FEVER BEVERAGES LEAD TIME IMPROVEMENT

A Lean Six Sigma Yellow Belt Case Study

By

< Your Full Name with Middle Initial >

DEFINE PHASE

Project Charter Example – Lead Time Improvement

Lead Time Improvement

Business Case

To support the strategic initiative of ensuring product quality and improving target lead time of serving coffee, Fever beverage project driven and supported by the top management.

As identified using the Factory VSM creation, Assembly has the largest gap of 1.38% versus the factory target of 99.5% for yield management.

Objective Statement

To decrease lead time at Fever Beverages from 16.27 mins to ≤15mins which is a gap of 1.27 improvement by the end of November

Project Scope

This project will focus on FeVer beverage affecting on how lead time works in their productivity.

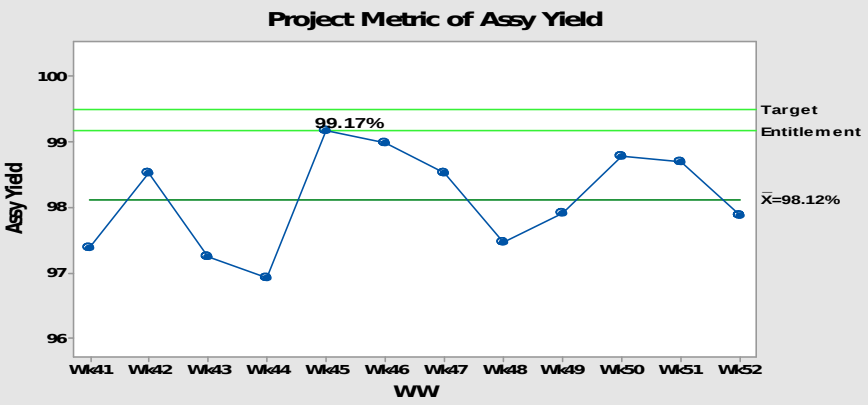
Problem Statement

High average Lead Time at FeVer Beverages is at 16.27mins since W13 to W29 versus the Coffee Shop target Lead Time of 15mins which is a gap of 1.27mins or 19%

