

# ITS Invoice Turnaround

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IT PM 2

3/30/2016

Green Belt Phase



*Making Ohio Better*



# DEFINE

# Team Members

I am listing members that can and have provided information to me to help this process.

- Meghan Leak/Invoicing
- Priscilla Brown/EDI
- Donna Good/Administration

# Project CTQ

- Who is your customer?
  - » Vendors that submit invoices to the state/ITS for services rendered
- What does your customer need?
  - » Timely payment of invoices submitted by vendors
- Use two actual quotes you heard your customer say
  - » ‘sometimes we are late paying them within 30 days’

# Project Charter

## Purpose:

- » This project is to determine if invoices are paid within a 30 or 15 day guideline for ITS.
- » Identify/document ITS processes for timely payment and evaluate for efficiencies.

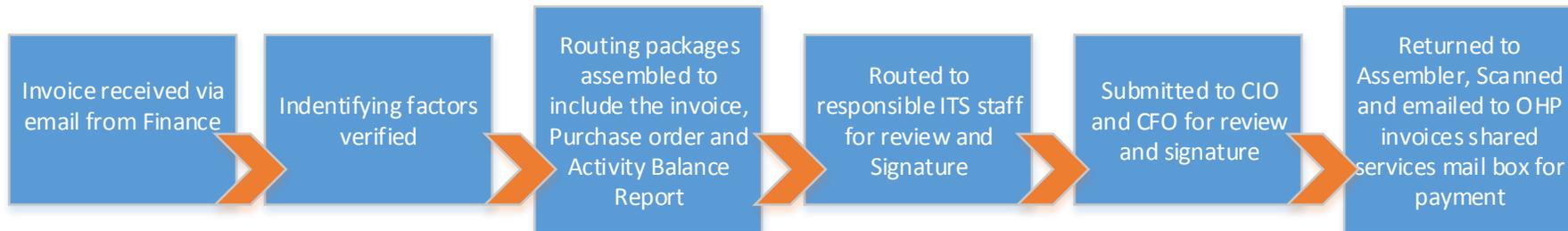
## Problem Statement:

There have been instances when invoices went unpaid for more than 30 days. MCD can be charged interest fees for late payments

Project Charter				
Project/Event Title	Improve Invoice Turnaround Time - Redsheet			
Project Facilitator	Felicia Sherman			
Agency/Organization	ODM			
Project Mentor:	Deborah Mayle			
Charter Last Updated Date:	3/29/2016			
<b>Project Background</b>				
ITS is responsible for accounts payable for services rendered in either Time and Material or Firm Fixed Price contracts. We seek a range of services from BAs, project managers, software architects, hardware and software acquisitions and licenses.				
<b>Problem/Opportunity Statement</b>				
Evaluate turn around time for invoice processing, identify inefficiencies and streamline invoice payment processing time				
First step in the process:				
SCOPE (define boundaries)	Invoice presents itself to the ITS for payment			
	Last step in the process:			
	Signed invoice is submitted to 'OHP invoices'			
<b>Project Goals</b>				
1. Evaluate current state,				
2. introduce efficiencies by sorting, straightening, standardizing and sustaining				
3. seek input from stakeholders for additional efficiencies				
4. monitor implemented changes and generate status reports that reflect year end projections				
5. Reduce invoices from 'getting lost' improve how the turn around in Utilities invoices				
<b>Project Boundaries</b>				
Boundaries are specific to workflow between Finance (invoice initiation) to process complete with a signed copy to 'OHP invoices'				
<b>Performance Metrics:</b>			<b>Performance Metrics</b>	
What measures will tell you if you are successful.			Current	Goal
the turn around time for invoices will improve from 'so many days' to 'so many days'				
generate monthly report to indicate current paid and projected to finish				
<b>Projected Benefits</b>				
timely invoice payment				
contract hours tracking				
<b>Project Team</b>				
Team Lead:	Lynda Zamora			
Team Champion/Sponsor:	Michelle Horn, Eric Skomra			
Process Owner:	Eric Skomra, Michelle Horn			
Team Members:	Meagan Leak, John Hunt, Robin Ferguson, Travis Moore, Donna Goode, Priscilla Brown			
Subject Matter Experts:	Meagan Leak, John Hunt, Robin Ferguson, Travis Moore, Donna Goode, Priscilla Brown			
<b>Project Champion/Sponsor and Process Owner Sign-Off:</b>				
I am committed to supporting this project and implementing the teams improvements.				
Sponsor Signature:				
Process Owner:				

# SIPOC or High Level Flowchart

SIPOC					
Suppliers	Inputs	Process	Outputs	Customers	
Vendors	Invoice			Received Invoice	Account Owner (ITS)
Divisions(ITS, Finance)	Information, data entry person, approvers			Verified information, Spreadsheets, payment information	Account Owner (ITS)
OAKS	Payment information	Invoice, paid invoice		OAKS, Vendor	





