Ryan Timbrook

MBC 638 Data Analysis and Decision Making

Project: Process Improvement
Deliverable: Problem Definition Worksheet
Due Date: 7/21/18

Problem Definition Worksheet

Problem Statement:

As a Software Development Manager who augments my teams resource pool with a Managed Vendor Service agreement, it is my responsibility to approve and sign-off all Purchase Order agreements my vendors submit monthly for the work they've completed.

Due to recent system changes and financial forecasting requirements, all POs are submitted three days prior to the start of a two-week Sprint; The details of which must include specific User Stories and their associated Project Finance Codes needed to bill back to the various projects the work is associated to.

Because of the manual steps and system limitations in capturing details of each PO it requires multiple people to collect, organize and categorize each of the Sprint teams work and manually validate the deliverables and costs specified in the PO are in fact what was delivered at the end of each Sprint. Due to the manual nature of the process and the high volume of work the team handles it's often observed, after the fact, that POs have been billed to wrong projects and their actual costs haven't been reconciled against their estimated costs given at the start of the Sprint. All of which causes delays and errors in validating the PO information which is submitted by our vendors is correct.

Business Impact:

I spend on average 8 hours per bi-weekly Sprint cycle manually collecting and organizing data for my five Sprint Teams and reconciling it with my vendors PO submissions. This does not include comparing estimates to actuals or loading my collected data into a system of record for future analysis. At a standard bill rate of 100/hr. this cost of time is $800 per Sprint, or $20,800 per year.

Due to the nature of this manual process it is also observed that 80% of the POs take greater than 15 days to be received in the Ariaba financial system. By going over the 15-day threshold we loss the opportunity of saving 5% on the total PO cost that our vendor offers as a discount.

At $120K per Sprint, per Sprint Team (5), this is a loss of 24K in savings every two weeks, annually $624K.

Based on Actuals not being reconciled against project estimates at this time there are no data at this time to baseline if this will be a positive or negative cost savings factor.

Goals:

My objective is to remove the manual steps I perform today in this process eliminating the $20,800 costs I accrue annually along with decreasing the percent of POs received after 15 days from 80% down to 20%. This would yield a $524,800 in cost savings.

$624K – $120K = $504,000 + $20,800 = $524,800 cost savings

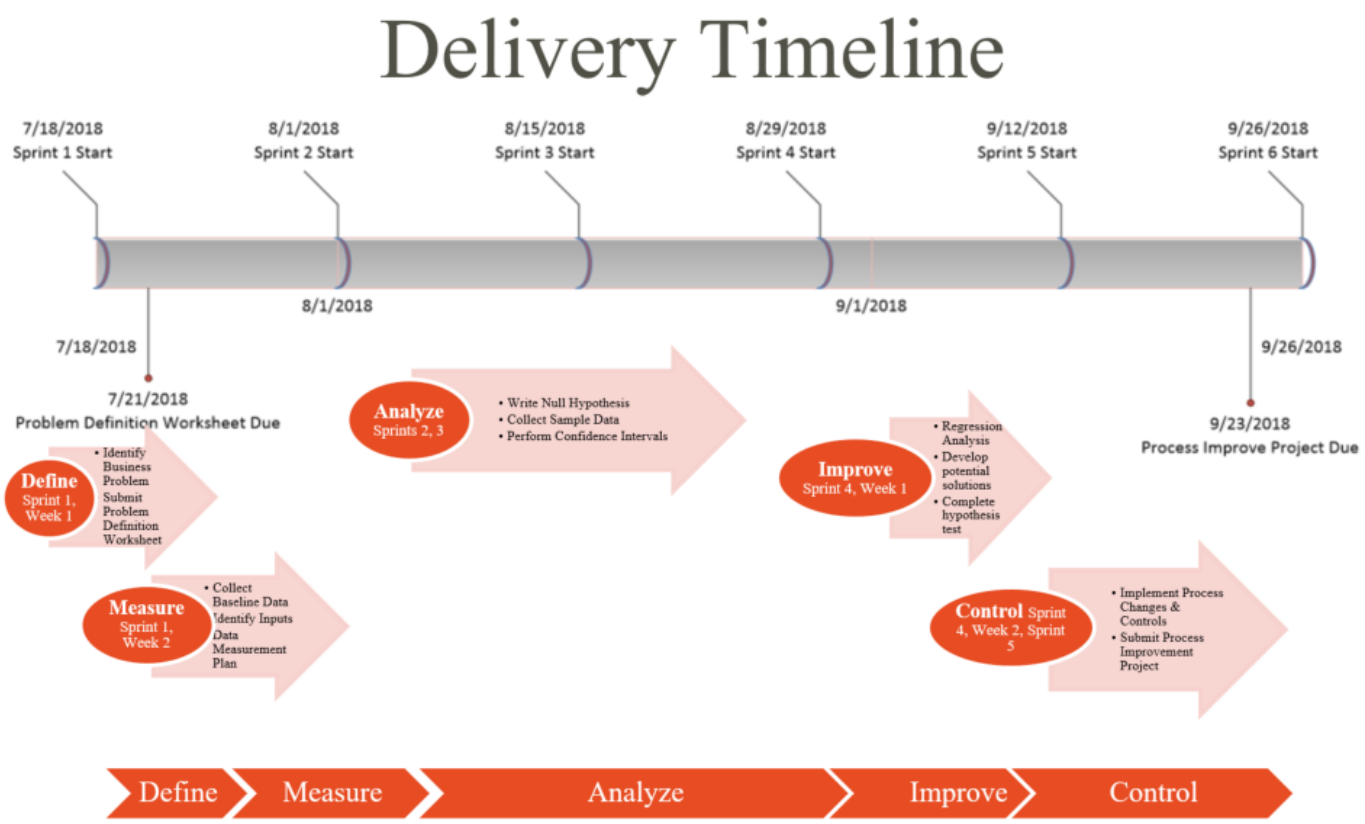
Project Scope:

My first step is to identify all the field attributes needed to create a custom SharePoint form that I plan to utilize as the automated, standard input form, for capturing the manual data I collect today from various people. This form will have automated business rule logic along with email notification rules that trigger rapped responses of designated team resources to complete, in real-time, data entry as they move through the Agile SDLC cycles. Though estimated and actual costs will be included in the new SharePoint form and input process steps, there will not be enough time to assess the positive or negative cost impacts due to time restraints of this Project deliverable. The final step in creating this process is to produce a cross-functional workflow diagram and accompanying material which then will be reviewed with my Scrum Master as expectations of their role in facilitating this new process.

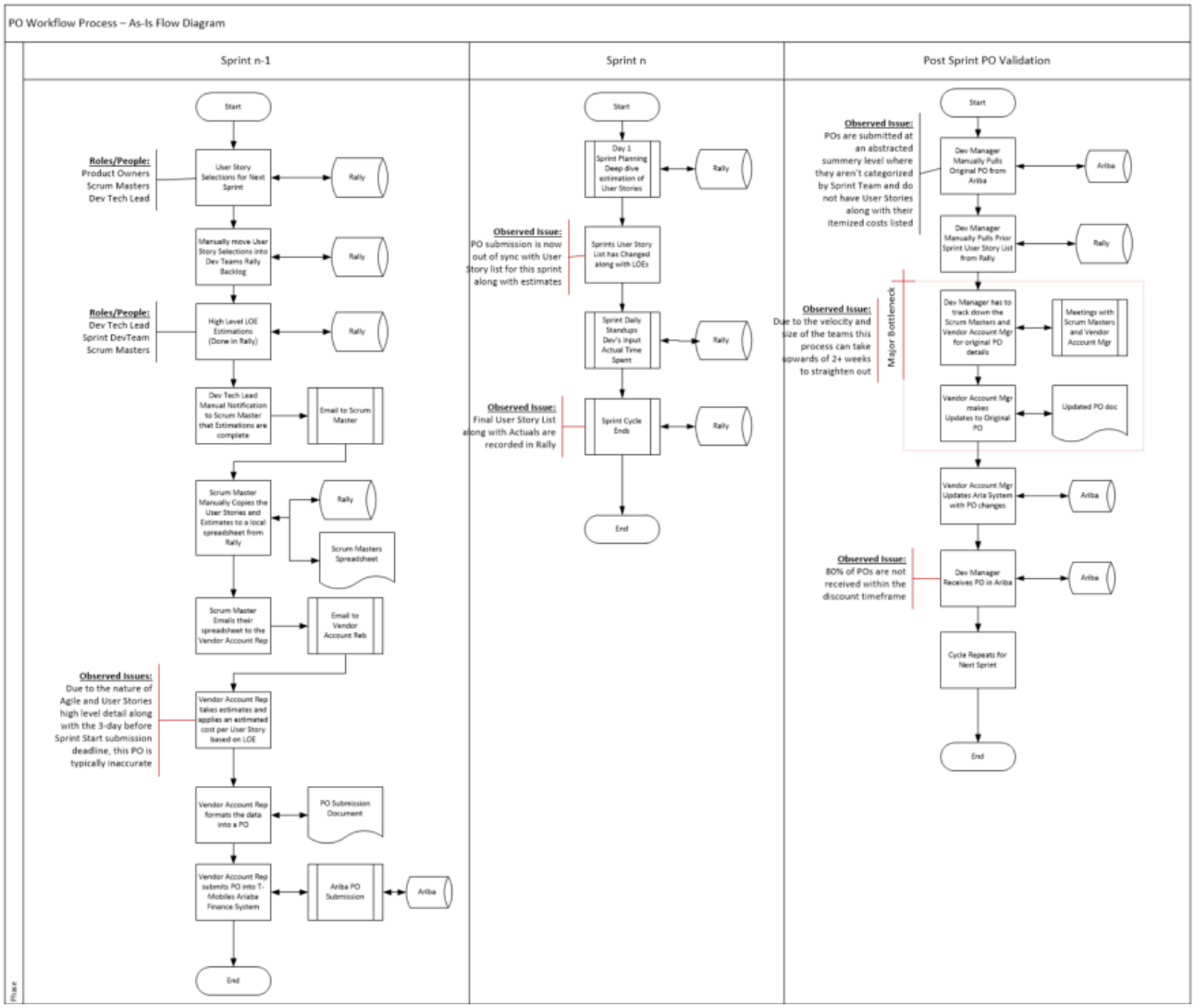
Team:

- Ryan Timbrook (Me, Software Development Manager)

Project Plan:



Process Map:


PO Workflow Process – As-Is Flow Diagram
Sprint n-1
Sprint n
Post Sprint PO Validation
Start
Roles/People:
Product Owners
Scrum Masters
Dev Tech Lead
User Story Selections for Next Sprint
Rally
Manually move User Story Selections into Dev Teams Rally Backlog
Rally
Roles/People:
Dev Tech Lead
Sprint DevTeam
Scrum Masters
High Level LOE Estimations (Done in Rally)
Rally
Dev Tech Lead Manual Notification to Scrum Master that Estimations are complete
Email to Scrum Master
Scrum Master Manually Copies the User Stories and Estimates to a local spreadsheet from Rally
Rally
Scrum Masters Spreadsheet
Scrum Master Emails their spreadsheet to the Vendor Account Rep
Email to Vendor Account Reb
Observed Issues:
Due to the nature of Agile and User Stories high level detail along with the 3-day before Sprint Start submission deadline, this PO is typically inaccurate
Vendor Account Rep takes estimates and applies an estimated cost per User Story based on LOE
Vendor Account Rep formats the data into a PO
PO Submission Document
Vendor Account Rep submits PO into T-Mobiles Ariba Finance System
Ariba PO Submission
Ariba
End
Start
Day 1 Sprint Planning Deep dive estimation of User Stories
Rally
Observed Issue:
PO submission is now out of sync with User Story list for this sprint along with estimates
Sprints User Story List has Changed along with LOEs
Sprint Daily Standups Dev's Input Actual Time Spent
Rally
Observed Issue:
Final User Story List along with Actuals are recorded in Rally
Sprint Cycle Ends
Rally
End
Observed Issue:
POs are submitted at an abstracted summery level where they aren't categorized by Sprint Team and do not have User Stories along with their itemized costs listed
Start
Dev Manager Manually Pulls Original PO from Ariba
Ariba
Dev Manager Manually Pulls Prior Sprint User Story List from Rally
Rally
Observed Issue:
Due to the velocity and size of the teams this process can take upwards of 2+ weeks to straighten out
Major Bottleneck
Dev Manager has to track down the Scrum Masters and Vendor Account Mgr for original PO details
Meetings with Scrum Masters and Vendor Account Mgr
Vendor Account Mgr makes Updates to Original PO
Updated PO doc
Vendor Account Mgr Updates Aria System with PO changes
Ariba
Observed Issue:
80% of POs are not received within the discount timeframe
Dev Manager Receives PO in Ariba
Ariba
Cycle Repeats for Next Sprint
End

Appendix – Background about the Process Improvement Project

Project Selection Criteria

Select an issue or opportunity that can be written as a problem statement.

- Must be within your sphere of influence
- Is not an attempt to solve world hunger
- Uses data that is accessible to you or can be collected in a reasonable amount of effort/time
- You have the ability to measure the current and future state; you have access to baseline data or can collect it
- Preferably uses more continuous data (rather than all discrete data)
- Fixing this problem will provide valuey; you should develop a business case to support working this issue (consider your time and others when calculating ROI)

Problem Definition Worksheet – Feedback

Please note my comments before moving on to the Measure phase.

Content Requirements	Possible Points	Points Earned	Comments
Project			
A) **Problem statement**: Is it clear, concise and stated as a problem? Is there evidence this is a problem?	2	**2.00**	Nice summary.
B) **Business impact**: Is the business case quantified? Has a measure of success been identified?	2	**2.00**	Nice work discussing the impacts and quantifying in dollars.
C) **Goals**: Clearly stated goal(s)?	1	**1.00**	Clearly stated and quantified
D) **Project scope**: Identified?	1	**0.75**	Scope identified, boundaries clear. Process not fully identified. Beginning and ending steps should match those included in the Process Map. This seems like an implementation plan instead of improvement - please use the data you collect to help decide on actions in the Improve phase.
E) **Team**: Identified?	1	**1.00**	Team members identified
F) **Project plan**: rough timeline or approximate dates/time per each DMAIC step?	1	**1.00**	Complete.
G) **Process map**: Has clearly identified the start of the current process? Has clearly identified the end of the process?	2	**2.00**	Nice work with your Process Map! This can be included in your final project as well.
Total possible 100 points	10	9.75	Nice start to your project!