Project Timeline

Define	Measure	Analyze	Improve	Control
W13-W14	W15-W17	W18-W20	W21-W24	W27-W29

Primary Metric



Consequential Metric

Output

Project Benefits

100k$

Project Team

- Leader: Maaño, Jerrick Mikhaelo
- Members

Peñaverde, Vinch Ron
De Castro Ricalyn
Mauricio, Samantha Mary Dawn

Approvers

- Champion: A. Caluya
- Coach: J. Palisoc
- MBB: F. Veroya

SIPOC Diagram

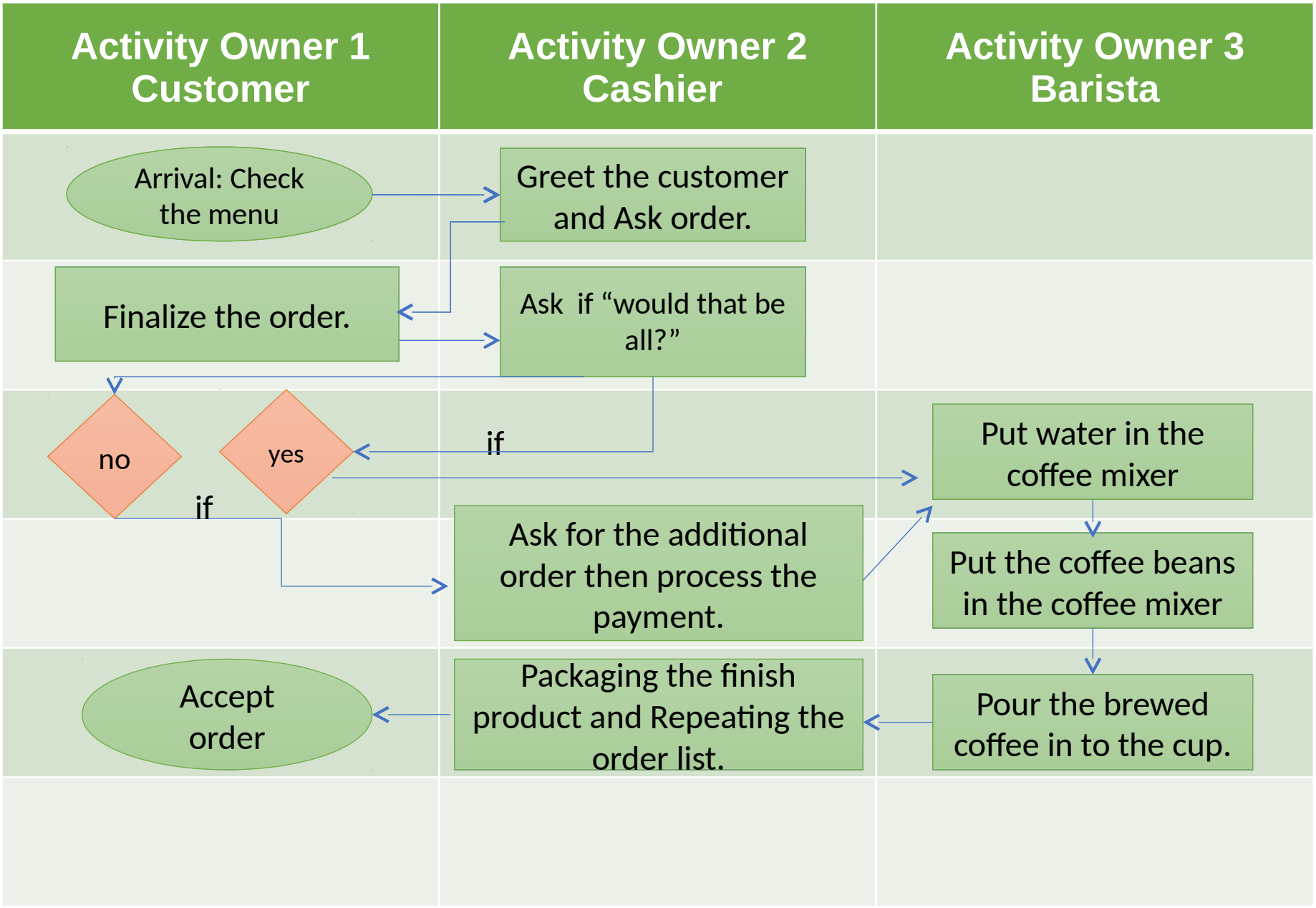
Supplier	Input	Process	Output	Customers
Local Farmers	Water Coffee Mug Coffee Grinder Drying Pan Roasting Machine	1. Customer(F. Beverages owner/staff) arrives. 2.Harvesting the coffee beans 3. Processing of the harvested beans. 4. Refinement of the processed and roasted coffee bean. 5. Packaging the fully finish product.	Fine processed coffee beans that is well-packed	F. Beverages Business Owner/Staff arrives to pick-up the product and processed the payment.

Supplier	Input	Process	Output	Customers
Paper Cup Manufacturer	Chemicals Processing Machines Conveyors Packaging Machines Quality Check Design Machine	Arrival of the order Purchasing the raw materials for the cups. Putting the raw materials with the chemicals at the processing machines. Processed cups are cooled down and proceed to the conveyors. Quality check for possible defects. Packaging the finish product(cups).	Packed set of cups	F. Beverages owner/staff.

Supplier	Input	Process	Output	Customers
Porcelain Mug Manufacturer	Chemicals Processing Machines Packaging Machines Quality Control Cooling machine Design Machine Conveyors	Arrival of the order. Purchasing the materials. Processing the materials into the machines. Proceed to the cooling machine. Into the next process at the design phase. Packaging machine. Quality check for defects. Proceed to the packaging machine.	Well packed porcelain cups.	F. Beverages Owner/Staff to

