V.1 December 2015

Case Study

Overhauling Payment Systems- Improving Administrative Functions

› Global Oil and Gas Company with Manilla (Philippines)-Based Shared Service Centre

Learn. Improve. Achieve

Summary

Challenge

Global oil and gas company experiencing unnecessarily complex and costly administrative functions.

Root Cause

Lack of internal opportunities to review, assess and alter processes.

Output

Lean6-sigma initiated thorough analysis and overhaul.

Results

Reduction of overtime by three quarters – saving time and money, and so improving bottom-line performance.

Case Study

Lean six sigma

Overhauling Payment Systems – Improves Administrative Functions

Overview

Sometimes, administrative and other processes within large organisations can become unnecessarily complex and costly, simply because no-one within that organisation has had the time (or the resources) to stand back and asses those processes objectively. Under such circumstances, lean6-sigma can step in and apply clear, objective analysis that will cut through even the most unwieldy processes. The result is a clear and new path that will simplify, streamline and improve company functions – resulting in significant time, cost and human resources benefits.

Define

- **Client back-office operations were performed off-shore, with the finance function operating from a Manilla Shared Service Centre**
- **A money-saving initiative was to create a central admin function for all business units.**
- **Centralisation process highlighted different procedures for similar activities – so lean6-sigma undertook a standardisation exercise.**

Our client, a global oil and gas company, based its back-office operations off-shore, running its finance function from a Shared Service Centre in Manilla – and from here, the company completed all aspects of finance processing.

Part of the oil and gas company's global strategy was to create *'One Finance'*, a central function designed to take care of all administrative functions for all business units. The current structure consisted of eight independent businesses, with each business looking after their own administrative and support functions (such as Finance and Human Resources). Centralising these functions into one business unit represented huge financial savings, plus increases in quality and efficiency.

The scope of this project was within the Accounts Payable (AP) team. – and when AP processes migrated from the business units into the Shared Service Centre, it was observed that many similar activities were completed in many different ways, using different processes and different methods of working. The first job for lean6-sigma was to ensure that all processes were completed in a standard way, and in a manner that was globally acceptable.

improve

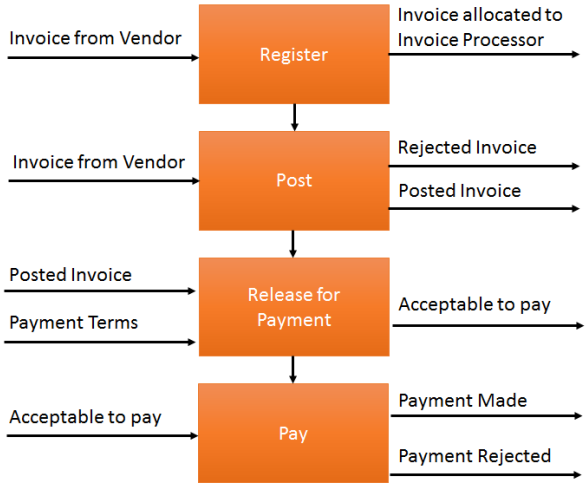
Migrating AP processes from the business units into the Shared Service Centre resulted in increased overtime and high levels of stress. The off-shore AP team consisted of 37 full-time employees who worked across three shifts, covering 24 hours.

The AP team leader needed to know if she had sufficient capacity to deal with the increased workload arising from the migrations; furthermore, she wanted to measure how efficiently the team was operating. With a typical overtime level of 400 hours per month (an average of 10 hours per person), did the team need more resources? Or could efficiency gains be made by reducing non-value-adding activities?

Measure

- Accounts Payable team was responsible for paying legitimate and accurate bills.
- Lean6-sigma produced a process flow diagram and fishbone diagram which revealed an unnecessarily complex process of 36 possible causes for rejection of bills deemed non-legitimate.
- Rationalisation process reduced this cause list to just 8 possible root causes.

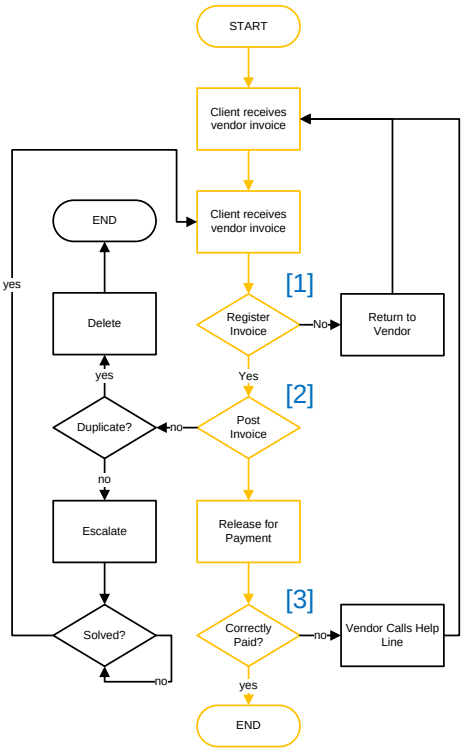
The Accounts Payable team was responsible for *"paying the company's bills that were legitimate and accurate"*. Any bills that were due for payment, but which did not meet these criteria, could not be paid. The high-level IPO[1] diagram offered an initial insight into where process defects and inefficiencies might be observed, and where the team was spending time on activities that added no value.



