

Time Optimization for Service Provider Operational Performance



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Abstract

A DMAIC methodology was carried out to identify and improve two processes within a Service Providing Company. These processes were the Quote redaction process and the Field Work Time Management. A bottle neck was identified on the Quote process and means were implemented to delegate work and mitigate the bottle neck. Check lists were developed to help reduce the error while evaluating, buying and preparing for works. This translates into less missed time in the completion of the work and therefore more revenue for the company.

Objectives

- Improve Quote Delivery Time
- Reduce Field Work Missed Time

Introduction

It is no secret that in any country there is great competition for service companies due to the high demand for specific services which require complex and/or technical skills. These types of companies include plumbing, electrical, masonry and even data providers among many others. There are many processes within a Service Providing Company that are completely transparent to customers and even field technical personnel. These processes can include, quote preparation, contract emission, client acquisition, invoicing, project planning and management, and even material acquisition. Careful execution of each process is a key aspect that differentiates the company as profitable from one that is not. The core of a service providing company are its employees and how these behave and manage tasks at the work place. These employees carry the company name and reputation with their acts and performance. Time management and fast interaction with customers provides a better chance of landing crucial jobs and gaining new customers. Both, fast delivery and Field Work time management are crucial aspects of day to day activities that represent two of the most profitable aspects for the company.