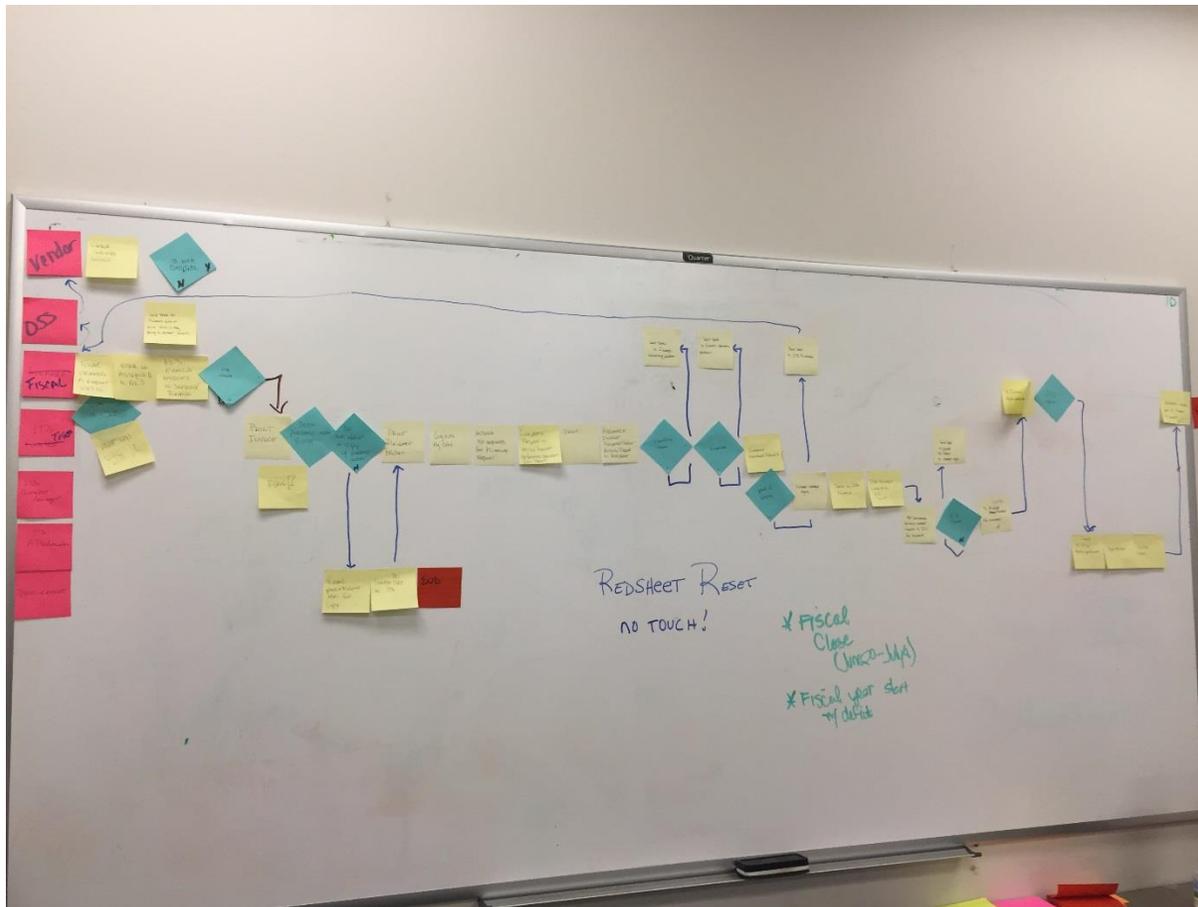
# MEASURE

# Project Charter Update

- In January, I fell behind on invoice payment. I wanted to identify the cause as I was processing invoices, but I felt I was behind on many.
- Upon review of the data, I found two things, yes, there were instances where invoices had fallen behind or invoices got lost, but it seemed that there is a bigger problem with the EDI invoices
- I was not aware until recently (Jan/Feb) that EDI invoices had a much shorter time line. I was treating them the same as regular invoices
- So the Charter was revised:
  - » This project is to determine if invoices are paid within a 30 or 15 day guideline for ITS.
  - » Identify/document ITS processes for timely payment and evaluate for efficiencies.



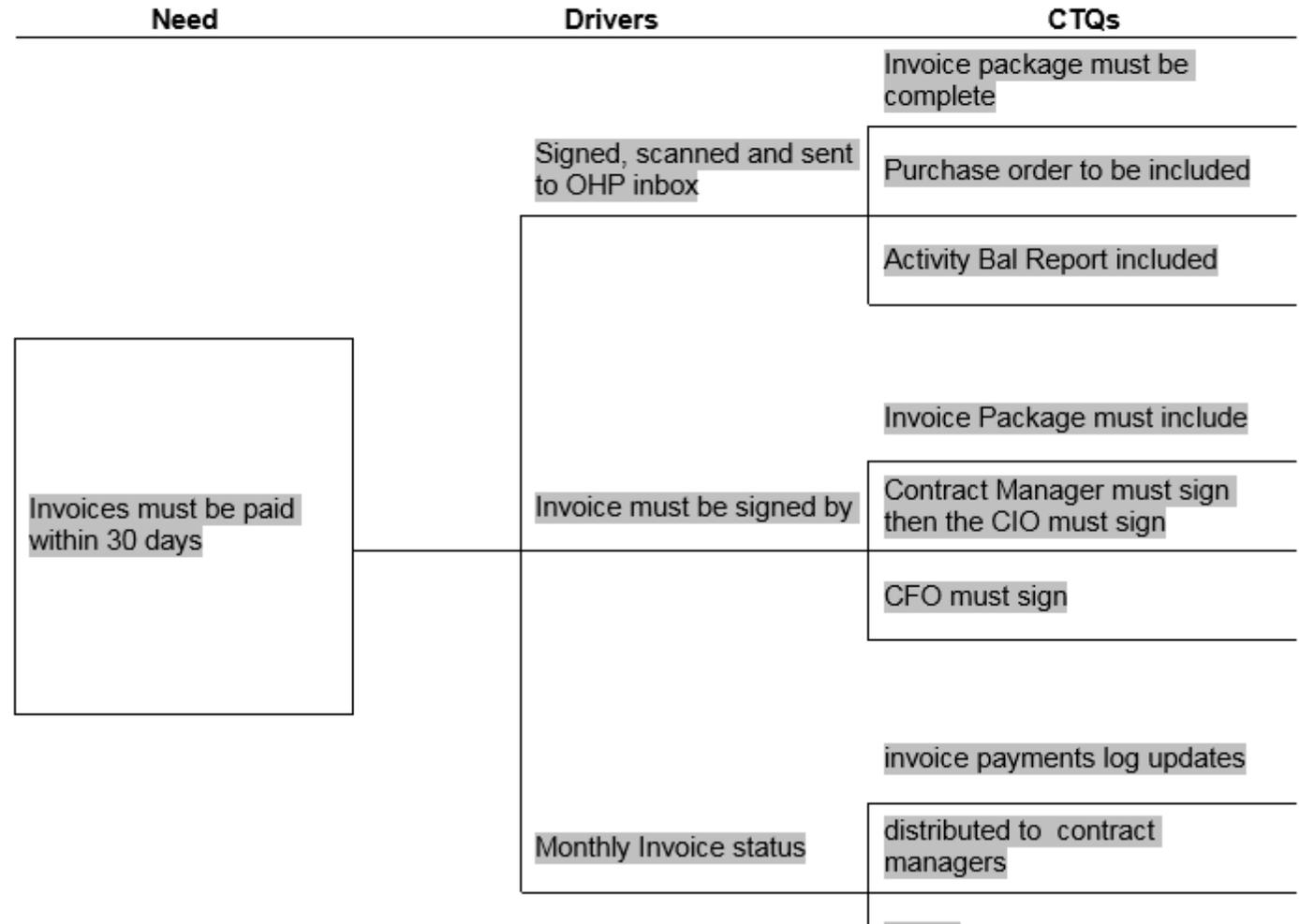
# Current State Map



# Project Y

- Invoice Turnaround must 30 days (non Utility)

## CTQ (Critical to Quality) Tree RED SHEET RESET



# Operational Definition

- There are invoices that do not meet either the 15 day or 30 day requirement to process?
- I was not aware that Utilities had a different time requirement until Jan/Feb. I treated them the same as any other invoice.
- The time limitation of 15 or 30 days depending on type of invoice. Utilities are 15 days, and non Utilities are 30 days.