MEASURE PHASE

Detailed Deployment Process Map



Data Collection Plan

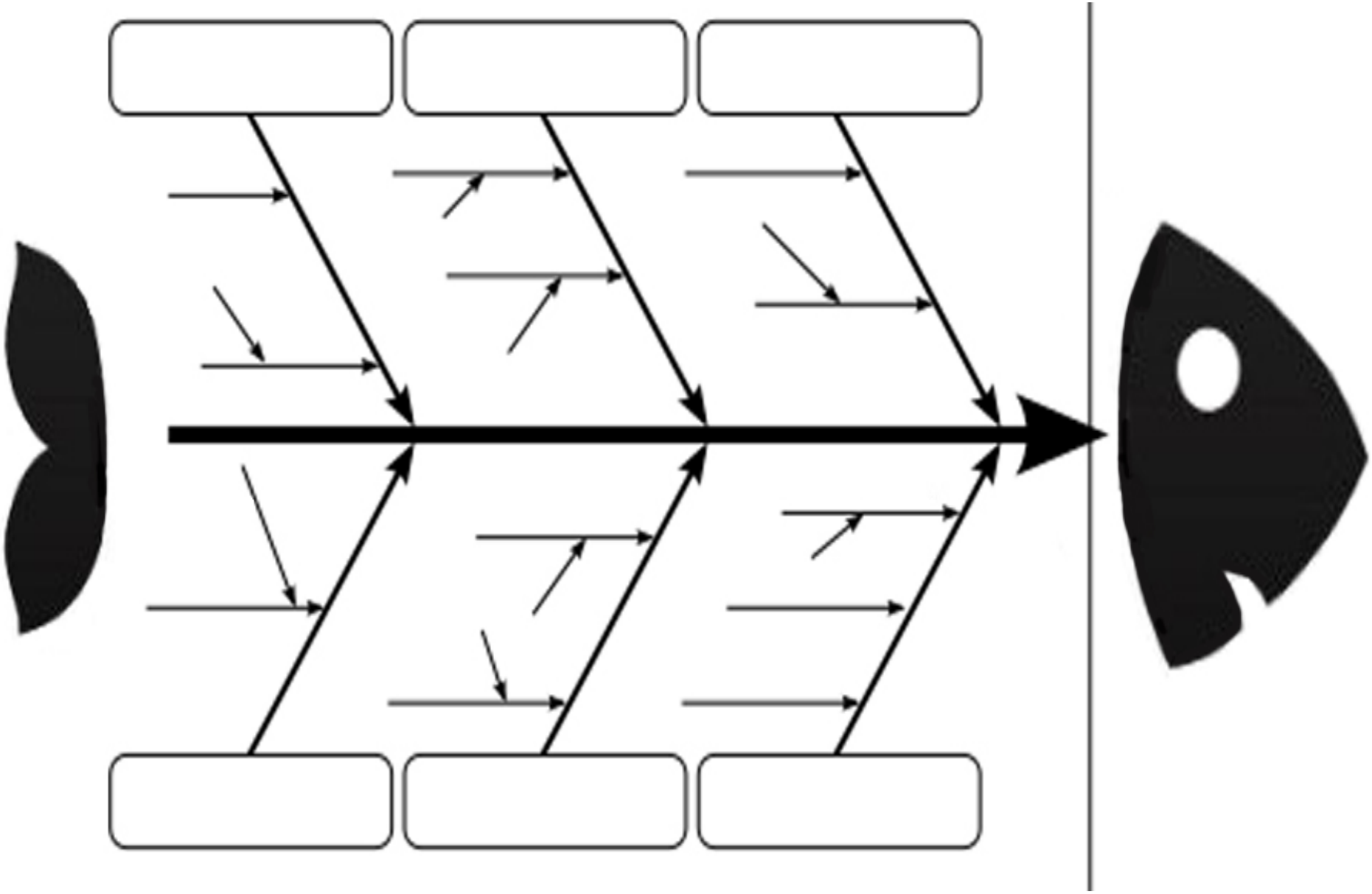
Data	Unit of Measurement	Operational Definition	Sampling Plan	Collection Method	In Charge
Order Lead Time	Minutes	Amount of time it takes from the moment the customer started to order to the moment the order has been served to the customer	Every order	Thru time studies	Restaurant Systems Officer
Variation of Beverages	Ounce (Oz)	Amount of order by the customer from the cashier	Every order	Thru sampling studies	Cashier
Staff	Minutes	Amount of time the order will make from the cashier to customer	Every order	Thru time studies	Staff