Service Industry workers



Methodology

Define Identify the customer and the problem

- Project Charter
- SIPOC Diagram

Measure Elaborate data collection plans and collect data

- Operational Definition
- Pareto Charts

Analyze Analyze the collected data

- 5 Why's
- Cause and Effect

Improve Identify opportunities for improvement and execute

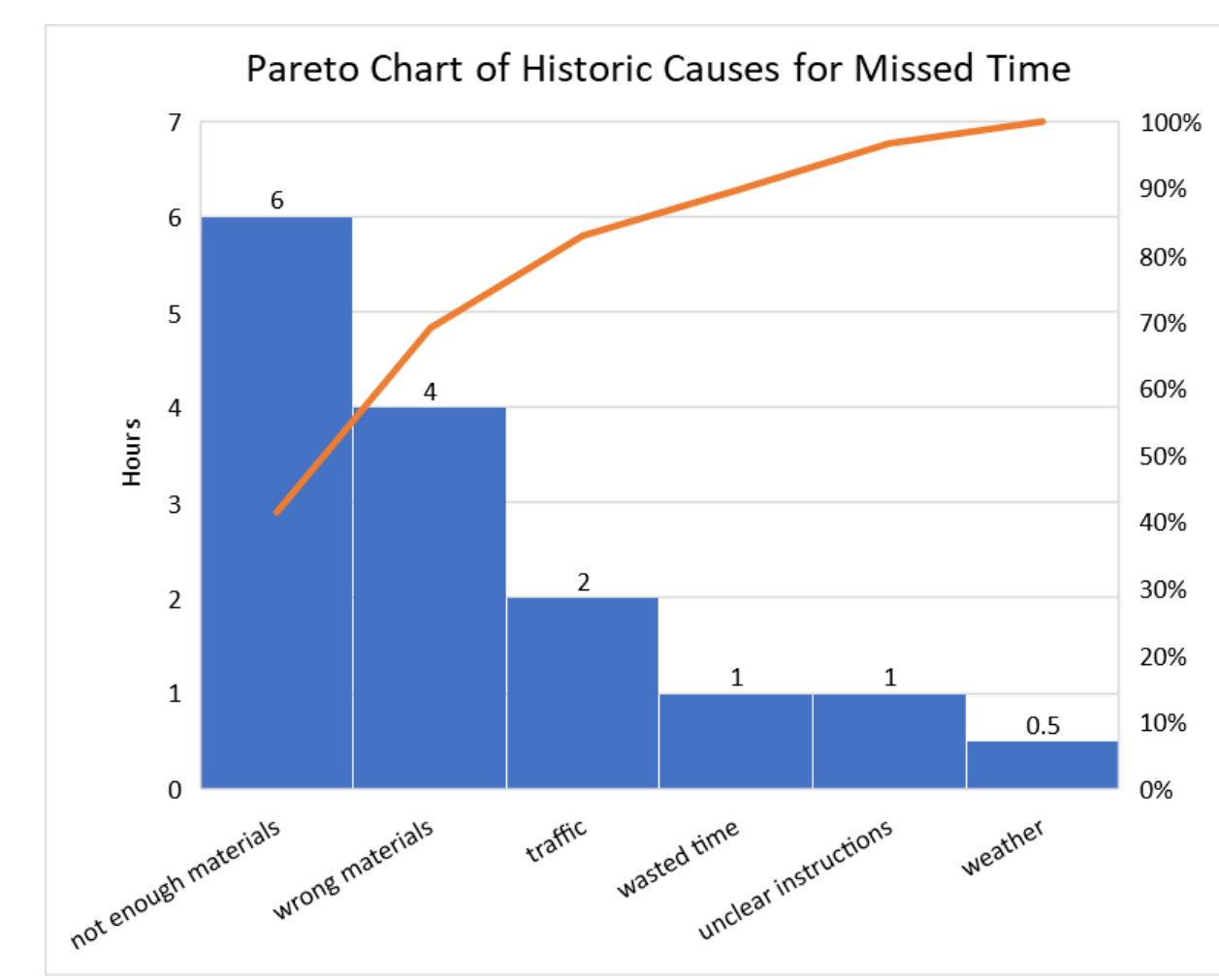
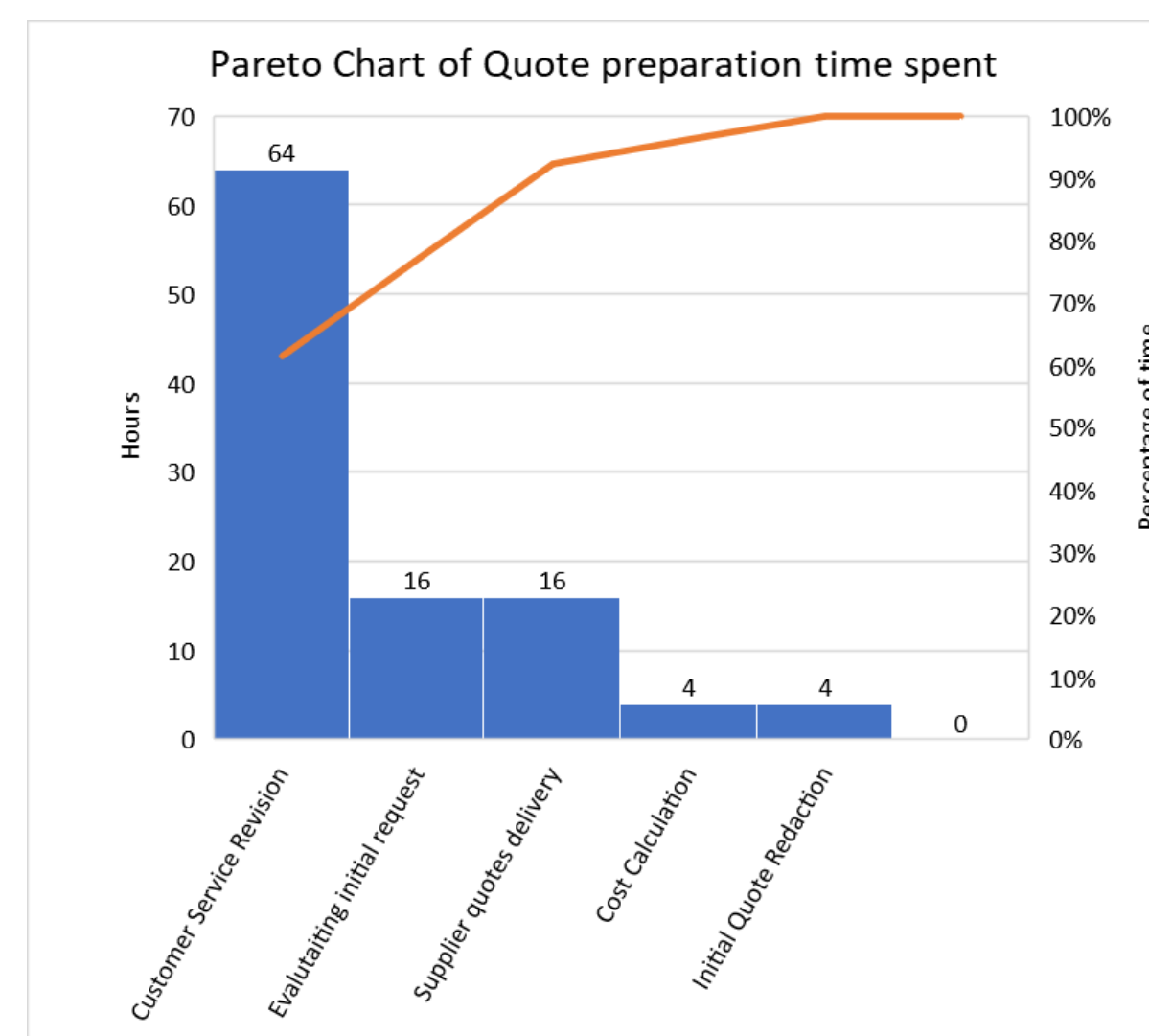
- Failure Mode Effect Analysis (FMEA)