# Data Collection Plan

- Obtained from MS Office Outlook the time stamp of when invoices were sent from Finance
- When the signed/scanned invoice '.pdfs' were sent back to "OHP invoices'
- Subtracted the days= net 'invoice turnaround time'

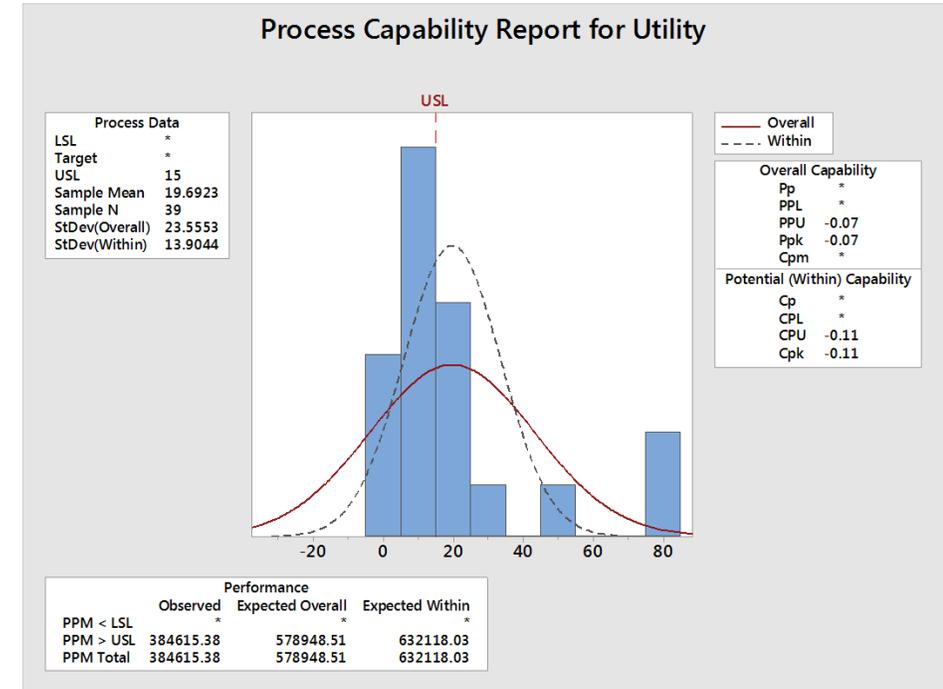
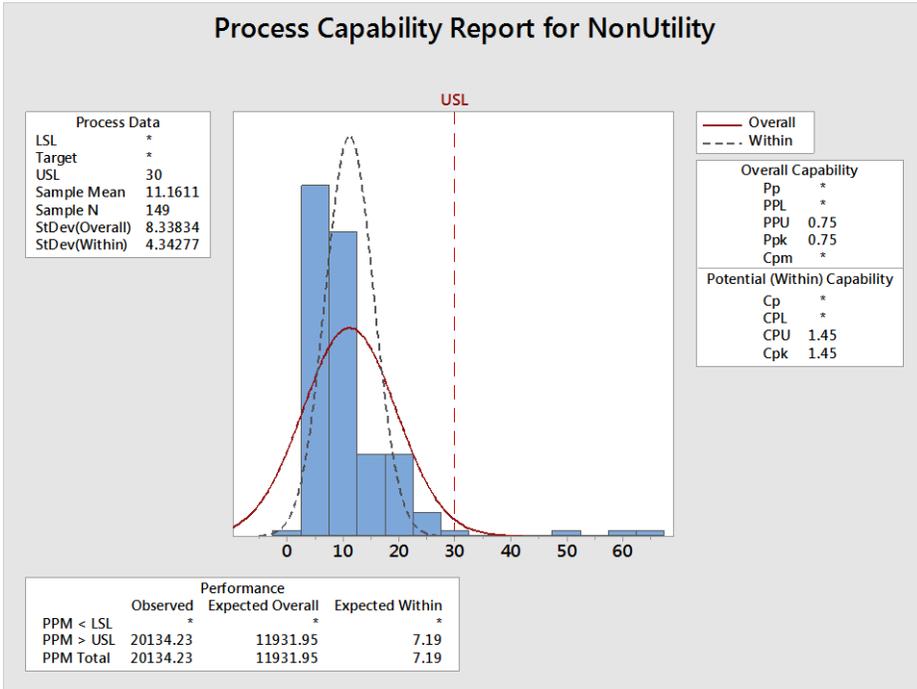
# Validate Measurement System

- Data Collection using Outlook timestamp is a consistent approach that can be determined by anyone.
- The data is valid as a result

# Collect data for Project Y

- Data Collected all invoices except DAS ISTVs (no purchase orders so processing became problematic)
- 188 data points from July 1, 2015 to present

# Capability for Project Y



# Improvement Goal for Project Y

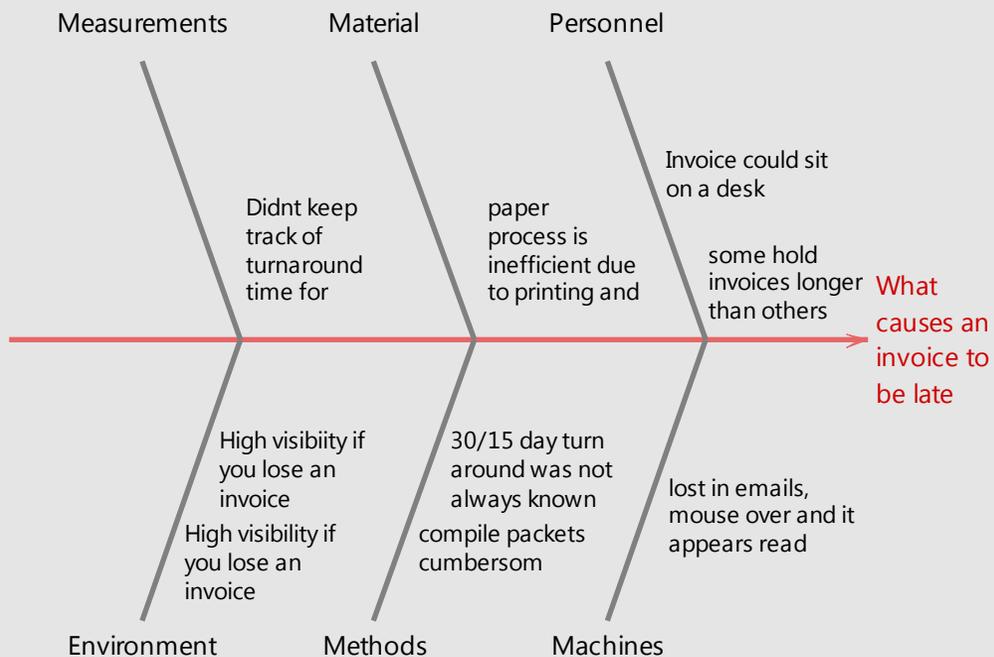
- We are meeting our 30 day target, on the average it takes about 12 days to process and send back an invoice
- Our data is a little off target, but it's on the less than 30 day invoice requirement. So that's a good thing!
- I have to walk the utility payments around. If I can, I stand and wait for signature. Automating this process using a workflow solution would greatly help.



