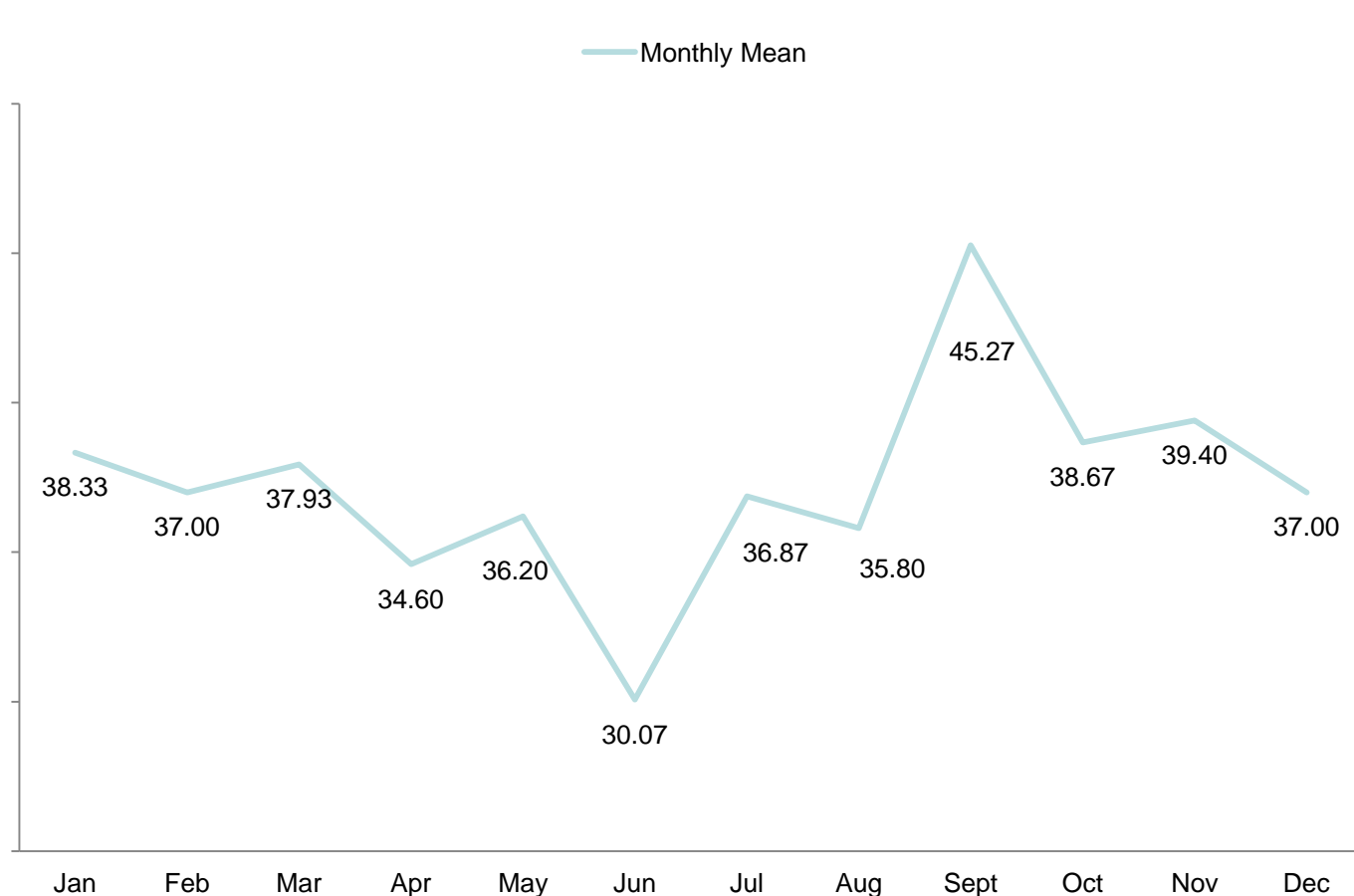
2009 Average Customer Payment Days Run Chart