The most efficient process (the one that was 'right first time') was where vendor invoices were received. This process was allocated to an 'invoice processor', who was able to 'post the invoice'. This procedure required extraction of all the relevant information from the invoice – and then these details were entered onto the SAP payment system.

Once the invoice was posted, the company would wait for all the payment terms (such as Due Date) to be met. The invoice would then be acceptable for payment and the invoice was 'released for payment'. However, this did not mean that the invoice was actually paid; at this stage, it was still possible for the payment to be rejected.

[1] Input Process Output



The project leader needed to know the reasons why invoices did not flow through the process easily. Why were they rejected and not paid? And how much time did the project leader's team spend dealing with these issues?

Analyse

- **Pareto identified reasons for invoice rejection and order of significance.**
- **Vendor supplying incorrect invoice data (or omitting data) contributed significantly to invoice rejection.**

Principal culprit vendors were identified.

By working their way through the process flow diagram, the lean6-sigma team gained an in-depth understanding of the process intricacies - particularly the key decision stages. A fishbone diagram showed that there were a possible 36 root causes, and an initial subjective assessment was run against these possible *x's* - which reduced the likely candidates to 16.

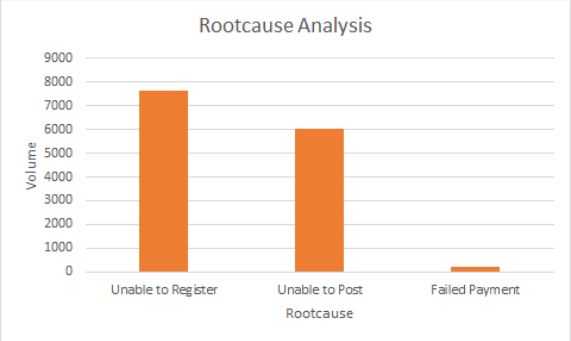
Following this sifting process, the team considered how the remaining *x's* might correlate with the Y variable invoices not posted correctly the first time. This further reduced the possible root causes to just 8. The team laid out their data collection plan and sought to turn their subjective thoughts into objective analysis.

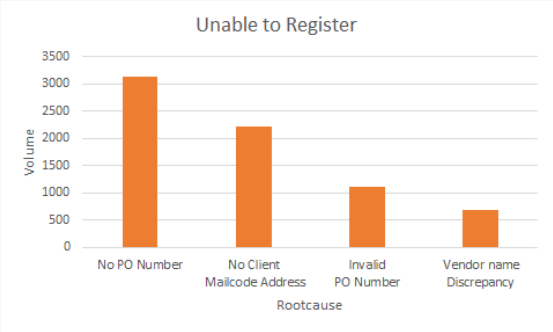
The process flow diagram (above) identified three stages at which invoices could fall out of the payment process. The initial task was to assess how many fell out at each stage.

Completing a Pareto (applying to the number of invoices falling out of the process at each stage) showed that the majority of invoices were *'unable to be registered'*. The second most significant reason was *'unable to post'*, followed by *'failed payment'*.

improve

Rather like peeling back the skin on an onion, understanding the root cause of each failure mechanism (and time taken) became the focus of the analysis phase.



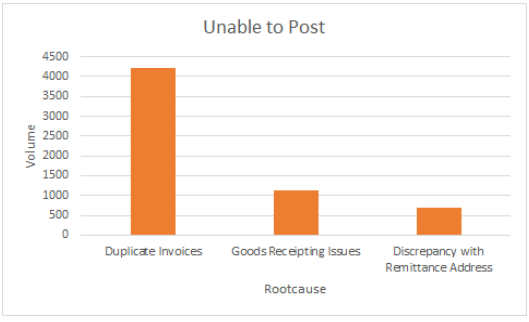


[1] Why were the team unable to register vendor invoices? The data showed that vendors were submitting invoices without PO numbers, with no client address, with invalid PO numbers, and with name discrepancies;

Which vendors ***didn't*** provide the correct information, (which would enable our client to register the invoice)? Due to time constraints, the lean6-sigma team captured data against the top three root causes. It was noted that the top 10 companies failed to provide the correct information, enabling our client to register their invoice. This information was tabulated as follows:

	No PO Number	No Client Mailcode	Invalid PO Number	**Total**
Mc Junkin Red	5	40	7	**52**
Weatherford US	16	28	3	**47**
Master Brands	5	36		**41**
Baker Hughes	10	14	4	**28**
Hagermeyer North	0	0	25	**25**
Iron Mountain	18			**18**
Total Safety	10		8	**18**
Louisana Coaches	17			**17**
Formulae Power	9		4	**13**
Bridges Port	0	13		**13**