# ANALYZE



### Fishbone for Invoice Turnaround

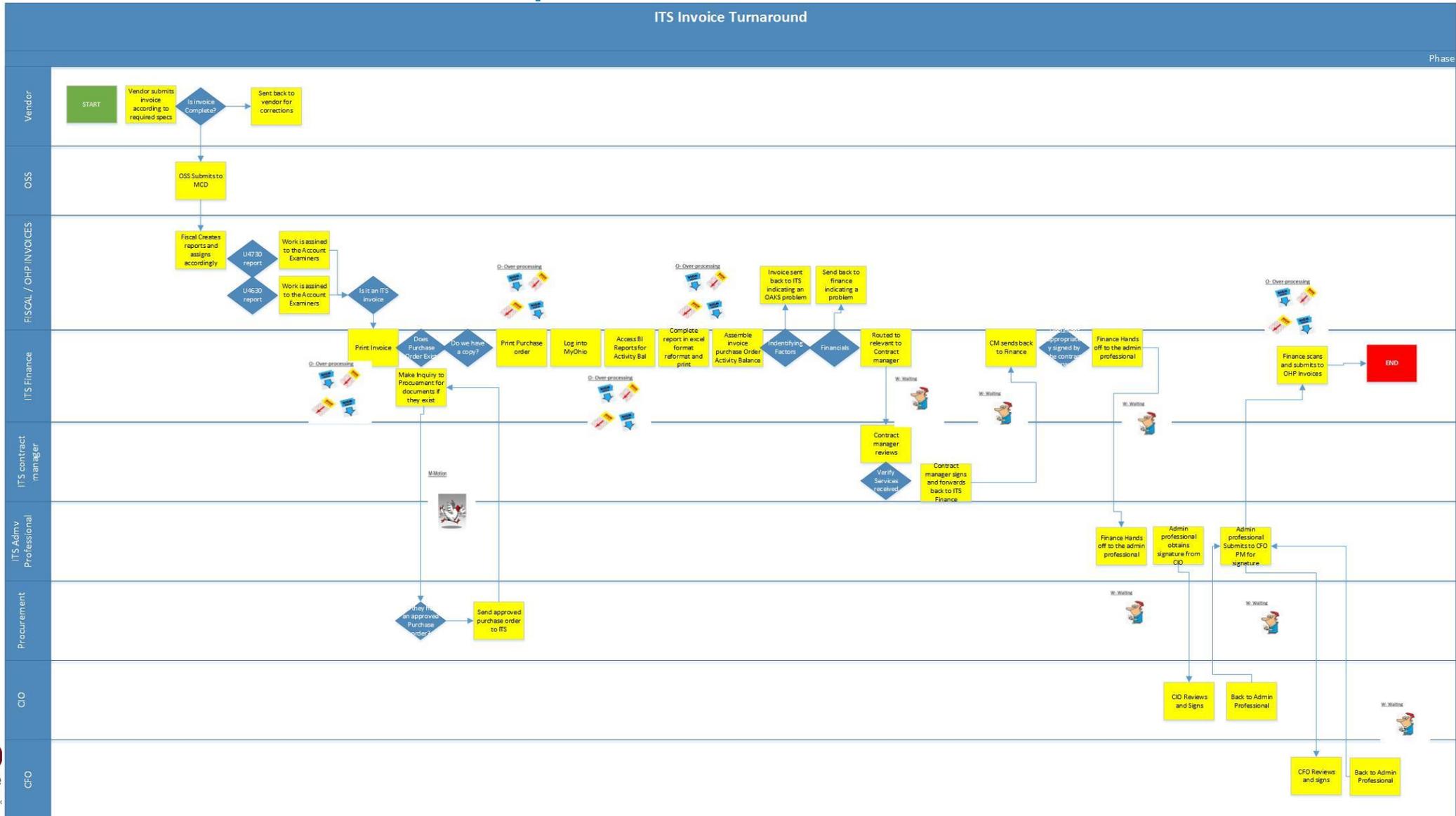


# List of All X's from Fishbone

- Measurements
  - » Emails to and from OHP invoices; redsheet summary includes dates of signature
- Material
  - » Redsheet; invoice; purchase order; activity balance report
- Personnel
  - » Trapped on desks
- Environment
  - » High visibility if invoices get lost 'the big scramble'
- Methods
  - » Hand walked, compile documents, spreadsheets, reports
- Machine
  - » Emails can get lost or appear to be 'read' when they aren't