Control Maintain project results overtime

- Checklists
- Periodic evaluations
- Re-training

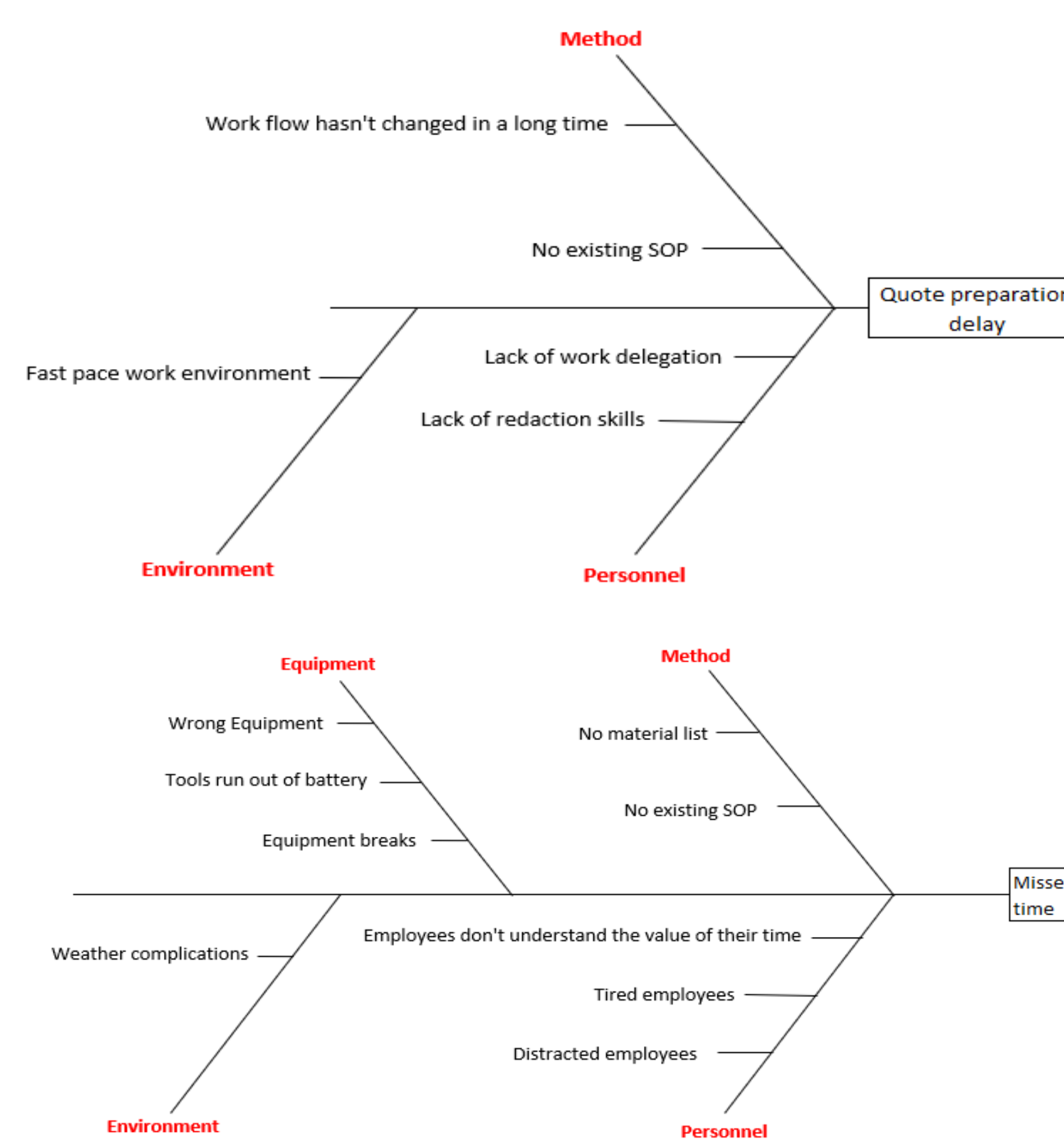
Results

Supplier	Inputs	Process	Outputs	Customers
Materials Supplier	Material and Equipment quotes from suppliers	Quote redaction process	Service Quote	Clients
Equipment supplier	Client request for job		Field Work tasks	Field Workers
		-->-->-->-->Process-->-->-->		
Staff receives suppliers quotes	Calculates Revenue percentage and labor cost	Delivers cost information to manager	Manager Redacts Quote detailing services to be provided and costs associated	Customer Service revises quote and sends to Customer



Question	Response
1 Why is Customer Service taking longer than other stages?	Employee focused on too many tasks
2 Why is the employee focused on so many tasks?	Spends too much time on details in each task
3 Why does the employee spend so many time on details of each task?	Company had less employees on other departments and all the work rested on Customer Service revision
4 If company has more employees, why does the work still rest on Customer Service?	Resistance to change and delegation of work
5 Why is there resistance to change and delegation of work?	Lack of trust toward new employees capabilities

Question	Response
1 Why do employees don't have all the required materials?	Employees forget materials when loading the trucks for the job
2 Why do employees forget materials when preparing?	short preparation time interval
3 Why is there a short preparation time interval?	Employees tend to get distracted if timeframe is too wide
4 Why do employees get distracted?	No detailed lists lead to employee not being directed to a specific location
5 Why is there no detailed list?	The employees discover the description of the job task verbally



Item of Process Step	Potential Failure Mode	Potential Effect (s) of Failure	Severity	Potential Cause (s)	Occurrence	Current Controls	Detection	RPN	Recommended Action	Responsibility	"After"-> Action Taken	Severity	Occurrence	Detection	RPN	
Prepare Material list	Not enough materials	No effective evaluation	7	Manager revision	5	21	Establish written checklist	Operation Manager	More realistic material lists	3	10	22				
Buy materials	Wrong materials	Did not have written material list	5	Manager revision	8	22	Only written material list would be approved	Operation Manager	No verbal purchases	1	10	20				
Prepare for Job	Forgotten materials or equipment	Missed time	9	Lack of training	7	Manager revision	7	23	Establish written checklist	Operation Manager	Less forgotten materials	2	10	21		
				No written material list	8	none	7	24	Hand employees written job description and material list	Operation Manager	Employees prepare better for the job to execute	4	10	23		
Execute job	Takes more time than planned	Backtracking do to no available items	7	none	7	23	Responsibility employee who executed checklist for forgotten items	Operation Manager	Employee take more seriously the job execution	3	10	22				
Total Risk Prioritization number											113	Total Risk Prioritization number				108

Item of Process Step	Potential Failure Mode	Potential Effect (s) of Failure	Severity	Potential Cause (s)	Occurrence	Current Controls	Detection	RPN	Recommended Action	Responsibility	"After"-> Action Taken	Severity	Occurrence	Detection	RPN	
Supplier Quote	Late quote	external causes	3	phone or email follow up	10	21	none	none	none	3	10	21				
Cost calculation	Wrong calculations	lack of training	2	Manager revision	10	20	none	none	none	2	10	20				
				Manager revision	10	21	3	10	21							
Quote redaction	long redaction time	Quote delay	8	high work load	7	none	10	25	train employees on quote redaction skills	Operation Manager	Quote arrives more robust and less revision is needed	3	10	21		
				high work load	9	none	10	27	delegate work on to trained employees	Customer Service Manager	Work does not accumulate and quotes are dispatched faster	3	10	21		
Total Risk Prioritization number											114	Total Risk Prioritization number				104

Conclusion

Project deliverables were met on both Quote redaction time and Field Work time management. The implementation of satisfactory measures enabled us to lower quote delivery from 10 days down to only 3. Work load has lowered and is more properly distributed among qualified employees. Field Work Missed time has been controlled and maintain within planned times by 78%. The proper use of the created checklists enabled us to standardize ways of evaluating jobs, buying materials and preparing to execute the jobs.

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