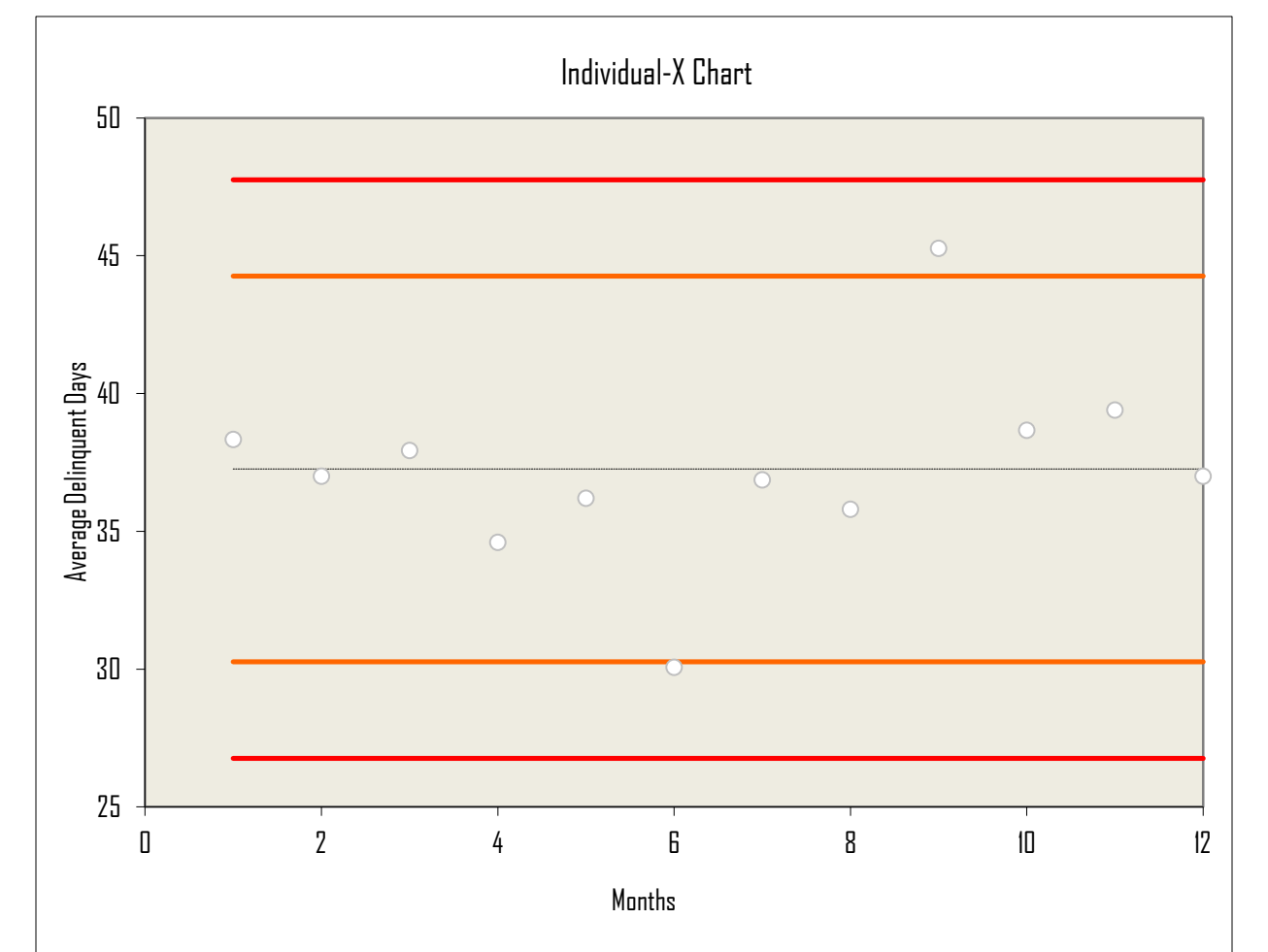
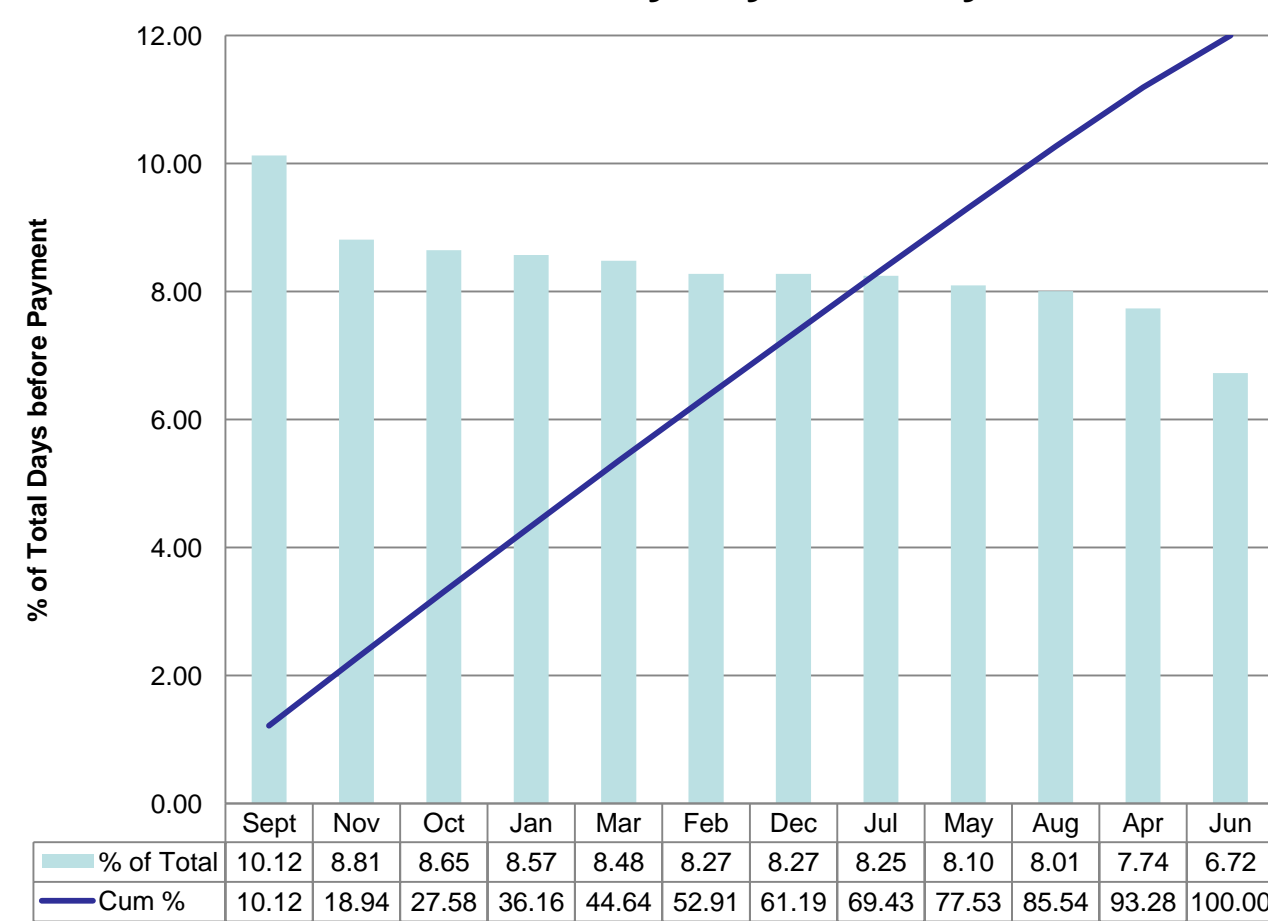
2009 Customer Payment Days Pareto Chart



2009 Average Monthly Payment Days Run Chart



2009 Monthly Payment Days Pareto Chart



A customer analysis and a monthly analysis was done using the 3 quality control methods seen above, a run chart, a pareto chart, and a control chart. Some customer averages were up to 28% higher than that of the customer with the lowest average. September experienced a spike in delinquent payments and was 30.5% higher than June which had the lowest.

## Results and Conclusions

Use of the chosen quality models was helpful in identifying a reasonable measure to address the issue of collecting bad debts. Data collection and quality analysis helped us to identify controllable periods in terms of months and specific customers that could be targeted immediately to begin rectifying the problem of not being able to collect payments within an agreed time. The business was able to validate a direct relationship between delinquent customers and months in the years where supply had improved to meet an increase in customer demand. These customers had the longest days before payment was received and also followed a monthly trend in their purchases.