# Current State Map with TimUWood



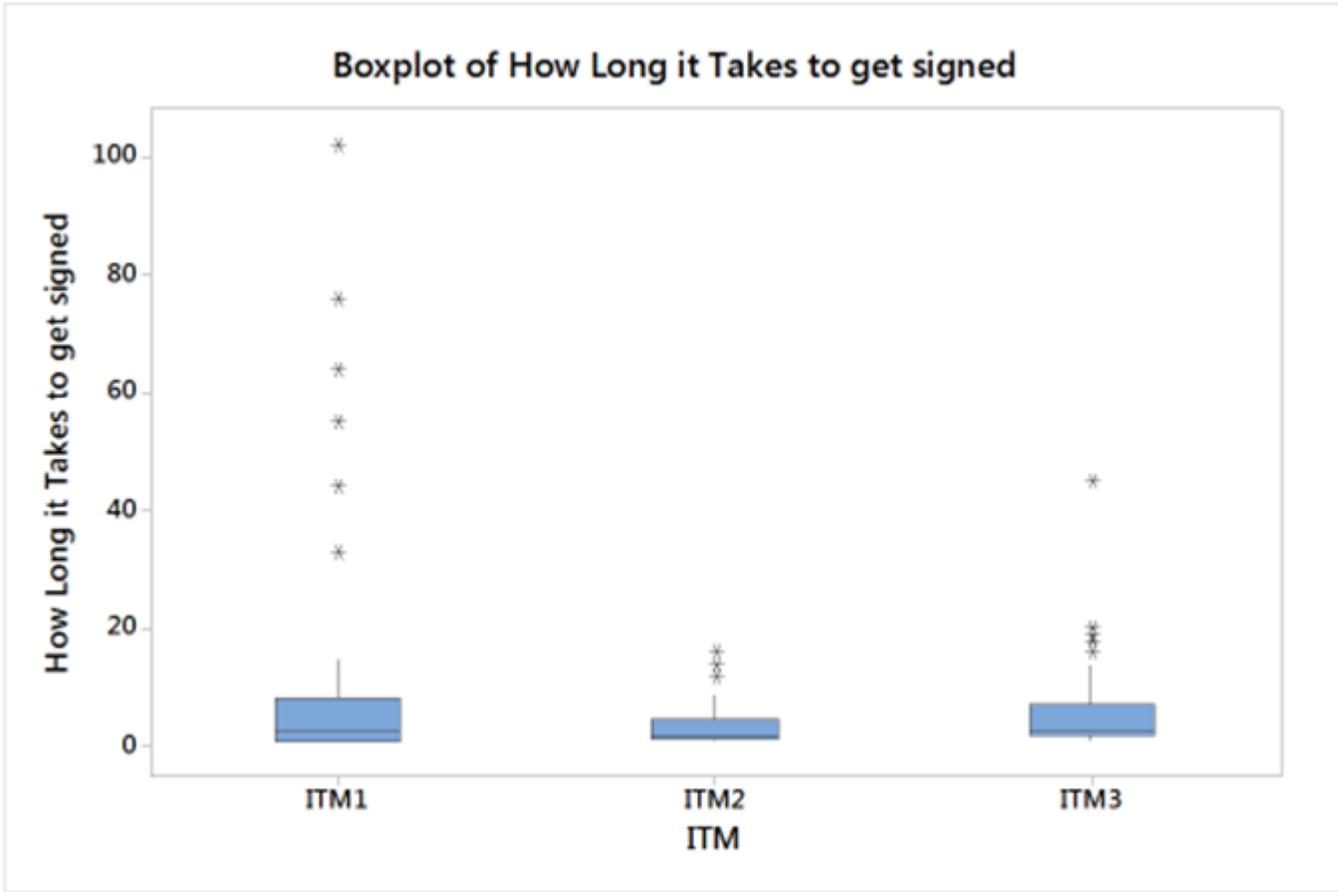
# Prioritized List of X's

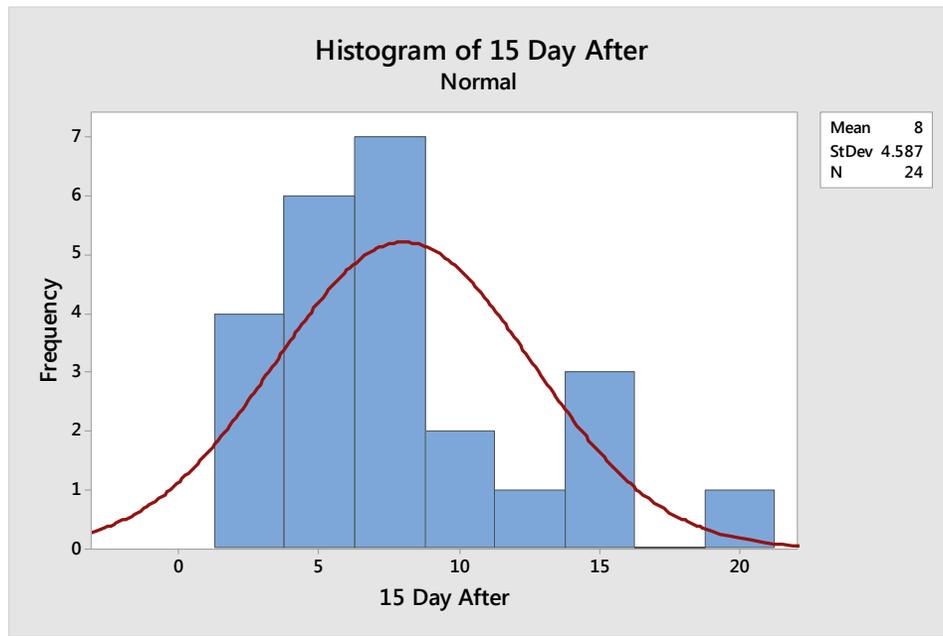
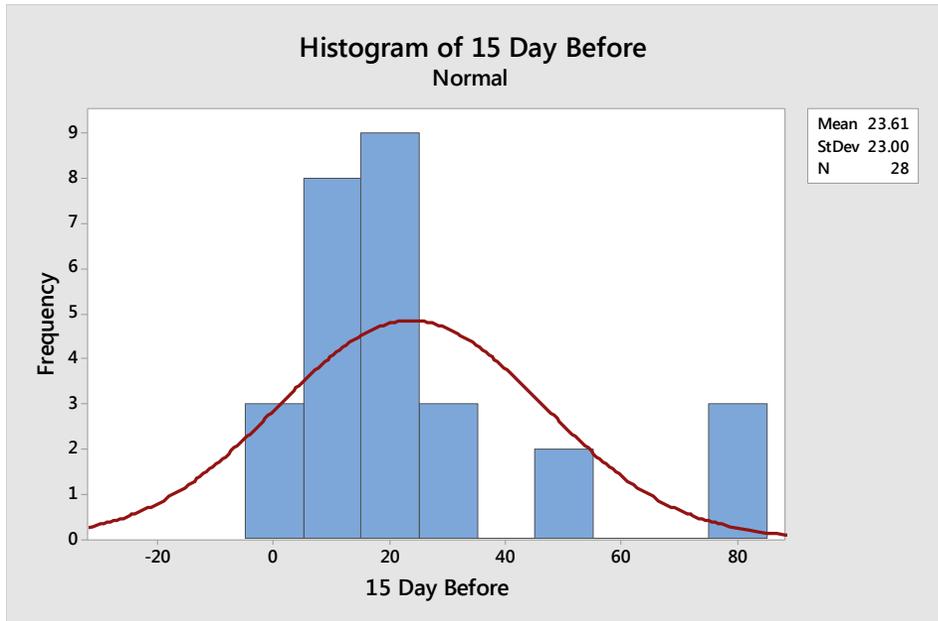
Cause and Effect Matrix							
	Rating of Importance to Customer	a signed invoice within stated time frame	completed package	signed by those responsible	tracking and reporting	Total	% Rank
#	X's from Fishbone						
1	Didn't keep track of invoice turnaround	10	10	10	10	340	18.52%
3	invoices desk sit	10	10	10	4	316	17.21%
7	lost emails 'mouse over' appears read	10	10	10	0	300	16.34%
2	paper process is cumbersome	8	8	10	0	260	14.16%
4	some invoices take longer to process than others	7	7	8	0	220	11.98%
5	high visibility when an invoice is lost	10	0	10	0	200	10.89%
6	30/15 day requirement wasn't always known	10	0	10	0	200	10.89%
				sum		1836	100.00%