[2] Why was the team unable to post vendor invoices? The data showed that vendors were submitting invoices without PO numbers, without client address, with invalid PO numbers, and with name discrepancies;



Which vendors ***didn't*** provide the correct information, (preventing our client from posting the invoice)? Details of the top 10 companies failing to provide the correct information (enabling our client to post their invoice) were tabulated as follows:

	Duplicate Invoices	Discrepancy with Remittance	Goods Receipting	**Total**
Mc Junkin Red	14	88	126	**228**
KS Industries	9		64	**73**
Baker Hughes	10		46	**56**
Redman Pipe	20	11	16	**47**
Chickas Aw Districation			35	**35**
Turbos Cope Vetco Int'l		30		**30**
FMC Technologies	7		20	**27**
H&S Construction	27			**27**
Kelly Services	20			**20**
Halliburton Engineering		5	14	**19**

[3] Why did payments fail? This turned out to be solely down to one root cause: the vendor had been placed on notice for disconnection. The process didn't allow for payments to be made against vendors who were under 'notification of disconnection'. Details of the top ten vendors under notification for disconnection were tabulated;

	Disconection Notices
Allied Waste	168
AT & T	89
CPL Energy	68
Medina Electric	52
Waste Management	44
QWEST	18
Pedernales Electric	16
City of Pharr	12
Airgas	10
Chevron	10

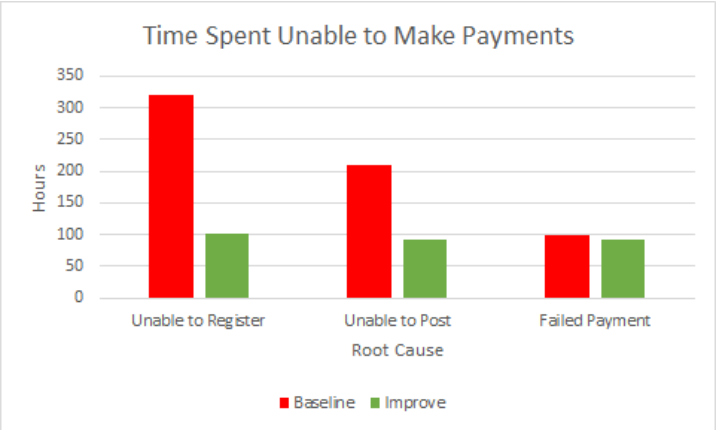
Improve

- **Analysis process allowed for creation of a targeted improvement plan.**
- **By working with culprit vendors, change was effected.**
- **This resulted in reduction of non-value-added work in our client's admin processes.**

By understanding why invoices did not flow through the process, by knowing the root cause (and which vendors were principally responsible), it was possible to create a targeted improvement plan. A summary of the top 10 vendors supplying inaccurate invoices was tabulated as follows:

Vendor	**Total Defective Invoices**
Mc Junkin Red	280
Allied Waste	168
AT & T	89
Baker Hughes	84
KS Industries	73
CPL Energy	68
Medina Electric	52
Redman Pipe	47
Weatherford US	47
Waste Management	44

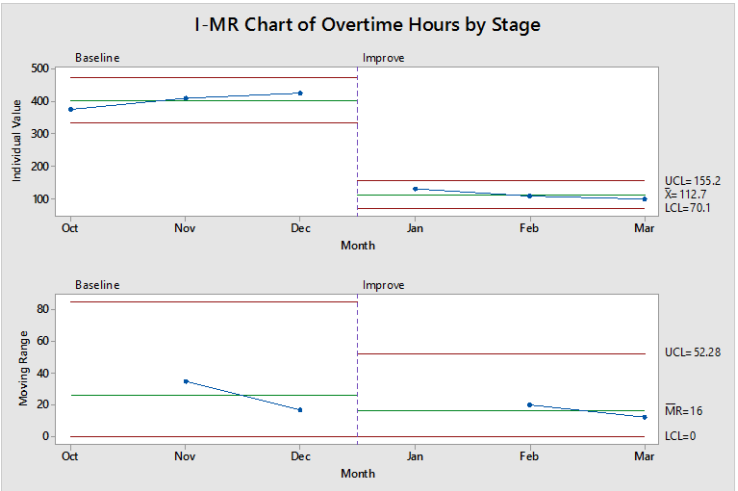
Through working with these vendors (and, where appropriate, by engaging with account managers), it was possible to bring about effective change. The improvements were not necessarily about bringing changes to our client's processes - they were about educating and working with the vendors, and helping them to comply with the new global payment process. In facilitating this process, our client was able to reduce the time spent on non-value-adding work;



Control

- Removing non-value-added activities reduced overtime from 400 to 100 hrs.
- Handling team stress levels also significantly reduced.
- No need to hire further employees.
- Client's customers enjoyed full and prompt payment of invoices.

The net effect of removing the time spent on non-value-adding activities resulted in reduced overtime from an average of 400 hrs to 100 hrs.



The team had visibly less stress and could now avoid employing two additional resources that were initially thought necessary. Moreover, our client's customers were able to receive full and prompt payment of their invoices!