WBS NO.	Activity	earliest start date	Latest End date	Resources	Timelines
1	Project management				
2	Canvanizer	23-Jul-19	7-Aug-19	Time and Computer	
3	Video presentation	8-Aug-19	23-Aug-19	Time and Video caputing equipment	
4	Market research cost report	24-Aug-19	8-Sep-19	Time and research cost	
5	Prototype	1-Sep-19	25-Sep-19		
5.1	Process mapout	1-Sep-19	2-Sep-19	Paper	
5.2	Identify the control system	3-Sep-19	4-Sep-19	paper	
6	Required devices to be connected				
6.1	Identify the sensor			Inductive and conductive proximity sensor and raspberrypi camera	
6.2	Identify the Actuator			Servo motor 180 degree rotation	
6.3	Identify the intermediate device			Arduino mega and Raspberrypi	
7	IOT protocol consderations			Range within the shop	
8	IoT protocol choice			Wifi	
8.1	Type generated			Volume, limited data range, partly processed in fog, analysis shared on web	
8.2	Storage solution			Local server, backed up	
8.3	analysis overview			Identify the type of material and report to the device for functioning	
9	Programming Required				
9.1	device function			programming to record the type of material. Holds data for 24 hours unless in contact with wifi when it uploads data.	
9.2	networking requirment			Data from sensor directed to wifi on AWS IOT.AWS Iot send data to device via wifi to direct actuator	

9.3	data management	Data needs algorithm to identify material that suggests whether the material is metallic or non metallic,help device to seprate the material in different bin
10	Security and privacy consideration	
10	deivce	Need to be secured from water,dust
10	network	Resisit the wifi coverge outside the shop and stop being connected that wifi to other
10	data	Protect historical data from being lost, stolen or ransomed, guard against re-setting of algorithm so shows all material are metallic or all non metallic

Risk
assetment