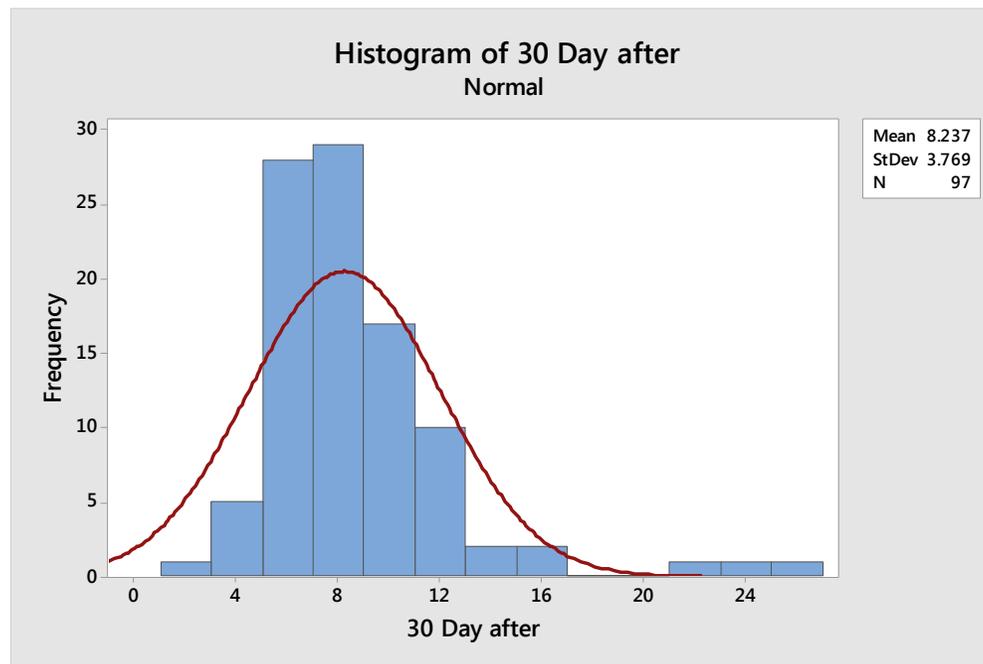
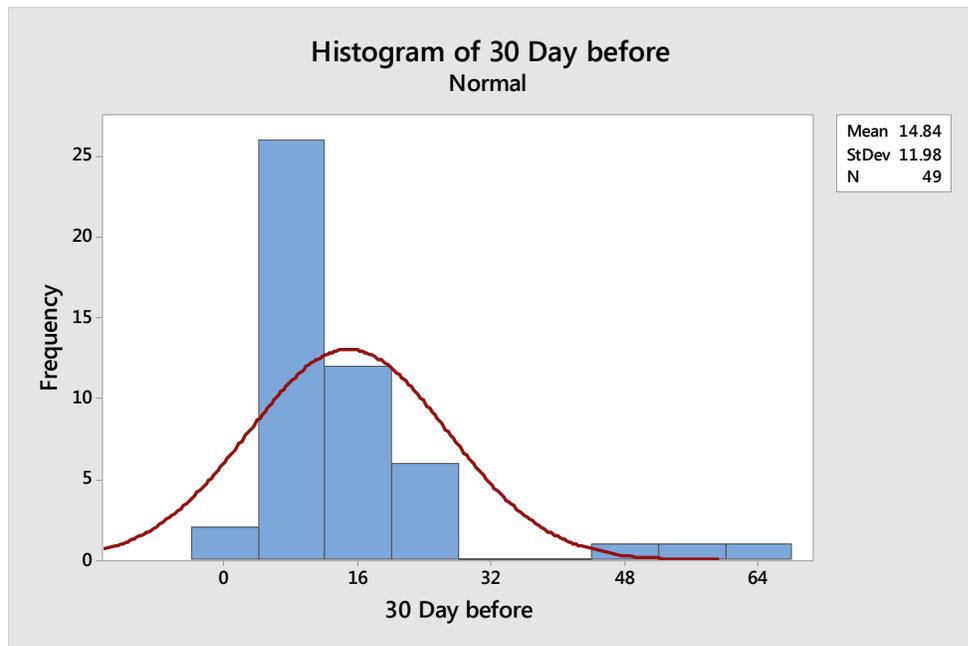
# List of Vital X's – Significant X's

List of Vital X's													
Number	Identified X	Can X be measured?	Rating of importance to customer	Statistical Test Used	What will test show?	Significant?							
1	Didn't keep track of invoice turnaround	yes		process capability 3 and box plot	before and after	will show that the turnaround is much faster now							
3	invoices desk sit	yes		process capability 7 and box plot	before and after	will show that the turnaround is much faster now							
7	lost emails 'mouse over' appears read	no		6									
2	paper process is cumbersome	no		2									
4	some invoices take longer to process than others	yes		process capability 5 and box plot	before and after	will show that the turnaround is much faster now							
5	high visibility when an invoice is lost	no		4									
6	30/15 day requirement wasn't always known	yes		process capability 1 and box plot	before and after	will show that the turnaround is much faster now							





Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
15 Day Before	28	0	23.61	4.35	23.00	2.00	7.00	16.00	25.00	81.00
15 Day After	24	0	8.000	0.936	4.587	2.000	5.000	7.000	11.000	20.000



### Descriptive Statistics: 30 Day before, 30 Day after

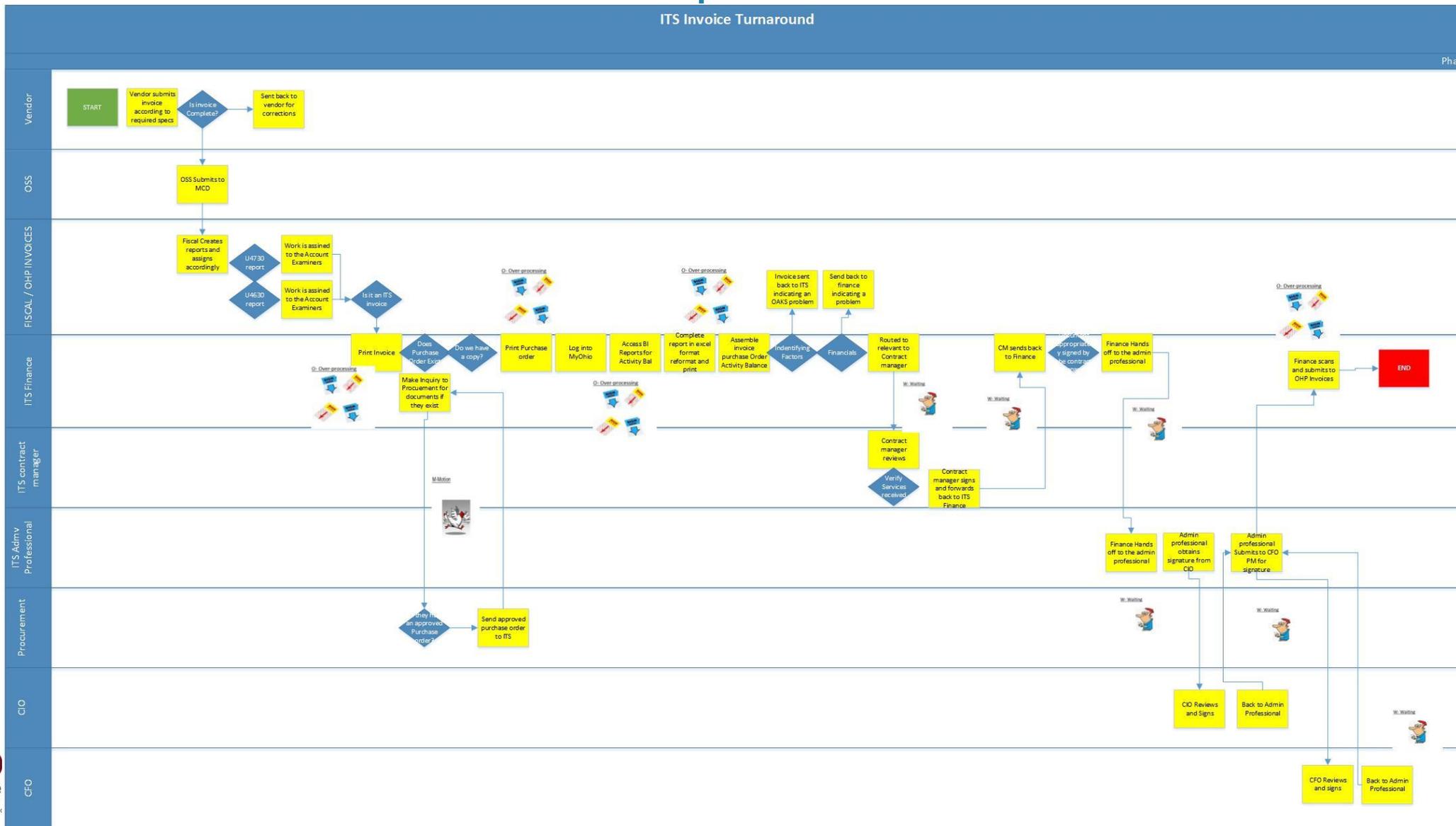
Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
30 Day before	49	0	14.84	1.71	11.98	3.00	9.00	11.00	18.00	63.00
30 Day after	97	0	8.237	0.383	3.769	1.000	6.000	7.000	10.000	25.000