Waste Walk Results

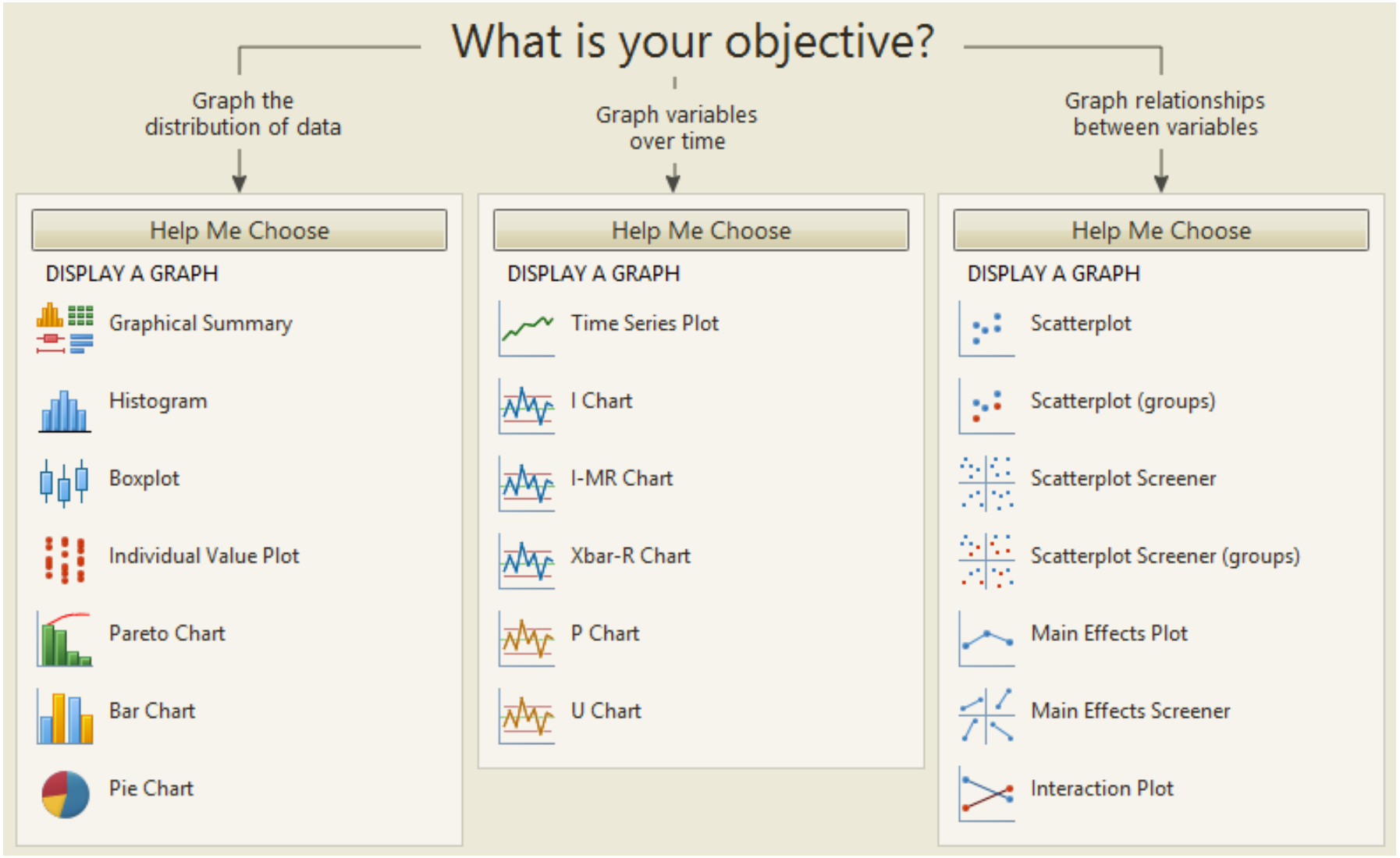
Type of Wastes (DOWNTIME)	Actual Observed Wastes	Quick Wins
Defect	Too much sugar Bitter taste Cup defect Errors during orders	Hire experienced barista Check cups before serving Hire experienced cashier
Over Production	Over calculated the production process	
Waiting	Slow Production Brewing time Lack of barista	Brew earlier Acquire another barista
Non-utilized talent	Repetitive action	Save motion
Transportation	Poor serving	Have another station for serving
Inventory	Over supply	Order enough supply
Motion	Crowded Small place	Expansion

ANALYZE PHASE

Root Cause Analysis



Root Cause Validation



Potential Root Cause #1

State here your potential root cause from your fishbone or why – why analysis

Present here your validation method used (as much as possible, graphical analysis). Use dummy data for you to be able to create the chart.

State your conclusion here.

Validation Table

Potential Root Cause	Validation Method (Observation, Records Checking, Data/Graphical Analysis, etc.)	Conclusion (Valid or Not Valid)
Insufficient materials during preparation makes the lead time longer than 15 mins	Boxplot	Valid

IMPROVE PHASE

Implementation Plan

#	WHAT	WHO	WHEN	STATUS
1	Implement visual management on Assembly area	F. Veroya	5/2/17	Done
2	Fabricate Go - No Go jig for Assembly platform	J. Palisoc	5/14/17	Done
3	Relocate excess racks at Assembly area	A. Pattaui	5/9/17	Done

Evaluation of Results

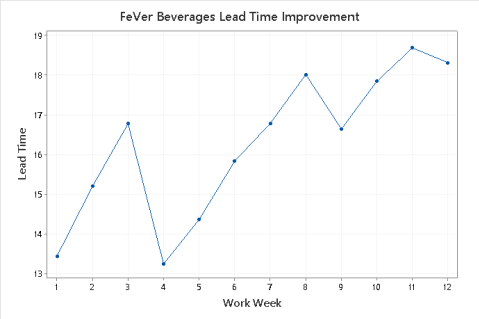
Reflect here any data-based evidence that the improvements made are significant and it created a positive change to the process.

You can use Before and After Box Plot or Time Series or any visualization that you can think can satisfy the requirement.

CONTROL PHASE

Process Control Plan

#	What's Controlled?	Input or Output?	Specs Limits/ Requirements	Control Method	Frequency	Person Responsible
1	Visual Management implementation	Input	Implemented	Audit	Weekly	F. Veroya
2	Brewing Time	Input	Within 10 mins		2x Daily	J. Palisoc


FeVer Beverages Lead Time Improvement
Lead Time
Work Week
13
14
15
16
17
18
19
1
2
3
4
5
6
7
8
9
10
11
12