Prestige YoYo – Vision

Introduction

Prestige YoYo makes a "collectible" yoyo. Although it is not a high-precision device, the quality finish and customized paint (with logo application) make it an ideal corporate gift. Until now, manufacturing was a manual process. Due to pending competition from China, and the need to control quality while increasing profits, Prestige YoYo will automate the process.
A database system will be necessary to monitor quality.

Requirements

The Prestige YoYo company would like to have the following reports:

1. First Time Yield (the Production Yield at each station, considering both Reject and Rework). This should be presented in the form of a Pie Chart and/or the supporting table data.
2. Final Yield (considering only the Reject numbers). This should be presented in the form of a Pie Chart and/or the supporting table data.
3. Pareto diagrams showing the defect categories.

The reports should provide reasonable filtering criteria that include date ranges, product selection, colour selection and defect selection – as appropriate.

The accompanying diagram shows the general process for 1 production line. At the present time, there are 3 such lines in operation. After automation, there will be an increase in the number of manufacturing lines – all identical.

Access to the application must be limited to specific users.

The IT department at Prestige YoYo has standardized on the Microsoft platform. Further, all applications are web-enabled using Internet Explorer 8 (or higher).

Prestige YoYo – Additional information

1. There are a number of Product SKUs being produced at this plant. Here is the current list of products:

SKU	Product Description	Colour
Y001-1	Prestige Classic	Red
Y001-2	Prestige Classic	Blue
Y001-3	Prestige Classic	Green
Y002-0	Clear Plastic	Clear
Y005-1	Whistler	Red
Y005-2	Whistler	Blue
Y005-3	Whistler	Green

2. The plant runs 24 hours a day (5 days a week). It runs on a schedule showing date, start time, end time and product SKU for each run. This schedule is currently maintained in an Excel Spreadsheet.

3. There are several reasons a product can be rejected. At the moment, they are as follows:

Inspection Location	Rework or Reject	Reason
1	Reject	Inconsistent thickness
1	Reject	Pitting
1	Reject	Warping
2	Reject	Primer Defect
2	Rework	Drip mark
2	Rework	Final Coat flaw
3	Reject	Broken shell
3	Rework	Broken Axle
3	Rework	Tangled String
3	Rework	Final Coat flaw