# IMPROVE



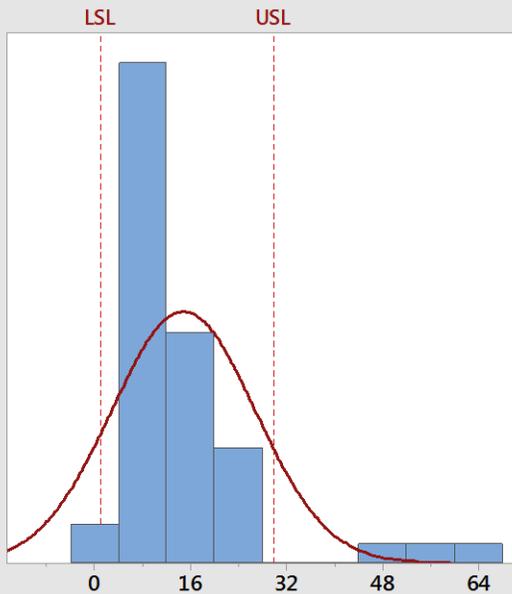
# Draw Future State Map



# After I started tracking and reporting data

Process Capability Report for 30 Day before

Process Data	
LSL	1
Target	*
USL	30
Sample Mean	14.8367
Sample N	49
StDev(Overall)	11.9763
StDev(Within)	0



Overall Capability	
Pp	0.40
PPL	0.39
PPU	0.42
Ppk	0.39
Cpm	*

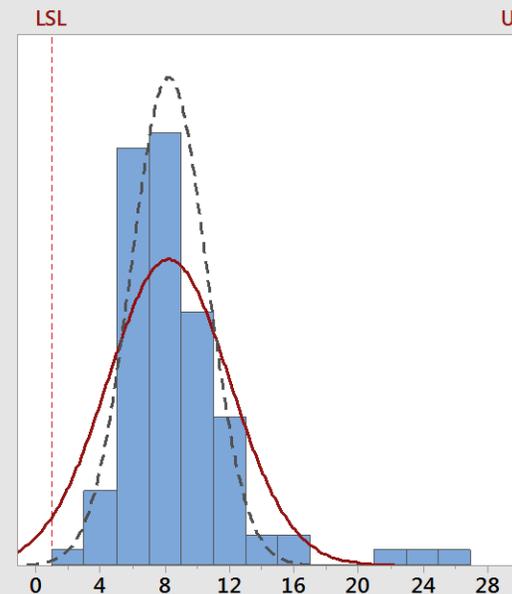
  

Potential (Within) Capability	
Cp	*
CPL	*
CPU	*
Cpk	*

	Performance		
	Observed	Expected Overall	Expected Within
PPM < LSL	0.00	123974.46	*
PPM > USL	61224.49	102737.06	*
PPM Total	61224.49	226711.53	*

Process Capability Report for 30 Day after

Process Data	
LSL	1
Target	*
USL	30
Sample Mean	8.23711
Sample N	97
StDev(Overall)	3.76877
StDev(Within)	2.36407



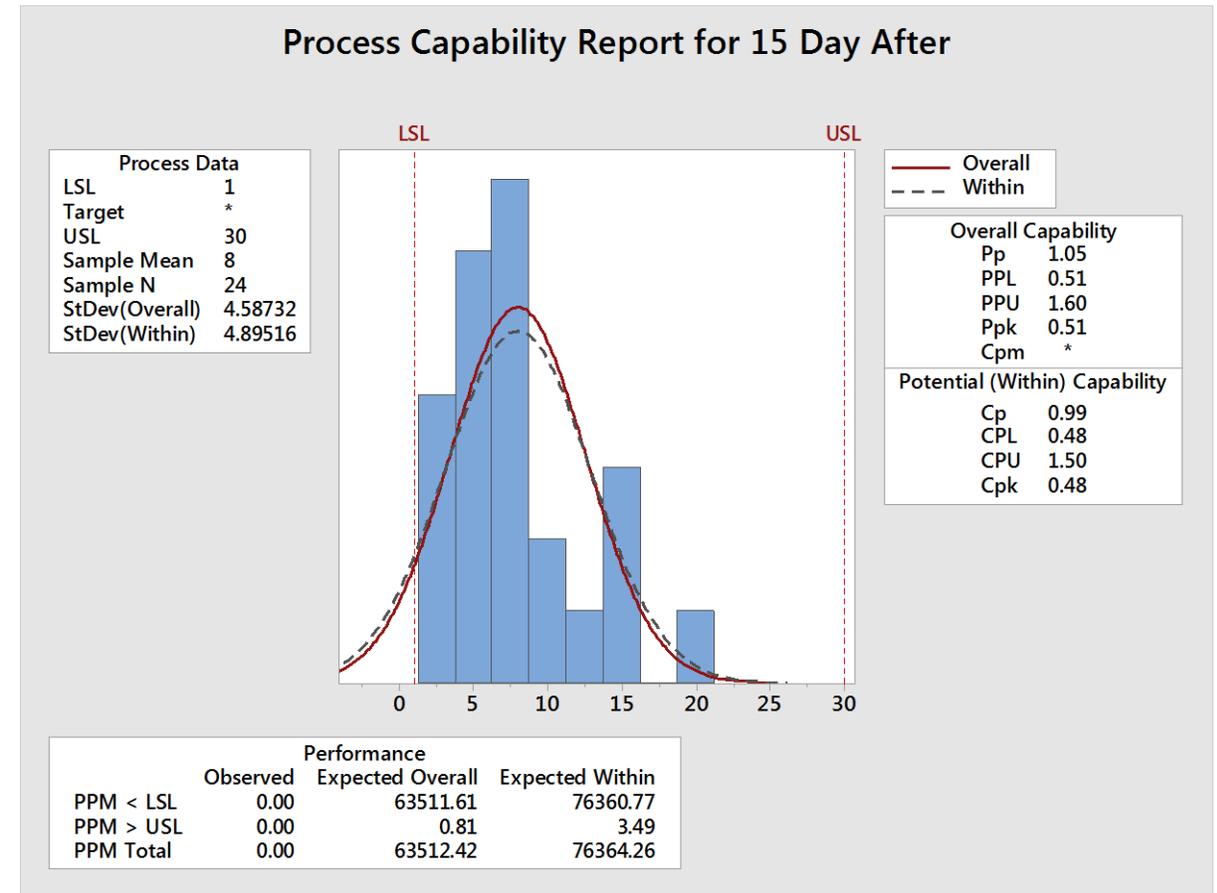
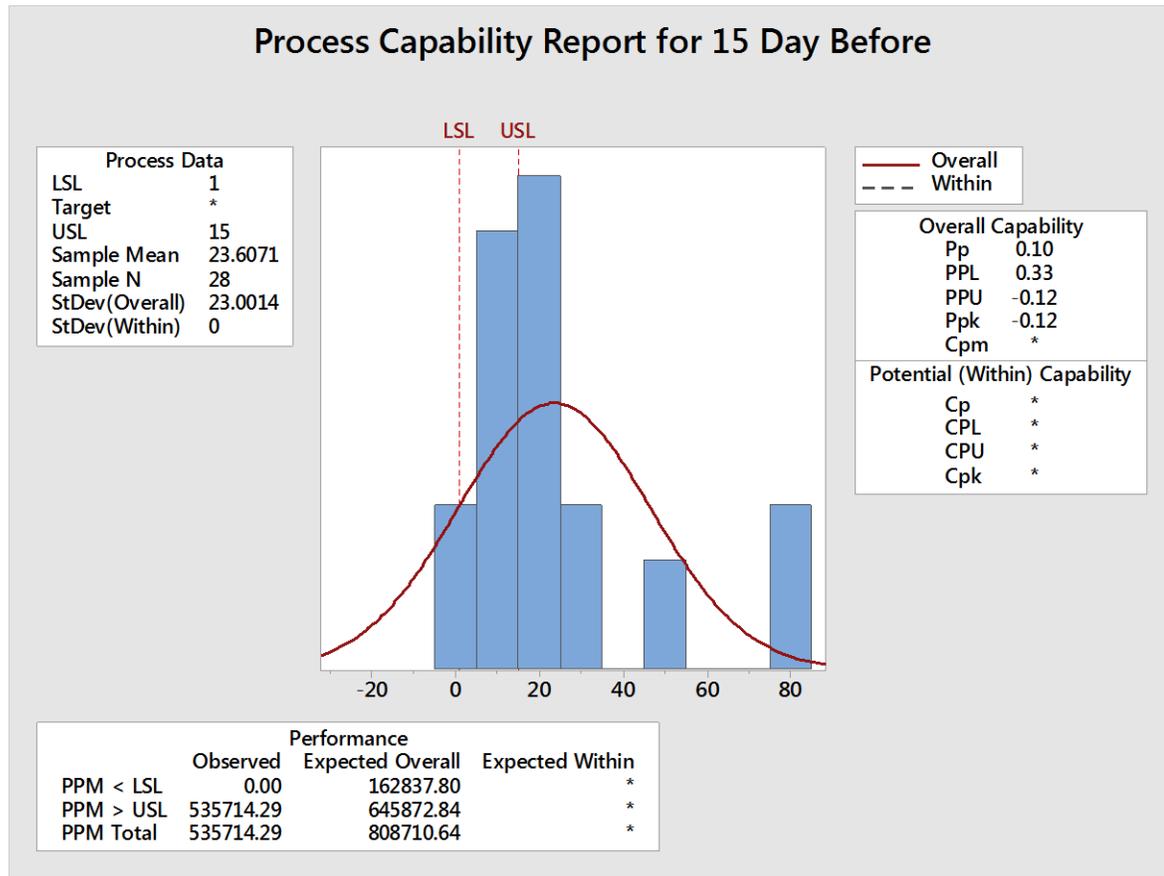
Overall Capability	
Pp	1.28
PPL	0.64
PPU	1.92
Ppk	0.64
Cpm	*

Potential (Within) Capability	
Cp	2.04
CPL	1.02
CPU	3.07
Cpk	1.02

	Performance		
	Observed	Expected Overall	Expected Within
PPM < LSL	0.00	27410.86	1101.89
PPM > USL	0.00	0.00	0.00
PPM Total	0.00	27410.86	1101.89

# Before I started tracking and reporting data



# Prioritized List of Solutions

- List Significant X's
- How can you control this X?

## List of all Solutions or Significant Xs

Number	Identified X	Significant ?	Optimal Setting	How will you control this X
X1	Didn't keep track of invoices	YES	To keep track	We keep a log, which I created
X2	Invoices tend to accumulate on desks	YES	Use of log	Because of the log, I can gently nudge work of desks
X3	Lost emails from MOUSEOVERS (MS)	YES	Difficult to control which is why we use a box now	We now use an ITSPayable inbox for tracking
X4	Paper process is cumbersome	YES	IT workflow solution	Automating this process using a workflow solution will help

# Pilot Solution

- I started a log/tracker which includes when the invoices are sent to our inbox, and how long they are out for signature
- The graph will show that changing how we keep track of invoices has improved the turn around time and minimizes lost invoices

# Approved Solution and Implementation Plan

- We Implemented:
- Started the log and built upon it, created a management report to distribute with projections
- Keep track of turn around times to make sure the paperwork is moving
- Created a shared services box for invoices to come in from finance



# CONTROL

# Sustained Solutions New SOP – Standard Operating Procedures

- A very detailed document has been written that explains all facets on how to process an invoice. It's the document I used to train the two new BAs.

How to process ITS invoices			
PROCESS Number	PROCESS	ACTION	OUTCOME
1	Invoice Intake	Review attachment, determine what purchase order the invoice is for Move invoice over to its directory F: drive F:\ITS Budget\PURCHASE ORDERS and INVOICES FY 2016 Then drill down to file folder for that Purchase Order and drop the file	Invoice is now in Vendor Purchase order folder
2	File Documents Invoice	Open folder move email attachment to relevant folder	File invoice
	Assemble documents	Once you move the file to the relevant folder, Print invoice Print Purchase order	Printed Invoice Printed Purchase order
	Tracking	Copy/Paste File name to Invoice Red sheet tab located on the F drive	<u>Redsheet</u> invoice tracker documented

# Sustained Solutions New Training Plan

- Worked with a BA to document all my processes for invoicing
- We have new BAs, I have taught them how to process the invoices using the documentation previously prepared



# Project Documentation/Control Plan

- The final process owner will be the project management office in the office of Information Technology. Two Business Analysts have been hired to complete this work.

Six Sigma Control Plan							25-Aug	
							Organization Name: ITS	
							Process Name: Invoice Turn Around	
							Project Name:	
Process or Process Step	Input/Output	Control Characteristic	Specificatio n or Tolerance	Measure Technique	Sample Size	Responsible	Control Method	Reaction Plan
ITS Invoice Turnaround	Input	# of days to process	15 for Utilities and 30 for non utilities	month report	entire count for the month	ITS	Audit , 100% inspection	continue to monitor turn around time, if its starts to slip, evaluate why.

# Improvements in a nutshell

- We Implemented:
- Started the log and built upon it, created a management report to distribute with projections
- Keep track of turn around times to make sure the paperwork is moving
- Created a shared services box for invoices to come in from finance



# Improvements in a nutshell

Required days for prompt payment	Average Processing before	Average day processing after
Utility payments 15 days	23	8
Contractor payments 30 days	14	8